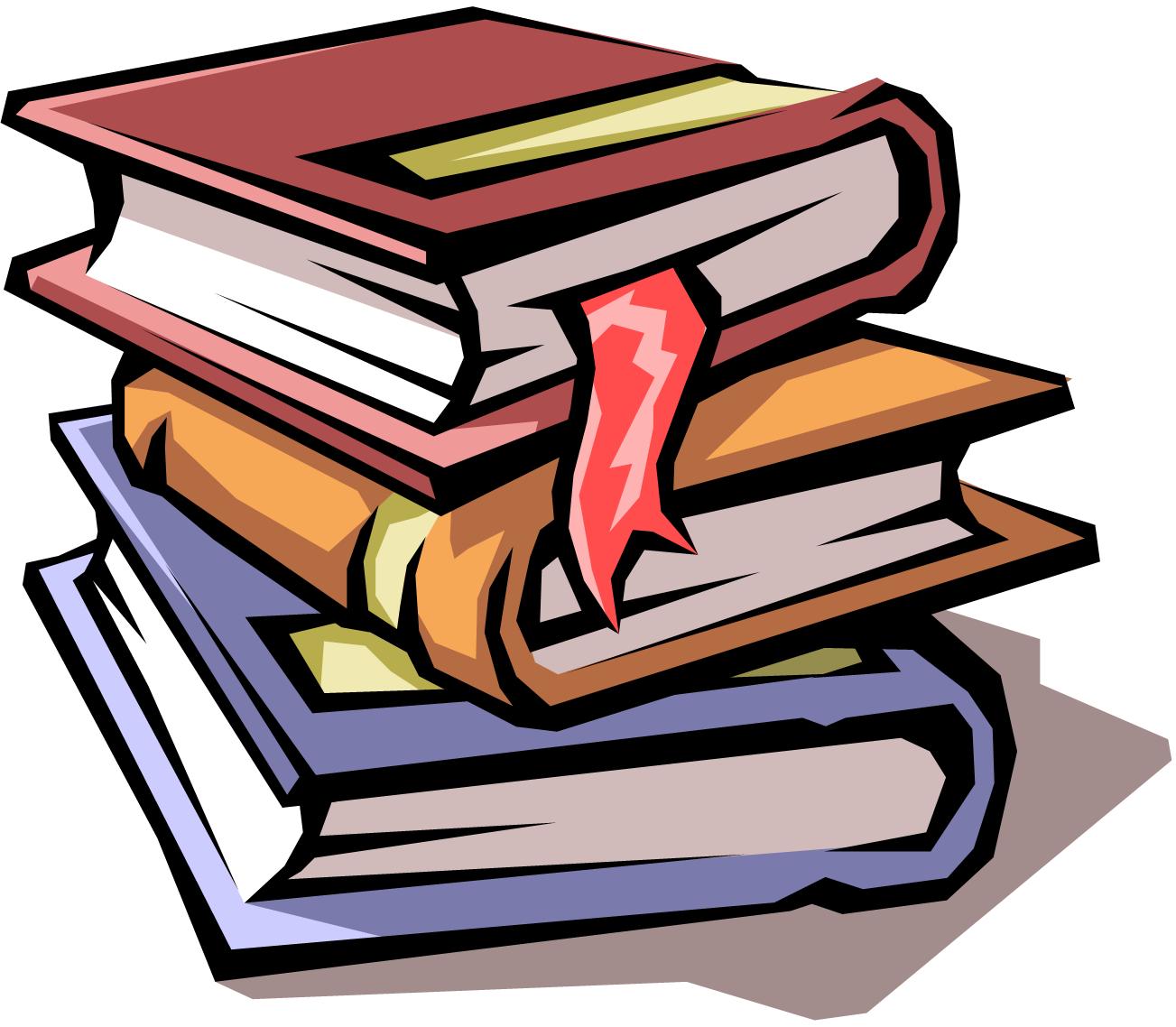
# INSTRUCTIONAL QUALITY COMMISSION ADVISORY REPORT

**2018 SCIENCE INSTRUCTIONAL MATERIALS ADOPTION**



Submitted to the California State Board of Education

October 2018

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## Introduction

California’s 2018 Science Instructional Materials Adoption represents the culmination of a great endeavor to bring the California Next Generation Science Standards (CA NGSS) to kindergarten through grade eight (K–8) classrooms around the State. Beginning with the adoption of the CA NGSS in 2013 and the subsequent development and adoption of the CA NGSS-based Science Framework for California Public Schools Kindergarten through Grade Twelve (Framework) in 2016, this current instructional materials adoption will recognize and recommend instructional materials programs that meet fully the grade-level CA NGSS and rigorous evaluation criteria.

Yet this adoption represents more a beginning. The California State Board of Education (SBE)-adopted instructional programs utilized by local educational agencies will place directly into the hands of educators and students the knowledge and skills presented within the standards and the instructional support and recommended practices of the Framework. The approved programs then represent the frontline launch pad for scientific intellectual development of our State’s greatest resource—our students.

The instructional programs recommended herein to be considered by the SBE are a vast departure from California’s past K–8 science education. The CA NGSS, to which these instructional programs align, represent a 21st century approach to scientific inquiry, built upon a three-dimensional learning strategy based in Disciplinary Core Ideas (DCIs), utilizing science and engineering practices (SEPs), connected by and unified through crosscutting concepts (CCCs). And to implement this strategy, instruction is focused on real-world phenomena in order to engage and captivate students fully. This new approach—along with the new content—represents a significant instructional shift from the past and holds the promise for a renewed and greatly expanded scientific literacy.

While the final act of approval for the standards, the subsequent Framework, and ultimately the instructional materials is adoption by the SBE, each step involves an important association of stakeholders. In each of these processes, volunteers—primarily teachers, administrators, and university professors—have served on various SBE-appointed committees and review panels to advise the Instructional Quality Commission (IQC) in making its own recommendations to the SBE.

This IQC Advisory Report to the SBE on the 2018 Science Instructional Materials Adoption takes into consideration the Reports of Findings developed by each review panel, public comment submitted throughout the adoption process, and the consideration of each IQC member.

## Adoption Process

### EVALUATION CRITERIA

The SBE-adopted criteria for evaluating K–8 instructional materials is found within the Framework. The criteria serve as the evaluation instrument for determining whether instructional materials align to the content standards, *Framework*, and the other requirements established by the SBE, California *Education Code* (*EC*), and State regulations*.* The criteria require that publisher-submitted instructional materials cover at least one full-year course of study.

The criteria for the evaluation of science instructional resources for kindergarten through grade eight are organized into five categories:

1. **Alignment with CA NGSS Three-Dimensional Learning:** Instructional resources include content as specified in the *CA NGSS*. Programs must include a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations to be eligible for adoption.
2. **Program Organization:** Instructional resources support instruction and learning of the *CA NGSS* and include such features as the organization, coherence, and design of the program; chapter, unit, and lesson overviews; and glossaries.
3. **Assessment:** Instructional resources include multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provide guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.
4. **Access and Equity:** Instructional resources should include suggestions for teachers on how to differentiate instruction to meet the needs of all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long-term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities, gifted learners, students below grade level in reading comprehension or mathematics skills and knowledge, and students below grade level in science skills and knowledge.
5. **Instructional Planning and Support:** Information and resources suggest coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

Resources that fail to meet the criteria in Category 1, content alignment with the standards, will not be considered suitable for adoption; all criteria statements in Category 1 must be met for a program to be adopted. The criteria for Category 1 must be met in the core resources or via the primary means of instruction, rather than in ancillary components. In addition, programs must have strengths in each of Categories 2 through 5 to be suitable for adoption. Extraneous resources should be minimal and clearly purposeful.

(See Appendix A for the complete evaluation criteria.)

The SBE-approved standards maps and evaluation criteria map were developed by the California Department of Education (CDE) to help publishers identify where their instructional materials are aligned with each standard for the appropriate grade level and each evaluation criteria statement. Publishers completed the maps with citations to their programs and submitted them with their sample materials. Review panels used the maps to evaluate a program’s alignment with the content standards and evaluation criteria.

### PREPARATION FOR PUBLISHERS

The CDE conducted the instructional materials adoption process pursuant to a Schedule of Significant Events adopted by the SBE in March 2017, adhering to all applicable State laws and regulations. The complete Schedule of Significant Events can be found on the CDE website at <https://www.cde.ca.gov/ci/sc/im/sciadoptiontimeline.asp>.

During the summer of 2017, the CDE hosted four webinars for the purpose of familiarizing publishers with the contents of the standards, Framework, evaluation criteria, and the expectations for successful publisher participation in the adoption process. Primarily during the fall of 2017, the CDE posted online the documents necessary for publisher participation, including various submission forms and guiding documents. In January 2018, the CDE held a Publishers Invitation to Submit meeting which again covered the evaluation criteria but focused more on the technical aspects of timely and appropriate publisher participation. Additionally, the CDE routinely provided individual guidance to inquiring publishers and posted online regular updates to a list of frequently asked questions. The complete 2018 Science Instructional Materials Adoption website is located at <https://www.cde.ca.gov/ci/sc/im/>.

### PUBLISHER PARTICIPATION

The adoption process required that interested publishers submit an initial Intent to Submit form by February 12, 2018, and to file additional submission documents by March 8, 2018. Copies of complete publisher programs were due by May 4, 2018. In the end, 19 publishers submitted 34 instructional materials programs for consideration of SBE-adoption.

### PUBLISHER FEES

Pursuant to EC Section 60213, and in accordance with the California Code of Regulations, Title 5 (5 CCR), Section 9517.3, this adoption was financed through fees paid by participating publishers. State regulations established the fee at $8,000 per program per grade level submitted.

The legislation also included the provision that, upon the request of a small publisher or small manufacturer, the SBE might reduce the fee for participation in the adoption. *EC* Section 60211 states that a "small publisher" and "small manufacturer" mean an independently owned or operated publisher or manufacturer that is not dominant in its field of operation and that, together with its affiliates, has 100 or fewer employees, and has average annual gross receipts of ten million dollars ($10,000,000) or less over the previous three years. Six participating publishers received SBE approval for small publisher fee reductions.

### REVIEWER APPOINTMENT AND TRAINING

In November 2017, the SBE appointed 109 Instructional Materials Reviewers and 11 Content Review Experts (Reviewers). The IQC divided Reviewers into 16 review panels assigned one or more programs to review.

Pursuant to 5 CCR Section 9512, the a majority of Reviewers included classroom teachers with a “professional” credential who teach students in kindergarten or grades 1–12, and who have experience with, and expertise in, standards-based-educational programs and practices in science. Some of the Reviewers had experience in providing instruction to English Learners, and in providing instruction to students with disabilities. Most panels included a reviewer holding a doctoral degree in science or a related field.

Utilizing SBE-approved training materials, CDE staff and members of the IQC trained Reviewers at the DoubleTree Hilton Hotel in Sacramento April 16–20, 2018, to prepare them for their independent review and subsequent deliberations. The training included sessions on the content standards, curriculum framework, evaluation criteria, social content requirements, and the overall adoption process. Publishers made scheduled formal presentations to their respective program review panels on the final day of the training and answered reviewer questions.

The CDE conducted the training in accordance with the Bagley-Keene Open Meeting Act. Various publisher representatives and interested members of the public attended the training, and each day at a pre-determined time, trainers paused the session to invite public comment.

### REVIEW PANEL DELIBERATIONS AND REPORTS OF FINDINGS

Within two weeks following the training session, participating publishers delivered complete copies of their programs to all Reviewers and select Learning Resource Display Centers (LRDC). Reviewers conducted their independent reviews of the submitted instructional materials during May through early July.

The Reviewers met in their assigned review panels at the DoubleTree Hilton in Sacramento for deliberations held on July 16–20, 2018. Reviewers discussed their findings, recorded via individual notes and citations developed while conducting their independent reviews. A member of the IQC or CDE staff approved by the SBE facilitated each panel while additional CDE staff provided administrative support to the panels. In addition to daily public comment periods during deliberations, publishers had the opportunity to provide a brief presentation Wednesday morning in response to three to five formal questions posed by the panel members Tuesday evening.

As Reviewers discussed each program and sought consensus on their findings for each evaluation criterion, they worked collaboratively to produce a Report of Findings for each program. The reports include findings for each category of the criteria and exemplary (not exhaustive) citations to support those findings.

By the end of deliberations, review panels recommended 29 programs of 34 submitted for consideration of adoption, with some recommendations contingent upon satisfactory completion of specified edits and corrections and/or social content citations.

Edits and corrections are defined as inexact language, imprecise definitions, mistaken notations, mislabeling, misspellings, and grammatical errors. Edits and corrections do not include rewrites, including revisions of sections, chapters, or entire pages, or adding new content to a program; rewrites are not allowed during the adoption process (pursuant to 5 CCR sections 9510 and 9519). The review panels also provided citations for social content violations when those were found in the programs (pursuant to 5 CCR Section 9518).

The panel deliberations were conducted in accordance with the Bagley-Keene Open Meeting Act. Various publisher representatives and interested members of the public attended the deliberations. At least twice each day, the deliberations process included an opportunity for public comment.

### PUBLIC COMMENT AND REVIEW

During the adoption process, instructional materials submitted for consideration of adoption were displayed for public review and comment at 10 Learning Resource Display Centers (LRDCs) throughout the state (see Appendix B). Additionally, the CDE posted at the science adoption website links to the student materials of submitted programs (pursuant to 5 CCR Section 9523(b)).

The IQC hosted a meeting to take public comment on the 2018 Science Instructional Materials Adoption on August 13, 2018, in Sacramento (pursuant to 5 CCR Section 9524). Publisher representatives and members of the public attended and submitted comments to the IQC for consideration. All members of the IQC were not present at that meeting, but all members received copies of comments that were submitted in writing.

Pursuant to 5 CCR Section 9521, The CDE forwarded for consideration any public comments received by specific deadlines to the relevant review panels, the IQC, and the SBE. All comments received by July 2, 2018, were forwarded to the review panels; all comments received by September 19, 2018, were forwarded to the IQC; all comments received by November 1, 2018, will be forwarded to the SBE.

As described below, prior to making its recommendations to the SBE, the IQC held two additional public hearings, one during the Science Subject Matter Committee meeting on September 20, 2018, and one during the full IQC meeting on September 21, 2018.

The SBE will hold a final public hearing at that meeting prior to taking action on the IQC’s recommendations.

### INSTRUCTIONAL QUALITY COMMISSION REVIEW AND DELIBERATIONS

IQC members also had the option of receiving all or partial submitted programs. On September 21, 2018, the members of the IQC considered the review panel recommendations, public comments, and reports from individual Commissioners to determine whether each program satisfied or did not satisfy the SBE-adopted evaluation criteria for this adoption.

On September 20, 2018, the IQC science subject matter committee held a public hearing and discussed in depth the review panel Report of Findings for each program. The committee heard testimony from three members of the public before taking action to recommend programs to the full IQC. Members of the committee initiated individual program-specific motions and voted on each of the 34 programs submitted by publishers. Each motion was stated in the affirmative. A majority vote from the science committee was required for any program to be recommended to the full IQC for adoption. The committee recommended for SBE adoption 29 of the 34 programs.

On September 21, 2018, after receiving comment from two members of the public in a second open hearing, the full IQC engaged in an extended discussion of the science subject matter committee’s recommendation before it took action to recommend programs to the SBE. Nine members of the IQC had to vote in the affirmative for any program to be recommended to the SBE. The IQC recommended 29 of the 34 programs.

### REQUIREMENT OF NUMBER OF ADOPTED PROGRAMS

EC Section 60200(e) requires specific findings related to the number of programs adopted by the SBE. In this adoption, the total number of recommended programs provides five or more basic instructional materials programs for each K–8 grade level.

SBE Liaisons were present at all meetings of the IQC related to this adoption, and at the training and deliberations of Reviewers, and can attest to the extent to which the process was aligned to the SBE-adopted framework.

### EDITS AND CORRECTIONS

When the SBE adopts instructional materials programs, it often stipulates as a condition of adoption that publishers make various edits and corrections. These edits and corrections are often identified by the review panels and included within their Reports of Findings, but they may also arise from publisher-submitted errata.

Following SBE adoption of programs, the CDE, in conjunction with members of the IQC, will schedule meetings with individual publishers to confirm remedies for the edits and corrections required by the SBE. The procedures for processing edits and corrections is specified in 5 CCR Section 9525, titled “Post Adoption Edits and Corrections Procedures,” and includes a 60-day timeline for publishers to submit proposed compliance remedies, and following CDE and IQC review as necessary, another 60-day timeline to submit final editions. Those errata are not attached to this report; however, they are available upon request.

### ADOPTED PUBLISHERS’ RESPONSIBILITIES

According to the provisions of EC sections 60061 and 60061.5, publishers must comply with a number of very specific provisions that ensure that they sell instructional materials at the lowest or same price offered to other districts in this state or any other state in the nation. Following SBE adoption, the CDE will apprise fully each publisher regarding the statutory and regulatory requirements related to state-adopted materials, post-adoption timelines, requirements regarding sales and marketing, alternate formats, pricing, and other associated issues.

### FUNDING

Districts receive funding to purchase instructional materials as part of their basic funding under the Local Control Funding Formula (LCFF). More information about the LCFF can be found on the CDE website at <http://www.cde.ca.gov/fg/aa/lc/>. There is no requirement to purchase SBE-adopted materials nor is there any timeline by which districts must implement new programs.

If a district elects to purchase instructional materials that are not SBE-adopted, any local review panel must include a majority of classroom teachers who are assigned to the subject area or grade level of the materials in their local review process (pursuant to EC Section 60210).

Instructional materials sufficiency requirements (EC Section 60119) remain in effect. Districts must certify each year that they have instructional materials in English language arts/English language development, mathematics, history–social science, and science for all students in kindergarten through grade twelve to use in class and take home. But while the law stipulates that materials must be aligned to the SBE-adopted standards, it allows that such standards may be current or prior standards as old as 1998.

## Instructional Quality Commission Recommendations

These programs have not been adopted by the State Board of Education.

The reports of the review panels are posted in their entirety on the CDE Science Instructional Materials website at <https://www.cde.ca.gov/ci/sc/im/>.

| **Publisher** | **Program Title** | **Grade Level(s)** | **Review Panel** | **IQC** |
| --- | --- | --- | --- | --- |
| Accelerate Learning | STEMscopes CA NGSS 3D | K–5 | Rec | Rec |
| Accelerate Learning | STEMscopes CA NGSS 3D | 6–8i | Rec | Rec |
| Accelerate Learning | STEMscopes CA NGSS 3D | 6–8d | Rec | Rec |
| Activate Learning | IQWST California Edition | 6–8i | Rec | Rec |
| Amplify Education | Amplify Science: California Discipline Specific Course Model | 6–8d | Rec | Rec |
| Amplify Education | Amplify Science: California Integrated Course Model | K–8i | Rec | Rec |
| Carolina Biological Supply Company | Building Blocks of Science 3D | K–5 | Rec | Rec |
| Carolina Biological Supply Company | STCMS (Science and Technology Concepts Middle School) | 6–8 | Not Rec | Not Rec |
| Delta Education | FOSS Next Generation Elementary | K–5 | Rec | Rec |
| Delta Education | FOSS Next Generation Middle School | 6–8d | Rec | Rec |
| Discovery Education | Discovery Education Science Techbook for California NGSS | K–8i | Rec | Rec |
| Great Minds | Great Minds Science | 4 | Rec | Rec |
| Green Ninja | Green Ninja Integrated Middle School Science | 6-8i | Rec | Rec |
| Houghton Mifflin Harcourt Publishing Company | California HMH Science Dimensions | K–6 | Rec | Rec |
| Houghton Mifflin Harcourt Publishing Company | California HMH Science Dimensions | 6–8i | Rec | Rec |
| Impact Science Education | Impact Science: Integrated Middle School Program for CA NGSS | 6–8i | Rec | Rec |
| Impact Science Education | Impact Science: Middle School Program for CA NGSS | 6–8d | Rec | Rec |
| Knowing Science | Knowing Science Curriculum: Physical, Life, Earth & Space | K–6 | Not Rec | Not Rec |
| Lab-Aids | Issues and Science | 6–7i | Rec | Rec |
| Learning Bits | SMART NGSS by Science Bits | 6–8d | Rec | Rec |
| McGraw-Hill School Education | California Inspire Science | K–6 | Rec | Rec |
| McGraw-Hill School Education | California Inspire Science | 6–8d | Rec | Rec |
| McGraw-Hill School Education | California Inspire Science | 6–8i | Rec | Rec |
| National Geographic Learning, a division of Cengage Learning | National Geographic Exploring Science | K–6i | Rec | Rec |
| Pearson Education | California Elevate Science | K–6 | Rec | Rec |
| Pearson Education | California Elevate Science, Integrated | 6–8i | Rec | Rec |
| Pearson Education | California Elevate Science 6–8 Discipline Specific | 6–8d | Rec | Rec |
| Teachers' Curriculum Institute | Bring Science Alive! California Integrated Program 6–8 | 6–8i | Rec | Rec |
| Teachers' Curriculum Institute | Bring Science Alive! California Program 6–8 | 6–8d | Rec | Rec |
| Teachers' Curriculum Institute | Bring Science Alive! California Program K–5 | K–5 | Rec | Rec |
| TPS Publishing | Creative Science Curriculum K–8 | K–8 | Not Rec | Not Rec |
| TPS Publishing | STEAM Exploration K–8 | K–8 | Not Rec | Not Rec |
| TPS Publishing | STEAM into NGSS K–8 | K–8 | Not Rec | Not Rec |
| Twig Education | Twig Science | K–6i | Rec | Rec |

## Basic Grade Level Programs

### Accelerate Learning, Inc.*,* STEMscopes CA NGSS 3D*, Grades* K–5

#### Program Summary:

STEMscopes CA NGSS 3D includes: a digital subscription; student notebook; STEMscopedia, and Teacher Planning Companion (TPC).

#### Recommendation:

STEMscopes CA NGSS 3D is recommended for adoption for K–5 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade K, Weather Patterns> Explore 2; Grade 1, Patterns in Space> Explore 1; Grade 2, Changes from Heat> Explore 1; Grade 3, Social and Group Behavior >Explore 1; Grade 4, Renewable and Nonrenewable Resources> Explore 3; Grade 5, Matter and Energy in Plants> Explore 1. These are exemplars of SEPs, CCCs, and DCIs being integrated into the PEs as expressed in the CA NGSS for kindergarten through grade five.
* Criterion #7: Grade 4, Plate Tectonics> Explore 3. This is an exemplar of a primary source, a TUVA data set, being integrated into the three-dimensional learning.
* Criterion #12: Grades K–5, Elaborate> Math Connections sections of each scope are linked to the CA CCSSM. Example: Grade 3, Objects in Motion> Math Connections A, B, and C.
* Criterion #13: Grades K–5, Elaborate> Reading Science sections provide leveled readers to develop grade-level appropriate language and vocabulary. Example: Grade 2, Mapping Our World> Reading Science A, B, and C.
* Criterion #15: Grades K–5, Standards> California Environmental Principles and Concepts are linked to specific learning opportunities. Example: Principle II, Concept B is linked to Grade 5, Explore 2> Reducing Human Footprints.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grades K–5, CA NGSS 3-D Segments; Grade 2, Teacher Planning Companion Storyline; Grade K, Animal Needs. We found evidence in all grades where the sequential organization of the material provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
* Criterion #3: Grade 4, Standards> CA NGSS> Performance Expectations> 4PS3-1; Grade 1, Seasonal Patterns> Standards Alignment; Grade 5, Mixtures> Standards Alignment. There is exemplary evidence in Grades K–5 Grade Band Endpoints. The examples provided show instructional resources that explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.
* Criterion #4: Grade 2, Properties and States of Matter> Hook-Sharing Properties; Grade 3, Processes and Impacts of Natural Hazards> Explore 2: Engineering Solution-Rising Expectations; Grade 5, Gravity> Explain> Linking Literacy. We found evidence that teacher resources provide support to engage students in three-dimensional learning and suggest research-based strategies to elicit student thinking and support student discourse.
* Criterion #9: Grade K, Animal Needs> Elaborate> Career Connections–Zoo Education Program Specialist (video); Grade 3, Inheritance and Variation of Traits> Explore 3, Tuva-Cicadas (simulation); Grades K–2, Elementary Teacher Toolbox> Interactives> Insect Life Cycles; Grades 3–5, Elementary Teacher Toolbox> Interactives> Food Chains and Webs. There is exemplary evidence in Grades K–5 resources that encourage the meaningful use of technologies such as video clips or computer simulations to investigate phenomena that cannot be directly experienced in the classroom. In these contexts, the materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.
* Criterion #10: Grade 1, Communication> Explore 3: Engineering Solution–Let’s Talk and Acceleration> Project-Based Learning (PBL); Grade 4, Natural Processes> Explore 2: Engineering Solution-Volcano Island; Grade 2, Mapping Our World> Explore 2: Engineering Solution-Real Estate Model; Grade 5> Reducing Human Footprint> Explore 4: Engineering Solution–NASA Needs Our Help and Acceleration> Project-Based Learning (PBL). We found evidence of resources that suggest appropriate engineering design tasks in varied contexts as a path to understanding and applying the science ideas being learned.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1: Grade K, Segment 1> Teacher Guide> Action Plan; Grade 1, Plant Survival> Evaluate> Claim-Evidence-Reasoning (CER), Open-Ended Response Assessment (OER), and Multiple Choice Assessment; Grade 3, Segment 1> Teacher Guide> Action Plan and Assessment> 3D Interactive Assessment; Grade 5, Properties of Matter> Evaluate> Claim-Evidence-Reasoning (CER), Open-Ended Response Assessment (OER), and Multiple Choice Assessment. We found evidence of assessments in the instructional resources that reflect the three-dimensional nature of the CA NGSS and CA Science Framework. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS. Assessments stress performance tasks rather than rote memorization.
* Criterion #3: Grade K, Weather Hazards> Access Prior Knowledge (APK), Explore 1> Claim-Evidence-Reasoning (CER), Evaluate> Claim-Evidence-Reasoning (CER), Acceleration> Extensions and Project Based Learning; Grade 1, Seasonal Patterns> Acceleration>Science Art; Grade 3, Plant and Animal Extinction> Accessing Prior Knowledge (APK), Explore 1> Claim–Evidence–Reasoning (CER), Intervention> Independent Practice, Acceleration> Extensions and PBL; Grade 4, Changing Land> Extensions> Science Art and Problem Based Learning (PBL). Additionally, in Grades K–5, there are scripted formative assessments that are included throughout all Engage and Explore activities. There is exemplary evidence that includes teacher materials that provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.
* Criterion #6: Grade 2, Mapping Our World> Engage> Accessing Prior Knowledge (APK), Explore 2, Claim–Evidence–Reasoning (CER), Open-Ended Response Assessment (OER), and Evaluate> Claim–Evidence–Reasoning (CER), Intervention> Guided Practice, Independent Practice, Concept Attainment Quiz, Acceleration> Science Art, Extensions, and Books on Topic; Grade 5, Ecosystems> Accessing Prior Knowledge (APK), Explore 2> Formative Claim–Evidence–Reasoning (CER), Open-Ended Response Assessment (OER), Evaluate> Claim–Evidence–Reasoning (CER), Intervention> Guided Practice, Independent Practice, Concept Attainment Quiz, Acceleration> Science Art and Project Based Learning. We found evidence of teacher resources that supply a differentiated path for diverse students to build toward the PEs of the CA NGSS. In particular, formative assessment tasks are designed to support teachers in collecting and analyzing data about student conceptual understanding.
* Criterion #10: Grade 1, Patterns in Space> Explore 1 (scientific investigations); Grade 2, Diversity of Living Things> Acceleration> Project Based Learning (PBLs); Grade 4, Information Technologies> Explore 3 (Engineering design); Grade 4, Energy and Speed> Evaluate> Multiple Choice Assessments; Grade 5, Gravity> Evaluate> Open-Ended Responses, Earth’s Rotation> Explore 2 (Tuva simulations). There is exemplary evidence that includes assessment tools that include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade 2, Properties of Materials> Acceleration> PBL> Super Soles! and Properties of Materials> Acceleration> PBL> Extension activities provide good examples of how the instructional resources reflect the goals of access and equity outlined in Chapter 10 of the CA Science Framework.
* Criterion #2: Grades K, Pushes and Pulls> Engage> Hook (English Language Development box, “Let’s Play Ball”) is an exemplar of how the resources address the needs of English Learners consistent with the CA ELD Standards.
* Criterion #3: Grade 1, Communication> Explore 2 (Intervention Strategies Box, “Roadblock: Does Not Interact with Peers”); Grade 3, Fossils> Explore 1 (Intervention Strategies Box, “Roadblock: Sensory Overload”); Grade 5, Matter and Energy in Plants> Engage> Hook (Intervention Strategies Box, “Roadblock: Hesitant or Fails to Participate in Classroom Discussions”). The instructional resources incorporated instructional strategies to address the needs of students with disabilities in scopes (lessons), assessments, and teacher resources, as appropriate at every grade level.
* Criterion #4 Grades K-5, Scopes> Teacher Toolbox> Intervention. The Interventions tab in the Teacher Toolbox supply a differentiated path for all students. They include guidance to support students with special needs, including, standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities, students below grade level in science skills, three dimensional learning, literacy skills, or mathematical skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #1: Grades K–5, TPC, provides a curriculum guide and grade level Storyline for the academic instructional year.
* Criterion #4: Grade 2, Segment 2: Landscape Materials> Segment Resources> Teacher Guide, Standards Alignments, Parents Letter, Mission Log, and Action plan work together to address the articulation of three-dimensional learning by identifying the knowledge and skills learned in prior grade level and prior grade level units and address how to connect and build on these learnings to help students develop increasingly sophisticated ideas.
* Criterion #9: Grade 4, Teacher Toolbox, 3D Supports, Parent Resources, and STEMScopes Parent Letters explain three-dimensional learning and objectives to parents.
* Criterion #14: Grade 3, Inheritance and Variation of Traits> Explore 1, Explore 3, Tuva, STEMscopedia, Concept Review Game and Evaluate CER, are examples of electronic learning resources, including technology-based assessments, and support instruction that is connected explicitly to the CA NGSS. These have a well-designed user interface, provide technical support, and include suggestions for appropriate and differentiated use.
* Criterion #15: Grade 1, Parts of Animals> Scientist Spotlight, is an example of a teacher resource that provides background information about important events, diverse people, places, ideas, and scientific principles appearing in, but not limited to the CA NGSS and CA Science Framework.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page number(s) | Current text | Proposed corrected text | Reason for edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | K | Pushes and Pulls (digital) | Explain | “Push it!” illustration with hand and dump truck | Illustration should depict the hands touching the truck, thereby applying a force (push or pull) to the truck | Accuracy |
| 2 | K | Pushes and Pulls | 83 | “Push it!” illustration with hand and dump truck. Red action arrows are present in the digital version but missing in printed version. | Illustration should depict the hands touching the truck, thereby applying a force (push or pull) to the truck. Include red action arrows. | Accuracy |
| 3 | K | Speed and Direction | 91 | “Pushing or pulling an object makes it move” illustration | “Pushing or pulling an object changes its speed.” | Accuracy |
| 4 | K | Speed and Direction | 91 | “A small push will make it move forward a little.” | “A small push will make its speed increase slowly.” | Accuracy |
| 5 | K | Speed and Direction | 91 | “A big push will make it move forward a lot.” | “A large push will make its speed increase quickly.” | Accuracy |
| 6 | K | Speed and Direction | 91 | “A little pull will make it move forward slowly.” | “A little pull will make its speed increase slowly.” | Accuracy |
| 7 | K | Speed and Direction | 91 | “A big pull will make it move forward quickly.” | “A big pull will make its speed increase quickly.” | Accuracy |
| 8 | K | Speed and Direction | 91 | Illustration of a car and hand not connected. | Yellow line needs to connect car to hand to depict “force” | Accuracy |
| 9 | K | Speed and Direction | Digital; 93 | “Is it the right speed and direction?” illustration | The child’s hands should be in contact with the ball and the force arrow (vector) should be acting on the ball (drawn from the ball). For the boy to apply a force to the ball, he needs to be in contact with the ball. | Accuracy |
| 10 | 1 | Parts of Plants | 3 | “Plants have roots” illustration | Blue circle needs to move to around the roots. The formatting of the photos appears to make images confusing. | Accuracy |
| 11 | 1 | Patterns in Space | Digital; 75 | Image of photoshopped rainbow | The image of the rainbow should be replaced with a photograph of an actual rainbow. For a rainbow to appear to an observer, the sun must be behind the observer and clouds (water vapor) must be in front of the observer (covering the area where a rainbow appears to come from); also, the arc of the rainbow would be larger. | Accuracy |
| 12 | 1 | Patterns in Space | Digital; 75 | Image of sun over green and moon over dark space. | Image should be replaced to represent a reality; two separate images to represent day and night would suffice. | Accuracy |
| 13 | 3 | Life Cycles | 20 | “Frog life cycle” illustration | The photos are mismatched with the captions and simply need to be rearranged to correct order. | Accuracy |
| 14 | 3 | Life Cycles | 21 | “The stages of a butterfly” illustration | The photos are mismatched with the captions and simply need to be rearranged to correct order. | Accuracy |
| 15 | 3 | Life Cycles | 21 | “Look closely. You can see butterfly wings” illustration | The photo is mismatched with the caption and simply need to be rearranged correctly. | Accuracy |
| 16 | 3 | Life Cycles | 21 | “Some insects, such as damselflies” illustration | The photo is mismatched with the caption and simply need to be rearranged correctly. | Accuracy |
| 17 | 3 | Survival of the Fittest | 41 | “Being the biggest, strongest, or fastest is very important to the survival of animals.” | Remove. Being the fittest to survive is not always- and not only- about being the biggest, strongest, or fastest; otherwise, humans would not have survived to be successful species on earth. | Accuracy |
| 18 | 3 | Plant and Animal Extinction | Digital; 79 | Image of fossilized dinosaur | Replace image with a photo of an actual dinosaur fossil. | Factual Error |
| 19 | 4 | Using Stored Energy | Digital; 15 | “What is energy?” section | Rephrase section to stress the included DCIs. | Clarity |
| 20 | 4 | Using Stored Energy | Digital; 16 | “How do we use energy?” | “Stored energy” is confused with “potential energy”. | Factual error |
| 21 | 4 | Rock Patterns | Digital; 44 | Image of fossilized dinosaur | Replace image with a photo of an actual dinosaur fossil. | Accuracy |
| 22 | 4 | Wavelength and Amplitude | Digital; 81 | “All waves move energy, not the matter, they travel through.” | Traveling waves transport energy, but standing waves do not. | Accuracy |
| 23 | 4 | Wavelength and Amplitude | Digital; 81 | “Vibrations are rapid, back-and-forth motions.” | “Vibrations are back-and-forth motions.” | Accuracy |
| 24 | 4 | Wavelength and Amplitude | Digital; 83 | “We can look at the wave’s amplitude to determine how much energy is being moved by the wave. Look at the two waves below [seismograph]. Which one is moving more energy?” | Use text submitted by publisher addressing this edit. | Accuracy |
| 25 | 4 | Motion of Waves | Digital; 88 | “It is strange to think that the energy of the wave moves, but not the water or objects resting on top of the water.” | “It is strange to think that the energy of the wave moves, but not the water.” | Accuracy |
| 26 | 5 | Matter is Everywhere | Digital; 4 | “The particles in matter are moving!” illustration | Replace the “Solid state” regular lattice of green particles with an irregular placement of green particles showing no motion.  For the “Liquid state” and the “Gas state,” add arrows to the green particles representing motion of the particles; the gas particles would have longer arrows. | Accuracy |
| 27 | 5 | Changes to Matter | Digital; 11 | “Remember, if you had six different ingredients in the mix or salad, then you will have 750 mL in the bowl.” | mL is the unit milliliter, a unit volume, not mass. The activity should be replaced with one that measures masses of each individual ingredient and then compares these to the mass of the total mixture. | Factual error |
| 28 | 5 | Matter Cycles | Digital; 53 | Elephant illustration | Arrows are misplaced and should be rearranged. | Accuracy |
| 29 | 5 | Water Sources | Digital; 75 | “Earth is nearly three-quarters water.” | “Nearly three-quarters of earth’s surface is covered in water.” | Grammatical error |
| 30 | 5 | Earth’s Rotation | digital | “As you read this sentence, Earth is rotating around its tiltd axis at a rate of about 1,000 miles (1,609 kilometers) per hour!” | Change “tiltd” to “tilted” | Misspelling |
| 31 | 5 | Observing the Stars | 109 | “Size and Distance” illustration | The radius line of the sun does not end at the sun’s center. | Accuracy |
| 32 | 5 | Observing the Stars | 110 | “Look Out!” Illustration | The sun is missing from the illustration and should be included. | Accuracy |
| 33 | 5 | Objects in the Sky | Digital; 115 | Day/ Night earth illustration; “Daily hemisphere” | Replace “Daily hemisphere” with “Day hemisphere.” | Accuracy |
| 34 | 5 | Objects in the Sky | Digital; 116 | Seasons illustration | The illustration does not properly show the relationship between the tilt of the earth’s rotation axis and the plane of the earth’s orbit around the sun in causing the seasons. An image properly depicting day and night hemispheres would be helpful. |  |
| 35 | K | Plant Needs | Explain | Communicate Science- Entertaining Speech handout | Insert correct handout | Mislabeled link |
| 36 | 1 | Behavior of Light | Hook | Question 10, SEP #2 answer: “It was easiest when it was dark.” | “It was hardest when it was dark.” | Accuracy |
| 37 | 3 | Life Science | Explore 3 | Link for print file “Coming to life” in Spanish under the English label | Link should direct to English print out | Link Error |
| 38 | 3 | Life Science | Explore 3 | “Coming to Life” linked Google Doc handouts only available in Spanish. | Make English Google Docs available as well | Accuracy |
| 39 | 3 | Environmental Traits | Explore 1 | Print CER posted “Environmental Changes and Effects” | Post CER for “Environmental Traits” to match answer key | Accuracy |
| 40 | 3 | Survival of the Fittest | Hook | Under number 5, last bullet, the second question is in red | Question should be in black | Consistency; All questions are in black across program |
| 41 | 3 | Weather & Climate | Explore 2 | Print file “Weather and Climate” posted is for Explore 1 | Post “Weather and Climate” Explore 2 | Accuracy |
| 42 | 3 | Weather & Climate | Explore 4 | Missing SEP and CCC callouts | Include SEP and CCC connections | Missing Connections; these have been included throughout program |
| 43 | 4 | Changing Land | Explore 2 | Under Application Cards; Desert landscape image is unclear (picture 1) | Insert a clearer picture of the changing desert | Accuracy and clarity |
| 44 | 4 | Plate Tectonics | Explore 1 | Under “Geographical Maps”, there is no key to the top black and white map | Insert key to help students interpret map | Illustration of map is unclear and formatting makes map difficult to understand |
| 45 | 5 | SE | 285 | Green Box has a yellow split | Green box needs to have a green split as every other box has their same color split. | Consistency |
| 46 | 5 | Matter Cycles | Hook | Under number 2, the answer is in black. | The answer should be in red. | Consistency |
| 47 | 5 | Matter Cycles | Hook | Question #3 5 bullet questions do not have answers | Include sample answers | Consistency |
| 48 | 5 | Life Science | Engage | Graphic Organizer labeled “Food Web” but demonstrates linear relationship. | Insert interconnecting arrows to demonstrate food web instead or relabel as “Food Chains” | Accuracy |
| 49 | 5 | Mixtures | Explore 1, 2, 3 | Google doc file is missing English version | Insert Google doc file in English | Missing file |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page number(s) | Current text | Proposed corrected text | Reason for citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | D-2 | K–5 | All | n/a | All people depicted are middle-aged or younger. | Replace some of the images with older people for variance. | Proportion of Portrayals |
| 2 | E-2 | K–5 | All | n/a | All people depicted seem to be in good “health” | Include images of people with disabilities | Proportion of Portrayals |
| 3 | L-1 | K–5 | Numerous Teacher Set-Up videos | Explore | Commercial brands are prominently displayed throughout videos. | Blur or remove the brand logos. | Brand Names and Corporate logos |
| 4 | B-2 | 3 | Objects and Motion: STEMscopedia digital and print | 3–8 | Dominated by representations of white people. | Include images representing various ethnic backgrounds. | Proportion of portrayals |
| 5 | B-2 | 3 | Objects and Motion: STEMscopedia digital and print | 7 | In the tug-of-war illustration, all twelve children are white. | Include images representing various ethnic backgrounds. | Proportion of portrayals |
| 6 | B-2 | 3 | Weather and Climate: STEMscopedia digital and print | 85–93 | Throughout this section, all four children portrayed are white. | Include images representing various ethnic backgrounds. | Proportion of portrayals |
| 7 | B-2 | 4 | Using Stored Energy: STEMscopedia digital and print | 15 | Image portrays a white basketball player. | Given the overrepresentation of white people throughout STEMscopedia, including a basketball player from a different ethnic background would be appropriate. | Proportion of Portrayals |
| 8 | A-8 | 5 | Gravity: STEMscopedia | 97 | “How could an astronaut keep his utensils from floating away while eating?” | Change “his” to “their” | Gender-neutral language |
| 9 | B-2 | 5 | Gravity: STEMscopedia digital and print | 95–98 | Five white people plus one astronaut of unknown race represented in images. | Include images representing various ethnic backgrounds. | Proportion of portrayals |
| 10 | A-3 | K–5 | Career Connections |  | Welder: White male  Arborist: White male  Farmer: White couple  Meteorologist: White male  Oceanographer: White male  Anthropologist: White male  Civil Engineer: White male  Astronomer: White male  Heat Shield Engineer: White female  Athletic Trainer: White female  Geologist: White male  Archeologist: White male  Audio Engineer: Hispanic male  Zoo Education Specialist: White female  Eye Doctor: Two females, one Hispanic  Programmer: White male NASA Engineer: White female  Hematopathologist: White female  Doctor: African American female  Mayor: White male | Include diversity within representation of different occupations | Proportion of portrayals |

### Accelerate Learning, Inc., STEMscopes CA NGSS 3D, Grades 6–8 (integrated)

#### Program Summary:

STEMscopes CA NGSS 3D includes: STEMscopes CA NGSS 3D includes: a digital subscription; student notebook; and STEMscopedia.

#### Recommendation:

STEMscopes CA NGSS 3D is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1: Grade 6, Segment 1: Scope: Systems and Subsystems in Earth and Life Science. The program contains numerous exemplars of three-dimensional learning.
* Criterion #1.1: Grade 7, Segment 1: Scope: Ecosystem Biodiversity: Explore 3: Engineering Solutions-Wetland Mitigation. The program contains numerous exemplars of three-dimensional learning.
* Criterion #1.1: Grade 8, Segment 1: Scope: Changes in Force and Motion: Explore 1-3. The program contains numerous exemplars of three-dimensional learning.
* Criterion #1.8: Grade 7, Segment 1: Human Dependence on Natural Resources: Engage: Investigative Phenomenon. The program contains examples that show strengths in the resources that introduce real world phenomena and systems.
* Criterion #1.10: Grade 8, Segment 2: Scope: Earth, Sun, and Moon System: Elaborate. The program contains numerous examples of evidence that the curriculum is enriched at the grade level.
* Criterion #1.3: Grade 6, Segments: Teacher: Toolbox: 3D Support. The program contains numerous examples of instructional resources that support teachers to engage students in using SEPs and CCCs through multiple exemplars.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.10: Grade 6, Segment 2: Scope: Thermal Energy Transfer: Explore 3: Engineering Solution-Build a Medicine Container. The program contains an example of strength in appropriate engineering design tasks as a path to understanding and applying science ideas being learned.
* Criterion #2.9: Grade 8, Segment 1: Objects Move and Collide: Scope: Gravitational Forces: Explore 3 Activity: Investigating Orbits. The program contains strength in meaningful use of technologies using a computer simulation (PhET) to investigate gravitational forces.
* Criterion #2.2: Grade 7, Segment 3: Scope: Seafloor Spreading: Engage. The instructional resources within the program strongly promote student-to-student discourse and guide student learning.
* Criterion #2.13: Grade 6, Teacher Planning Companion pages 9–10. The “grade 6” storyline within the program is a strong example of how the progression builds ideas in a planned sequence so that each unit builds on prior learning.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3.7: Grade 7, Segments: Natural Processes and Human Activities Shape Earth’s Resources and Ecosystems: Scope: Seafloor Spreading. The program contains an exemplar of summative assessments and attainment of three-dimensional learning using multicomponent tasks.
* Criterion #3.8: Grade 8, Scope: Genes and Proteins: Elaborate: Math Connections. The program contains a strong example of how the program assesses student progress towards meeting the three dimensions through both writing and performance tasks.
* Criterion #3.11: Grades 6-8, STEMscopedia pp. 141–148 and Segment: Teacher Toolbox: Literacy Toolbox. The Literacy Toolbox and STEMscopedia are exemplars of how assessment tools include guidance on measuring students’ ability to apply information literacy skills.
* Criterion #3.10: Grade 6, Segment 3: Causes & Effects of Regional Climates: Scope: Sensory Receptors Acceleration: PBL Energy Drinks. The program’s PBL lesson on energy drinks is an exemplar of assessment that uses multiple measures of student performance and guides teachers through detailed rubrics.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.1: Grade 6, Segment 2: Scope: Energy Transfer and Temperature: Teacher Explore 2: Scientific Investigation. Strong examples exist within the program of how the resources reflect the goals of access and equity.
* Criterion #4.1: Grade 8, Segment 3: Scope: Geologic History of Earth: Teacher Explore 1: Activity: Law of Superposition. The program contains exemplars of resources to meet the goals of equity and access.
* Criterion #4.2: Grades 6–8, Segment 3: Scope: Plate Tectonics: Explore 2. The program’s Super Evidence is an exemplar of how suggested lessons include research-based strategies to address the needs of English learners consistent with the California English Language Development Standards.
* Criterion #4.3: Grade 8, Segment 4: Scope: Properties of Visible Light: Elaborate: SE Reading Science A, B, and C: Intervention TE: Guided Practice and Independent Practice. The program contains resources that incorporate instructional strategies to address the needs of students with disabilities.
* Criterion #4.4: Grade 7, Segment 1: Scope: Structure of Matter: Teacher Explore 3: Activity: Atoms, Molecules, Extended Structures, and Substances. The Densities of Materials within the program is a strong example of how the teacher resources supply a differentiated path for all students with guidance to support students with special needs.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.2: Grade 6, Teacher Planning Companion pp. 9–13. The program contains strength in the teacher resources providing estimated instructional time for each activity, lesson, chapter, and unit, allowing for student engagement design project.
* Criterion #5.3: Grade 8, Segment 4: Sustaining Local and Global Biodiversity: Scope: Introduction to Properties of Waves. The program’s Waves Scope to be an exemplar of guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons to ensure three-dimensional learning through 3D hands-on explore activities.
* Criterion #5.14: Grade 7, Segment 4: Sustaining Biodiversity and Ecosystem Services in a Changing World: Scope: Ecosystem Biodiversity, The program contains a breadth of resources that support three-dimensional instruction that is outlined in the California Next Generation Science Standards.
* Criterion #5.10: Grade 7, Segment 2: Characteristics of Chemical Reactions: Engage: Investigative Phenomena Table (print file). The program contains strength in this student resource and provides experiences that clearly build to the development of learning goals prior to instruction by introducing a phenomenon.
* Criterion #5.12: Grade 6, Segment 3: Scope: Inheritance and Genetic Variation, Home Materials List. The program shows strength with the scope that contains an interactive materials list within the program.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 7 | Student Notebook | pp. 33, 62, 125, 155, and 483 | Pictures | Clearer pictures | Blurry images |
| 2 | 7 | Student Notebook | p. 207 | Changes in Matter | Changes in Matter | Text intrudes into writing space provided |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | B.1. | 7 | Teacher Toolbox: Secondary Grade 7: Segment: Scope: Competition in Ecosystems: Teacher Explore | N/A | Students in poverty may not know appropriate social behaviors because they may not have been taught by a parent or caregiver and appropriate behavior is crucial when it comes to learning. | Many students, including students in poverty, may not know appropriate social behaviors… | The original text portrays a negative stereotype of students in poverty. |
| 2 | C.4. | 6 | Segment 1: Systems and Subsystems in Earth and Life Sciences: Scope: Bodies and Systems: Elaborate: Scientist Spotlight | N/A | The couple was forced to move frequently when people began to question his gender identity. | Despite Hart’s numerous contributions to TB research, the couple was forced to move frequently when people began to question his gender identity. | Original statement trivialized Dr. Hart’s work in tuberculosis. |

### Accelerate Learning, Inc., STEMscopes CA NGSS 3D, Grades 6–8 (discipline specific)

#### Program Summary:

STEMscopes CA NGSS 3D includes: STEMscopes CA NGSS 3D includes: a digital subscription; student notebook; and STEMscopedia.

#### Recommendation:

STEMscopes CA NGSS 3D is recommended for adoption for 6–8d because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1: Grade 6, Homepage, Scopes, Segment 1, Middle School Earth and Space Sciences: The Earth and the Solar System, Earth-Sun-Moon System, Standards Alignment; Grade 7, Homepage, Scopes, Segment 1, Cells, Standards Alignment; Grade 8, Homepage, Scopes, Eighth Grade Physical Science, Structure of Matter, Standards Alignment. In every domain, there are Disciplinary Core Ideas.
* Criterion #1.2: Grade 6, 7, 8 Homepage, Scopes, Segment: Growth and Organisms. We found numerous exemplars of the standards being fully covered in middle school via the 5E learning sequences. All segments, all grades have the same 5E template.
* Criterion #1.4: Grade 6 Homepage, Scopes, Earth and Space Science, Segment 4: The Water Cycle. For each Scope in all domains, Performance Expectations are linked with specific three-dimensional instructional sequences in an organized sequential manner.
* Criterion #1.7: Grade 6 Homepage, Scopes, Earth and Space Science, the Solar System, Elaborate. Use of primary sources, scientific research, case studies, and photographs are integrated through multiple scopes within the program.
* Criterion #1.8: Grade 8, Homepage, Scopes, Synthetic Materials, Explore. Numerous exemplars of students being able to investigate, model, and explain using the targeted Disciplinary Core Ideas and Crosscutting Concepts.
* Criterion #1.13: Grade 8, Homepage, Scopes, Segment: Properties of Visible Light. There are numerous materials that provide support for students to develop grade-level-appropriate academic language and discipline-specific vocabulary.
* Criterion #1.15; Grade 7, Homepage, Scopes, Growth of Organisms, Standards Alignment. We found evidence of the Environmental Principles and Concepts in the standards alignment. They are also embedded in various stages of the 5E cycle.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.1: Grades 6, 7, and 8, Teacher Planning Companion (no page numbers in print copy). STEMscopes provides a storyline page for each grade level demonstrating the sequential organization of the program.
* Criterion #2.2: Grade 7, Homepage, Scopes, Natural Selection, Explore 3. Guided teacher questions are included in the Engage and Explore Sections. Example: 7D Life Natural Selection (Assessing Prior Knowledge, Hook, Explore 3).
* Criterion #2.4: Grade 6, 7, 8, Homepage, Scope, 6D Earth, Sun, and Moon System, Assessing Prior Knowledge. Formative assessments are found in each scope, including Assessing Prior Knowledge.
* Criterion #2.5: Grade 6, 7, 8, Teacher Planning Companion (no page numbers in print copy). Each grade level has content to fill the 180 day instructional calendar.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3.1: Grade 8, Homepage, Scopes, 8D Physical Changes in Forced Motion, Evaluate, Claim–Evidence–Reasoning Assessments (CERs). Stemscopes includes CER Assessments that evaluate students by engaging in scientific discourse.
* Criterion #3.5: Grade 6, Homepage, Scopes, Segment Formation and Motion of Galaxies, Evaluate. Numerous types of assessments help teachers evaluate all students to see where they need intervention or where they are ready to accelerate.
* Criterion #3.8: Grade 7, Life Growth of Organisms, Explore 1, Claim–Evidence–Reasoning Assessments (CERs). There are numerous opportunities for assessment through both writing and performance tasks.
* Criterion #3.10: Grade 7, Student Notebook, pages 29–38, Evaluate, Intervention, Accelerate. Assessments tools include multiple measures of student performance, including engineering design, lab practical tasks, performance-based tasks, open-ended and short-answer essay responses, and oral presentations.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.1: Grade 7, Homepage, Segments, Teacher Toolbox. There is exemplary evidence in grade 7 of how the teacher resources provide support for a wide variety of student needs.
* Criterion #4.2: Grade 6, 7, 8, Homepage, Scopes, Teacher Toolbox: Middle School ELD Strategies Alignment (no page numbers). Supports for English learners are listed in each lesson.
* Criterion #4.3: Grade 6, 7, 8, Homepage, Scopes, Teacher Toolbox: Secondary Interventions Tab. Instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resource at every grade level.
* Criterion #4.4: Grade 7, Homepage, Scopes, Teacher Toolbox. Teacher resources for differentiation can be found in the Teacher Toolbox.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.1: Grade 6, Teacher Planning Companion (no page numbers in print copy): Segment 1 Earth and the Solar Systems. Organizes anchoring phenomena, scopes, and phenomena with instructional time teaches can use/follow when planning.
* Criterion #5.5: Grade 7, Homepage, Scopes, Flow of Energy in Ecosystems. Under the “Home” tab there are standards alignment. Also under the “Home” tab you will find resources under Teacher background.
* Criterion #5.10: Grade 7, Homepage, Scopes, Domain: Life Science, Cells, Home. Student resources do not explicitly state learning guides prior to instruction and instead introduce phenomenon and guiding questions to build the development of learning goals, for all scopes.
* Criterion #5.12: Grade 6, 7, 8 Homepage, Segments, Teacher Toolbox, Safety. The Toolbox provides safety standards for middle school. Additionally if one of the 5E sections requires materials, the section explicitly states what is needed.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption.

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | SE | p. 159 | CO2 | CO2 | Typo |
| 2 | 8 | SE | p. 6 | CaCO3 | CaCO3 | Typo |
| 3 | 8 | Student Notebook | p. 437 | n/a | p. 437 is duplicated on p. 439 | Typo |
| 4 | 8 | Student Notebook | p. 447 | A diver standing on top of a diving platform that is 20 m above the ground dives off the platform. | A diver standing on top of a diving platform that is 20 m above the pool dives off the platform. | Clumsy sentence. |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L.1. | 6 | Digital Teacher Material | Earth Explore 1 Materials | The materials list calls for the use of a “Thermos”. | Substitute “vacuum insulated container” for “Thermos.” | Brand names and corporate logos |
| 2 | L.1. | 6 | Digital Teacher Material | Geoscience Explore 1 Teacher Prep Video | Honey Maid crackers are displayed in the video. | Blur the label, or remove crackers from the box. | Brand names and corporate logos |
| 3 | L.1. | 6 | Digital Teacher Material | Geoscience Explore 2 Teacher Prep Video | Pillsbury frosting in the video. | Remove cover from the container. | Brand names and corporate logos |
| 4 | L.1. | 6 | Digital Teacher Material | Seafloor Explore 1 Teacher Prep Video | Sharpies in video. | Cover or blur logo. | Brand names and corporate logos |
| 5 | L.1. | 6 | Digital Teacher Material | Tectonics Explore 1–3 Teacher Prep Video | Nikon camera and Sharpies in the video. | Cover or blur logo. | Brand names and corporate logos |
| 6 | L.1. | 6 | Digital Teacher Material | Weather Explore 2 and 4 Teacher Prep Video | Google Search Engine, Macbook Air | Change to generic search engine, and cover logo. | Brand names and corporate logos |
| 7 | L.1. | 6 | Digital Teacher Material | Weather Explore 3 Teacher Prep Video | Coca-Cola can is displayed. | Cover or blur logo. | Brand names and corporate logos |
| 8 | L.1. | 6 | Digital Teacher Material | Ocean Currents Explore 2 Teacher Prep Video | Apple computer is displayed. | Cover or blur logo. | Brand names and corporate logos |
| 9 | L.1. | 6 | Digital Teacher Material | Influence of Weather Explore 1 Teacher Prep Video | Sharpies in video. | Cover or blur logo. | Brand names and corporate logos |
| 10 | L.1. | 6 | Digital Teacher Material | Human Dependence Explore 3 Teacher Prep Video | Google Search Engine, Macbook Air | Cover or blur logo. | Brand names and corporate logos |
| 11 | L.1. | 7 | Digital Teacher Material | Bodies and Systems Explore 2 Teacher Prep Video | Diet Coke and Ziploc logo displayed. | Cover or blur logo. | Brand names and corporate logos |
| 12 | L.1. | 7 | Digital Teacher Material | Energy Flow Explore 3 Teacher Prep Video | Diet Coke displayed. | Cover or blur logo. | Brand names and corporate logos |
| 13 | L.1. | 7 | Digital Teacher Material | Relationship Ecosystems Explore 2 Teacher Prep Video | Crayola markers displayed. | Cover or blur logo. | Brand names and corporate logos |
| 14 | L.1. | 7 | Digital Teacher Material | Inheritance Genetic Explore 4 Teacher Prep Video | Macbook Air is displayed. | Cover or blur logo. | Brand names and corporate logos |
| 15 | L.1. | 8 | Digital Teacher Material | Structure of Matter Explore 1 Teacher Prep Video | Elmer’s Glue is displayed. | Cover or blur logo. | Brand names and corporate logos |
| 16 | L.1. | 8 | Digital Teacher Material | Physical and Chemical Properties Teacher Prep Video | Kool-Aid and Karo Syrup are displayed. | Cover or blur logo. | Brand names and corporate logos |

### Activate Leaning, *IQWST California Edition*, Grades 6–8 (integrated)

#### Program Summary:

IQWST California Edition includes: Student Edition (SE), Teacher Edition (TE), Activity (A), Reading (R), Overview (OV), Teacher Portal (TP), Student Portal (SP).

#### Recommendation:

IQWST California Edition is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 6, Module 6.1 TE p. 5; Grade 7, Module 7.3 TE p. 10; Grade 8, Module 8.2 TE p. 6. There were numerous exemplars of the standards being fully covered in grades 6–8.
* Criterion #2: Grade 6, Module 6.2 SE pp. 49–62; Grade 7, Module 7.1 SE pp. 21–29; Grade 8, Module 8.1 SE pp. 1–20. Instructional resources engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS.
* Criterion #4: Grades 6–8, OV pp. 4, 12. Instructional resources progressively build students’ abilities to meet all grade-level Performance Expectations through a three-dimensional instructional sequence.
* Criterion #15: Grades 6–8, OV p. 62; Grade 6, Module 6.3 TE 4. Instructional resources examine humanity’s place in ecological systems and the necessity for the protection of the environment. Resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency.
* Criterion #18: Grades 6–8, OV p. 62; Grade 7, Module 7.2 TE p. 267. Instructional resources address the applications of science in the development of technologies and in fields such as agriculture, medicine, engineering, and environmental protection.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grades 6–8, OV pp. 9, 12, 13, 64, 65, 76; Grades 6–8, TE p. vii. Sequential organization provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
* Criterion #2: Grades 6–8, OV pp. 4, 8, 49, 70; Grade 6, Module 6.1 TE p. 3; Grade 7, Module 7.3 TE p. 7; Grade 8, Module 8.1 TE pp. 5, 17. Instructional resources support teacher questioning strategies as a tool to assess students' knowledge and skills, promote student-to-student discourse, and guide student learning.
* Criterion #5: Grade 6, Module 6.1 TE pp. vii, x, xi; Grade 7, Module 7.1 TE pp. vii, xi, 10; Grade 8, Module 8.1 TE pp. vii, x, 10. Instructional resources are grade-level specific and provide instructional content for 180 days of instruction for at least one daily class period and the necessary instructional time.
* Criterion #7: Grades 6–8, OV pp. 9, 12, 13, 17, 27, 28, 31; Grade 6, Module 6.2 TE p. 12; Grade 7, Module 7.1 TE p. 75; Grade 8, Module 8.2 TE p. 110. Resources include explanations regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the PEs of the CA NGSS.
* Criterion #13: Grades 6–8, OV pp. 3, 4, 9, 12, 13; Grades 6–8, TE p. vii. Student tasks, including end-of-chapter or culminating problems and exercises, are three-dimensional in nature and build in complexity throughout the year and across years.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3: Grade 6, Module 6.1 TE p. 46; Grade 7, Module 7.1 TE p. 21; Grade 8, Module 8.1 TE p. 33; Grades 6–8, OV p. 73. Teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities. Teacher materials provide guidance on how to embed formative assessment activities in the broader learning activity.
* Criterion #8: Grade 6, Module 6.3 TE p. 296; Grade 7, Module 7.1 TE p. 306; Grade 8, Module 8.3 TE p. 312. Assessments show students’ progress toward meeting the three-dimensions of the CA NGSS through both writing and performance tasks. Student written responses are consistent with the grade-level writing and mathematics requirements in the CA CCSS for ELA/Literacy and the CA CCSSM.
* Criterion #9: Grade 6, Module 6.1 TE p. 103; Grade 7, Module 7.1 TE p. 5; TP/Lesson Planning Resources/Assessment Bank Key; Teacher resources include student work expectations, analytical rubrics for scoring performance tasks, and examples of student work.
* Criterion #10: Grade 7, Module 7.4 TE p. 353; Grade 8, Module 8.2 TE p. 314. Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade 8, Module 8.2 TE 38. The instructional resources reflect the differentiation goals of Chapter 10: Access and Equity.
* Criterion #2: Grade 6, Module 6.1 TE p. 3. At every grade level, suggested lessons and teacher resources include a research-based strategy to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3: Grade 8, Module 8.1 TE p. ix. Across all grade levels instructional resources incorporate instructional strategies to address the needs of students with visual impairments.
* Criterion #4: Grade 6, Module 6.2 TE p. 2. Teacher resources supply a differentiated path for all students––special needs, English learners (standard and long term), students living in poverty, foster youth, girls and young women, advanced learners, and students with disabilities, below grade level in science, three-dimensional learning, literacy and mathematical skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #1: Grade 6-8, OV p. 66. Program resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.
* Criterion #2: Grade 6, TE p. x; Grade 7, TE p. xi; Grade 8, TE p. x. Teacher resources provide instructional time for each activity, lesson, chapter, and unit which allows for student engagement in the SEPs and engineering design projects.
* Criterion #7: Grade 6, Module 6.1 p. TE 17, SE p. 1; Grade 7, Module 7.1 TE p. 23, SE p. 1; Grade 8, Module 8.1 TE p. 35, SE p. 1. Teacher and student resources have correlating page numbers in print resources or corresponding references in electronic resources.
* Criterion #8: Grade 6-8, OV pp. 3, 13, 28–30. Teacher resources include a planning guide that describes the relationships between the components of the program and how to use all the components to meet all of the CA NGSS.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | n/a | Overview | p. 74 | “Access to on-line support” | “Access to online support” | Grammar and spelling |
| 2 | n/a | Overview | p. 78 | General Safety for Teachers – bullet #2 “f you will be using chemicals” | “If you will be using chemicals” | Grammar and spelling |
| 3 | n/a | Overview | p. 75 | One key way to use school library personnel is to have someone help students to understand when they can copy photographs or text from other sources using their URL extensions (.gov or.edu, for example) as a cue to their likely validity. | “One key way to use school library personnel is to have someone help students to understand when they can copy photographs or text from other sources using their URL extensions (.gov or.edu, for  example) as a cue to their likely validity, accuracy, and possible bias.” | Clarification |

#### Social Content Citations: None

### Amplify Education, Inc., Amplify Science: California Discipline Specific Course Model, Grades 6–8 (discipline specific)

#### Program Summary:

Amplify Science: California Discipline Specific Course Model includes: Amplify Science California: Discipline Specific Course Model includes: Digital Teacher’s Guide (DTG), Digital Student Library.

#### Recommendation:

Amplify Science: California Discipline Specific Course Model is recommended for adoption for 6–8d because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: DTG, Grade 6, Geology on Mars, Ch. 2, Lesson 2; Grade 7, Traits and Reproduction, Chapter 3, Lesson 2; Grade 8, Thermal Energy Unit, Chapter 2, Lesson 4. There are numerous exemplars of the standards being fully covered in grades 6, 7, and 8.
* Criterion #10: DTG, Grade 8, Thermal Energy, Ch. 2, Lesson 2.4, Activity 2; Grade 7, Metabolism, Ch.1. Lesson 1.2. The curriculum is enriched with opportunities for students to access informational texts and primary sources, simulations, and videos and presents examples of notable scientists and engineers throughout grades 6, 7, and 8.
* Criterion #11: Grade 6, Geology on Mars, Digital resources, Article Compilation, C1–C2 “Who Becomes a Space Scientist”; Grade 7, Matter and Energy in Ecosystems: Biodome Collapse, “Meet a Scientist Who Studies How Plants Find Water Underground.” The Amplify digital resources provided numerous examples of scientists with diverse backgrounds who have made important contributions to society through science and technology.
* Criterion #13: Grade 8, DTG, Light Waves: Ch. 1, Lesson 1.2, Activity 2–4; Grade 8, DTG, Thermal Energy: Ch. 4, Lesson 4.2, Activity 2-3, Science Seminar. There are examples of students being led in student-to-student discussions. We find that materials provide support for students to develop grade-level academic vocabulary and discipline-specific vocabulary through classroom discourse and grade-level appropriate text resources.
* Criterion #14: Grade 8, Magnetic Fields, Ch. 1, Lesson 1.2, Activity 5; Grade 6, Earth’s Changing Climate: Ch. 2, Lesson 2.2, Lesson Brief; Grade 7,Traits and Reproduction: Ch. 2, Lesson 2.1, Lesson Brief. There is evidence at all grade levels of the inclusion of teacher guidance to support all students, including language learners and non-standard English speakers, to develop their science vocabulary and reading abilities. The curriculum also includes multiple elements that commonly occur in science (text, diagrams, graphs and charts, etc.).

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Program Guide, Planning a Year, Scope and Sequence and Grade 6–8 grade-level builds; Grade 7, Matter and Energy in Ecosystems: Unit Guide, Planning for the Unit, Progress Builds. Both the program guide for the curriculum as a whole and the planning guides and progress build for each unit provide teachers with structure for student learning and sequential organization information for planning.
* Criterion #2: Grade 8, Force and Motion: Ch. 3, Lesson 3.2, Activity 4, Instructional Guide; Grade 7, Evolutionary History: Ch. 1, Lesson 1.3, Activity 2, On-the-Fly Assessment. The On-The-Fly Assessments and the Instructional Guides in Amplify support teacher questioning strategies as a tool to assess student skills and understanding and guide student learning.
* Criterion #4: Grade 7, Metabolism: Unit Guide, Teacher References, 3-D Statements; Grade 8, Thermal Energy: Ch. 1, Lesson 1.4, Activity 2, On-the-Fly Assessment. On-the-Fly Assessments help teachers make sense of students’ activity during a learning experience, elicit students’ thinking, and provide evidence of how students understand core concepts and develop dexterity with SEPs and CCCs. Each lesson is designed to engage students in three-dimensional learning, and teacher resources include detailed, step-by-step instructional guides, along with student materials, to support this aim.
* Criterion #8: Grade 6, Earth’s Changing Climate Internship. The phenomenon and the subsequent activities motivate and engage students in three-dimensional learning and scaffold and support students in developing explanations. This unit is an example of students building knowledge and abilities needed to achieve proficiency in multiple PEs.
* Criterion #9: Grade 6, Earth’s Changing Climate: Ch. 1, Lesson 1.5, Activity 2, screens 1–5 of 7, Instructional Guide, Student View Students analyze primary source data from NASA, NOAA, EPA, USGS, United Nations, and the Earth Policy Institute.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #5: Grade 7, Natural Selection: Unit Guide, Assessment System and Embedded Formative Assessments. Through a combination of On-the-Fly Assessments, Critical Juncture Assessments, and lesson level differentiation strategies, teachers have a variety of ways and supports to plan and modify instruction based on current student understanding, helping all students meet or exceed the standards. Based on the understanding of the progress students are making as revealed by formative assessments, teachers can further employ strategies in the Differentiation section found in each Lesson Brief, which provides instructional strategies to enable diverse learners to meet or, as appropriate, exceed standards.
* Criterion #8: Grade 6, Earth’s Changing Climate: Ch. 4, Lesson 4.3, Activity 2, Instructional Guide; Grade 7, Traits and Reproduction: Ch. 4, Lesson 4.2, Activity 3, Instructional Guide; Grade 8, Light Waves: Ch. 4, Lesson 4.2, Activity 3, Instructional Guide. Student progress is assessed through both writing and multidimensional performance tasks, which include written scientific explanations, argumentation, investigation and data analysis, developing and using models and designing solutions, computational thinking, asking questions, and defining problems. Expectations for student writing, mathematics, and computational thinking are aligned with grade-level expectations as described in the CA CCSS for ELA and CCSSM.
* Criteria #9: Grade 6, Weather Patterns: Chapter 4, Lesson 3 “Weather Patterns Rubric for Final Written Argument”; Grade 7, Microbiome, Ch. 2, Lesson 8, Digital Resources, End-of-Unit Assessment Scoring Guide. Instructional objectives for three-dimensional learning are explicitly stated and clearly identifiable in the rubrics.
* Criterion #11: Grade 7, Traits and Reproduction, Unit Guide, Assessment System, Program Guide pp. 40–52. There was evidence in the Program Guide to guide teachers on measuring literacy skills and instruction for teachers in the program guide.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade 7, Populations and Resources: Unit Guide, Teacher References, Opportunities for Unit Extensions; Grade 8, Chemical Reactions: Ch. 2, Lesson 2.3, Activity 5, screen 2 of 2, “Meet a Scientist Who Preserves Artwork.” The instructional resources reflect the goals of access and equity outlined in Chapter 10 of the CA Science Framework and are consistently found throughout the lessons.
* Criterion #2: Grade 6, Geology On Mars: Ch. 2, Lesson 2.2, Lesson Brief, Differentiation. At every grade level, suggested lessons and teacher resources include research-based strategies to address the needs of ELD learners.
* Criterion #3: Grade 8, Force and Motion: Ch. 1, Lesson 1.1, Lesson Brief**,** Differentiation. Instructional resources incorporate instructional strategies addressing the needs of students with disabilities.
* Criterion #4: Grade 7, Natural Selection: Ch. 2, Lesson 2.5, Lesson Brief**,** Digital Resources, Natural Selection Critical Juncture Assessment Answer Key and Scoring Guide. Teacher resources supply a differentiated path for all students.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5: Grade 6, Ocean, Atmosphere, and Climate Unit Guide, Teacher Reference, Standards and Goals; Grade 7, Traits and Reproduction, Unit Guide, Teacher Reference, Standards and Goals; Grade 8, Thermal Energy Unit Guide, Teacher Reference, Standards and Goals. The Unit Guides consistently provide background information for teachers about the three dimensions of learning with SEPs, CCCs, and DCIs.
* Criterion #6: Grade 6, Earth’s Changing Climate: Ch. 1, Lesson 1.5, Digital Resources, Activity 3, Instructional Guide, Each lesson has assessment keys and rubrics in the Digital Resources section of the Lesson Brief. Each Unit Guide includes an Assessment System section that describes the location of assessment opportunities and rubrics.
* Criterion #8: Grade 6, Weather Patterns: Unit Guide**,** Planning for the Unit, Materials and Preparation. Teacher resources include a planning guide that describes the relationship between all components of the Amplify program and CA NGSS.
* Criterion #21: Grades 6–8, Program Guide, An Integrated Science and Literacy Program, Academic Language and Vocabulary; Grade 6: Earth’s Changing Climate: Chapter 1, Lesson 4, Activity 4, Instructional Guide “Using the Word Relationships Routine to Reflect”; Grade 8, Phase Change: Chapter 4, Lesson 3, Instructional Guide “Participating in the Science Seminar.” The teacher resources provide guidance and support for engaging students in collaborative conversations using grade-level appropriate academic vocabulary for scientific discourse.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 7 | Natural Resources Selection Engineering Intern | Unit Overview | They a sequence | They determine a sequence | typo |
| 2 | 6 | Geology on Mars | Who Becames a Space Scientist | “Who Becames a Space Scientist” | “Who Becomes a Space Scientist” | typo |

#### Social Content Citations: None

### Amplify Education, Inc., Amplify Science: California integrated Course Model, Grades K–8 (integrated)

#### Program Summary:

Amplify Science: California integrated Course Model includes: Amplify Science California: Integrated Course Model includes: Digital Teacher’s Guide, Digital Student Library.

#### Recommendation:

Amplify Science: California integrated Course Model is recommended for adoption for K–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: The program instructional resources align to the CA NGSS at each grade level.

Grade Kindergarten, Needs of Plants and Animals, Standards and Goals [https://web.learning.amplify.com/#/unit/835d6a0c-de05-4670-a826cb81269d13c4\_5a8dcca8a8d1b1bd3600f603#standards-and-goals](https://web.learning.amplify.com/#/unit/835d6a0c-de05-4670-a826cb81269d13c4_5a8dcca8a8d1b1bd3600f603)

Grade 1, Animal and Plant Defenses, Standards and Goals <https://s3.amazonaws.com/amplify-pdfer-prod/8a31e0f9506c8fa2015269c55ff37873_californiaintegrated/20989/standards-at-a-glance.pdf>

Grade 2, Plant and Animal Relationships, Standards and Goals <https://s3.amazonaws.com/amplify-pdfer-prod/8a31e0dd4f40e85c014f4892a112225f_californiaintegrated/22870/standards-at-a-glance.pdf>

Grade 3, Balancing Forces, Standards and Goals <https://s3.amazonaws.com/amplify-pdfer-prod/8a80818e4c988f53014d2694c2e9396a_californiaintegrated/50708/standards-at-a-glance.pdf>

Grade 4, Energy Conversions, Standards and Goals <https://s3.amazonaws.com/amplify-pdfer-prod/8a31e0f9506c8fa2015269bf9dc2782f_californiaintegrated/28990/standards-at-a-glance.pdf>

Grade 5, Patterns of Earth and Sky, Standards and Goals <https://s3.amazonaws.com/amplify-pdfer-prod/8a31e0dd4f40e85c014f489f79d2233b_californiaintegrated/25322/standards-at-a-glance.pdf>

Grade 6, Microbiome, Standards and Goals <https://s3.amazonaws.com/amplify-pdfer-prod/8a80818e476a01ed0148a3fd771a5118_californiaintegrated/40009/standards-at-a-glance.pdf>

Grade 7, Geology on Mars, Standards and Goals <https://s3.amazonaws.com/amplify-pdfer-prod/8a80818e4c988f53014d9222817c046b_californiaintegrated/40131/standards-at-a-glance.pdf>

Grade 8, Harnessing Human Energy, Standards and Goals <https://s3.amazonaws.com/amplify-pdfer-prod/8a31e0f9506c8fa20151aba2eb020cef_californiaintegrated/26638/standards-at-a-glance.pdf>

* Criterion #3: The program instructional resources reflect Science and Engineering Practices in multiple contexts and the Cross Cutting Concepts.

Grade 3, Balancing Forces, Chapter 5, Lesson 1, Activity 3, Instructional Guide [https://web.learning.amplify.com/#/unit/8a80818e4c988f53014d2694c2e9396a\_californiaintegrated/chapter/ff8080816102f7dc0161200d1be8501e\_californiaintegrated/lesson/8a80818e4c988f53014d2694c35f3d12\_californiaintegrated/cardstack/8a80818e4e066ab2014e227e54843c05\_californiaintegrated?cardkey=8a80818e4e066ab2014e228306dc3c23\_californiaintegrated&tgActive=guide](https://web.learning.amplify.com/%23/unit/8a80818e4c988f53014d2694c2e9396a_californiaintegrated/chapter/ff8080816102f7dc0161200d1be8501e_californiaintegrated/lesson/8a80818e4c988f53014d2694c35f3d12_californiaintegrated/cardstack/8a80818e4e066ab2014e227e54843c05_californiaintegrated?cardkey=8a80818e4e066ab2014e228306dc3c23_californiaintegrated&tgActive=guide)

Grade 7, Population and Resources, Chapter 1, Lesson 4, Activity 1, Instructional Guide [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa201525f8b19276421\_californiaintegrated/chapter/ff80808156991d150158400513f3564b\_californiaintegrated/lesson/ff80808156991d1501584a8e30765fd0\_californiaintegrated/cardstack/ff80808156991d1501584aa74f766068\_californiaintegrated?cardkey=ff80808156991d1501584aa89ccb607e\_californiaintegrated&tgActive=guide](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa201525f8b19276421_californiaintegrated/chapter/ff80808156991d150158400513f3564b_californiaintegrated/lesson/ff80808156991d1501584a8e30765fd0_californiaintegrated/cardstack/ff80808156991d1501584aa74f766068_californiaintegrated?cardkey=ff80808156991d1501584aa89ccb607e_californiaintegrated&tgActive=guide)

* Criterion #5: The program teacher resources support instructional opportunities and assessments that engage students in three-dimensional learning.

Grade 1, Light and Sound, Unit Guide, Embedded Formative Assessments <https://s3.amazonaws.com/amplify-pdfer-prod/8a31e0f9506c8fa2015279b19c077f0e_californiaintegrated/21461/on-the-fly-assessments.pdf>

Grade 5, Patterns of Earth and Sky, Chapter 3, Lesson 5, Activity 1, Instructional Guide [https://web.learning.amplify.com/#/unit/8a31e0dd4f40e85c014f489f79d2233b\_californiaintegrated/chapter/ff808081586e7a150158d12be90b379d\_californiaintegrated/lesson/ff808081586e7a150158d16af4ae3987\_californiaintegrated/cardstack/ff80808159d73272015a4eaea7405344\_californiaintegrated?cardkey=ff80808159d73272015a4eb04ac75356\_californiaintegrated&tgActive=guide](https://web.learning.amplify.com/%23/unit/8a31e0dd4f40e85c014f489f79d2233b_californiaintegrated/chapter/ff808081586e7a150158d12be90b379d_californiaintegrated/lesson/ff808081586e7a150158d16af4ae3987_californiaintegrated/cardstack/ff80808159d73272015a4eaea7405344_californiaintegrated?cardkey=ff80808159d73272015a4eb04ac75356_californiaintegrated&tgActive=guide)

Grade 8, Natural Selection, Chapter 2, Lesson 4, Activity 2, Instructional Guide [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa201525f8c6e5c644d\_californiaintegrated/chapter/ff8080815651e77401565715262a0612\_californiaintegrated/lesson/ff808081566b7c1801566c3c47fe07db\_californiaintegrated/cardstack/ff808081566b7c18015670038cc70d46\_californiaintegrated?cardkey=ff808081566b7c1801567006a9c30d95\_californiaintegrated&lfActive=true](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa201525f8c6e5c644d_californiaintegrated/chapter/ff8080815651e77401565715262a0612_californiaintegrated/lesson/ff808081566b7c1801566c3c47fe07db_californiaintegrated/cardstack/ff808081566b7c18015670038cc70d46_californiaintegrated?cardkey=ff808081566b7c1801567006a9c30d95_californiaintegrated&lfActive=true)

* Criterion #10: The program science curriculum is enriched with opportunities for students to access informational texts, literature, simulations and other media related to science and engineering and it presents diverse examples of notable scientists and engineers.

Grade Kindergarten, Needs of Plants and Animals, Chapter 1, Lesson 1, Activities 1-4, Book: What Does a Scientist Look Like?

Grade 6, Earth’s Changing Climate, Chapter 1, Lesson 2, Instructional Guide [https://web.learning.amplify.com/#/unit/8a80818e4a782c80014ad02cfd366f5c\_californiaintegrated/chapter/8a80818e4a782c80014ad02e20b66f70\_californiaintegrated/lesson/8a80818e4a782c80014ae49353743151\_californiaintegrated/cardstack/8a80818e4a782c80014ae4ee8b53359c\_californiaintegrated?cardkey=8a80818e4a782c80014ae5150d5b37e2\_californiaintegrated](https://web.learning.amplify.com/%23/unit/8a80818e4a782c80014ad02cfd366f5c_californiaintegrated/chapter/8a80818e4a782c80014ad02e20b66f70_californiaintegrated/lesson/8a80818e4a782c80014ae49353743151_californiaintegrated/cardstack/8a80818e4a782c80014ae4ee8b53359c_californiaintegrated?cardkey=8a80818e4a782c80014ae5150d5b37e2_californiaintegrated)

* Criterion #14: The program teacher resources provide guidance to support all students at all grade levels to develop their science-related language and reading abilities.

Program Guide, Program Supports and Strategies <https://www.amplify.com/science/california/review/content/program-supports-and-strategies/integrated-model/>

Grade 2, Plant and Animal Relationships, Chapter 2, Lesson 2, Lesson Brief, Differentiation [https://web.learning.amplify.com/#/unit/8a31e0dd4f40e85c014f4892a112225f\_californiaintegrated/chapter/ff8080815904817c01598a886750631e\_californiaintegrated/lesson/ff8080815a81104f015b120fe46a30b2\_californiaintegrated](https://web.learning.amplify.com/%23/unit/8a31e0dd4f40e85c014f4892a112225f_californiaintegrated/chapter/ff8080815904817c01598a886750631e_californiaintegrated/lesson/ff8080815a81104f015b120fe46a30b2_californiaintegrated)

Grade 4, Waves, Energy, and Information, Ch. 1, Lesson 1.3, Activity 1, Instructional Guide, Differentiation [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa2015269c008387845\_californiaintegrated/chapter/8a31e0f953241239015367aad6ef51cc\_californiaintegrated/lesson/8a31e0f95324123901539f8b73da04da\_californiaintegrated](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa2015269c008387845_californiaintegrated/chapter/8a31e0f953241239015367aad6ef51cc_californiaintegrated/lesson/8a31e0f95324123901539f8b73da04da_californiaintegrated)

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2: The program has evidence in all grades where the materials support teacher questioning strategies as a tool to assess student’s knowledge and skills, promote student-to-student discourse, and guide student learning.

Grade K, Pushes and Pulls, Ch. 6, lesson 3, Unit Assessment [https://web.learning.amplify.com/#/unit/09f581e7-2748-42fa-9dc9-367348e2b69b\_5a8dcca8a8d1b1bd3600f603/chapter/8b292285-b14e-478b-97ef-95ceceeeb5e6\_5a8dcca8a8d1b1bd3600f603/lesson/e5414c65-f8a8-4702-ae39-b78a92139923\_5a8dcca8a8d1b1bd3600f603](https://web.learning.amplify.com/%23/unit/09f581e7-2748-42fa-9dc9-367348e2b69b_5a8dcca8a8d1b1bd3600f603/chapter/8b292285-b14e-478b-97ef-95ceceeeb5e6_5a8dcca8a8d1b1bd3600f603/lesson/e5414c65-f8a8-4702-ae39-b78a92139923_5a8dcca8a8d1b1bd3600f603)

Grade 4, Energy Conversions, Ch. 3, lesson 1, Shared listening routine [https://web.learning.amplify.com/#/unit/78a8ec2f-59bc-400f-ac92-20f54df2bcea\_5a8dcca8a8d1b1bd3600f607/chapter/13883be6-2fc6-4413-b1ed-c2a311c9ca10\_5a8dcca8a8d1b1bd3600f607/lesson/178323d0-b10e-4347-8f74-91d6776958c8\_5a8dcca8a8d1b1bd3600f607](https://web.learning.amplify.com/%23/unit/78a8ec2f-59bc-400f-ac92-20f54df2bcea_5a8dcca8a8d1b1bd3600f607/chapter/13883be6-2fc6-4413-b1ed-c2a311c9ca10_5a8dcca8a8d1b1bd3600f607/lesson/178323d0-b10e-4347-8f74-91d6776958c8_5a8dcca8a8d1b1bd3600f607)

Grade 6, Traits and Reproduction, Ch. 4, lesson 2, Seminar [https://web.learning.amplify.com/#/unit/78466d79-2d51-41aa-889a-3ed0c8e62aab\_5a8dcca8a8d1b1bd3600f609/chapter/6c5ecb63-c463-4565-bfa8-c27ad4f65d2e\_5a8dcca8a8d1b1bd3600f609/lesson/1520e8c3-78ce-4f21-aff5-f84d9426bdc8\_5a8dcca8a8d1b1bd3600f609](https://web.learning.amplify.com/%23/unit/78466d79-2d51-41aa-889a-3ed0c8e62aab_5a8dcca8a8d1b1bd3600f609/chapter/6c5ecb63-c463-4565-bfa8-c27ad4f65d2e_5a8dcca8a8d1b1bd3600f609/lesson/1520e8c3-78ce-4f21-aff5-f84d9426bdc8_5a8dcca8a8d1b1bd3600f609)

* Criterion #3: The program has evidence in all grades where instructional resources explicitly state the knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.

Grade 1, Spinning Earth, Unit Guide, Standards and Goals [https://web.learning.amplify.com/#/unit/59ca8afe-7169-4f8f-84af-7a3db1a65f8e\_5a8dcca8a8d1b1bd3600f604](https://web.learning.amplify.com/%23/unit/59ca8afe-7169-4f8f-84af-7a3db1a65f8e_5a8dcca8a8d1b1bd3600f604)

Grade 7, Geology on Mars, Unit Guide, Science Background [https://web.learning.amplify.com/#/unit/ae850f5b-fd2b-402c-8555-7c5dcdd44537\_5a8dcca8a8d1b1bd3600f60a](https://web.learning.amplify.com/%23/unit/ae850f5b-fd2b-402c-8555-7c5dcdd44537_5a8dcca8a8d1b1bd3600f60a)

* Criterion #7: Anchor Phenomena is listed for each grade level and each unit. The materials include explanations to teachers regarding how the SEP’s, DCI’s, and CCC’s work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the Performance Expectations (PE’s) of the CA NGSS.

Program Guide, Grade 2 <https://www.amplify.com/science/california/review/content/unit-phenomena-and-performance-expectations/grade-2/integrated-model/>

Grade 3, Inheritance and Traits, Unit Overview, Standards at a Glance [https://web.learning.amplify.com/#/unit/0db38b6c-b80f-43ad-82ee-ab810e306c63\_5a8dcca8a8d1b1bd3600f606](https://web.learning.amplify.com/%23/unit/0db38b6c-b80f-43ad-82ee-ab810e306c63_5a8dcca8a8d1b1bd3600f606)

Grade 8, Unit Overview, Forces and Motion, Unit Overview, Standards and Goals [https://web.learning.amplify.com/#/unit/687cd1d8-7c03-4fbc-95c3-590df7a6a558\_5a8dcca8a8d1b1bd3600f60b](https://web.learning.amplify.com/%23/unit/687cd1d8-7c03-4fbc-95c3-590df7a6a558_5a8dcca8a8d1b1bd3600f60b)

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #2: Instructional resources engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the Science and Engineering Practices (SEPs), Crosscutting Concepts (CCCs), and DCIs.

Grade 2, Changing Landforms: Ch. 1, Lesson 1.1, Activity 2, Instructional Guide and <http://on.amplify.com/CA18I-2ES-CH1-L1-A2-ig>, and Lesson Brief, <https://assets-prdd.learning.amplify.com/damAssets/48f1a67d-801e-40bc-abec-50bb91b941c6/f92089df-f2ca-48f8-90f5-b7f8303798a0/CL_AssessmentGuideInterpretingStudentsPreUnitExplanationsAbouttheArch.pdf> and Unit Guide, [https://web.learning.amplify.com/#/unit/8a31e0dd4f40e85c014f489dfc3f22f9\_californiaintegrated#assessment-system](https://web.learning.amplify.com/%23/unit/8a31e0dd4f40e85c014f489dfc3f22f9_californiaintegrated%23assessment-system)

Grade 4, Energy Conversions Ch. 1, Lesson 1.3, Activity 3, On-the-fly Assessment [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa2015269bf9dc2782f\_californiaintegrated/chapter/8a31e0f9506c8fa2015279e8906a7fa2\_californiaintegrated/lesson/8a31e0f9506c8fa201527a814d6e03e6\_californiaintegrated/cardstack/8a31e0f9506c8fa201527abfe07a0601\_californiaintegrated?cardkey=8a31e0f9506c8fa201527ad14cb40692\_californiaintegrated&lfActive=true](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa2015269bf9dc2782f_californiaintegrated/chapter/8a31e0f9506c8fa2015279e8906a7fa2_californiaintegrated/lesson/8a31e0f9506c8fa201527a814d6e03e6_californiaintegrated/cardstack/8a31e0f9506c8fa201527abfe07a0601_californiaintegrated?cardkey=8a31e0f9506c8fa201527ad14cb40692_californiaintegrated&lfActive=true)

Criterion #4: Brief formative assessment tools provide teachers with strategies of how to address preconceptions during instruction. These strategies are differentiated for different age levels.

Grade K, Pushes and Pulls, Ch. 4, Lesson 4.3, Activity 2, Critical Juncture Assessment [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa2015269b9ae1977f4\_californiaintegrated/chapter/ff80808154ce31c9015516db556d62f9\_californiaintegrated/lesson/ff80808154ce31c9015517694fdf66c3\_californiaintegrated/cardstack/ff80808154ce31c90155180da7d367f5\_californiaintegrated?cardkey=ff80808154ce31c901551812c3ff6825\_californiaintegrated&lfActive=true](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa2015269b9ae1977f4_californiaintegrated/chapter/ff80808154ce31c9015516db556d62f9_californiaintegrated/lesson/ff80808154ce31c9015517694fdf66c3_californiaintegrated/cardstack/ff80808154ce31c90155180da7d367f5_californiaintegrated?cardkey=ff80808154ce31c901551812c3ff6825_californiaintegrated&lfActive=true)

Grade 5, Patterns of Earth and Sky: Unit Guide [https://web.learning.amplify.com/#/unit/8a31e0dd4f40e85c014f489f79d2233b\_californiaintegrated#assessment-system](https://web.learning.amplify.com/%23/unit/8a31e0dd4f40e85c014f489f79d2233b_californiaintegrated%23assessment-system)

* Criterion #5: Assessments yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards.

Grade 5, Patterns of Earth and Sky: Ch. 1, Lesson 1.7, Activity 3, Critical Juncture Assessment [https://web.learning.amplify.com/#/unit/8a31e0dd4f40e85c014f489f79d2233b\_californiaintegrated/chapter/ff808081586e7a150158d124f8853767\_californiaintegrated/lesson/ff808081586e7a150158d1473acd3824\_californiaintegrated/cardstack/ff8080815904817c0159cd4f801b07ec\_californiaintegrated?cardkey=ff8080815904817c0159cd50373f0802\_californiaintegrated&lfActive=true](https://web.learning.amplify.com/%23/unit/8a31e0dd4f40e85c014f489f79d2233b_californiaintegrated/chapter/ff808081586e7a150158d124f8853767_californiaintegrated/lesson/ff808081586e7a150158d1473acd3824_californiaintegrated/cardstack/ff8080815904817c0159cd4f801b07ec_californiaintegrated?cardkey=ff8080815904817c0159cd50373f0802_californiaintegrated&lfActive=true)

Grade 8, Natural Selection, Ch. 1, Lesson 1.3, Activity 4, On-the-Fly Assessment [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa201525f8c6e5c644d\_californiaintegrated/chapter/ff808081563442ce0156474082713a89\_californiaintegrated/lesson/ff808081563442ce015647c29ef83d4d\_californiaintegrated/cardstack/ff808081563442ce01564819d69f3f20\_californiaintegrated?cardkey=ff808081563442ce0156481df5ae3f4e\_californiaintegrated&lfActive=true](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa201525f8c6e5c644d_californiaintegrated/chapter/ff808081563442ce0156474082713a89_californiaintegrated/lesson/ff808081563442ce015647c29ef83d4d_californiaintegrated/cardstack/ff808081563442ce01564819d69f3f20_californiaintegrated?cardkey=ff808081563442ce0156481df5ae3f4e_californiaintegrated&lfActive=true)

* Criterion #8: Students’ progress toward meeting the CA NGSS is assessed through both writing and performance tasks consistent with the grade-level writing and mathematics requirements in the CA CCSS for ELA/Literacy and the CA CCSSM.

Grade 3, Weather and Climate: Ch. 4, Lesson 4.4, Activity 1, Instructional Guide [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa2015269ce3b1378cd\_californiaintegrated/chapter/ff8080815a81104f015b029144a11ea4\_californiaintegrated/lesson/ff8080815a81104f015b5e15991a15cd\_californiaintegrated/cardstack/ff8080815a81104f015b5e15993115db\_californiaintegrated?cardkey=ff8080815c5f6386015c6a199b5c1fb5\_californiaintegrated&tgActive=guide](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa2015269ce3b1378cd_californiaintegrated/chapter/ff8080815a81104f015b029144a11ea4_californiaintegrated/lesson/ff8080815a81104f015b5e15991a15cd_californiaintegrated/cardstack/ff8080815a81104f015b5e15993115db_californiaintegrated?cardkey=ff8080815c5f6386015c6a199b5c1fb5_californiaintegrated&tgActive=guide)

Grade 6, Earth’s Changing Climate: Ch. 4, Lesson 4.3, Activity 2, Instructional Guide [https://web.learning.amplify.com/#/unit/8a80818e4a782c80014ad02cfd366f5c\_californiaintegrated/chapter/8a80818e4a782c80014b14b0d5b62482\_californiaintegrated/lesson/8a80818e4a782c80014b1805a1882e88\_californiaintegrated/cardstack/8a80818e4a782c80014b181572712f41\_californiaintegrated?cardkey=8a80818e4a782c80014b18238d182fae\_californiaintegrated&tgActive=guide](https://web.learning.amplify.com/%23/unit/8a80818e4a782c80014ad02cfd366f5c_californiaintegrated/chapter/8a80818e4a782c80014b14b0d5b62482_californiaintegrated/lesson/8a80818e4a782c80014b1805a1882e88_californiaintegrated/cardstack/8a80818e4a782c80014b181572712f41_californiaintegrated?cardkey=8a80818e4a782c80014b18238d182fae_californiaintegrated&tgActive=guide)

* Criterion #10: Assessment tools include multiple measures, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.

Grade 1, Light and Sound, Ch. 3, Lesson 3.4, Activity 2, Instructional Guide [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa2015279b19c077f0e\_californiaintegrated/chapter/8a31e0f95324123901539f7b4e7e0443\_californiaintegrated/lesson/8a31e0f9532412390153ec9f048c6c6f\_californiaintegrated/cardstack/8a31e0f9532412390153ecb7ed57711b\_californiaintegrated?cardkey=8a31e0f9532412390153ecbfef827178\_californiaintegrated&tgActive=guide](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa2015279b19c077f0e_californiaintegrated/chapter/8a31e0f95324123901539f7b4e7e0443_californiaintegrated/lesson/8a31e0f9532412390153ec9f048c6c6f_californiaintegrated/cardstack/8a31e0f9532412390153ecb7ed57711b_californiaintegrated?cardkey=8a31e0f9532412390153ecbfef827178_californiaintegrated&tgActive=guide)

Grade 7, Matter and Energy in Ecosystems: Ch. 4, Lesson 4.4, Activity 3, Instructional Guide [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa201523180a29f2665\_californiaintegrated/chapter/8a31e0f9506c8fa20152c30918aa4c22\_californiaintegrated/lesson/8a31e0f9532412390153809a99a26319\_californiaintegrated/cardstack/8a31e0f953fbbe1101543f41af567b47\_californiaintegrated?cardkey=8a31e0f953fbbe1101543f41af607b48\_californiaintegrated&tgActive=guide](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa201523180a29f2665_californiaintegrated/chapter/8a31e0f9506c8fa20152c30918aa4c22_californiaintegrated/lesson/8a31e0f9532412390153809a99a26319_californiaintegrated/cardstack/8a31e0f953fbbe1101543f41af567b47_californiaintegrated?cardkey=8a31e0f953fbbe1101543f41af607b48_californiaintegrated&tgActive=guide)

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #3: The integrated program allows teachers to address needs of English learners by providing different reading strategies.
* Grade 1, Ch. 1, Lesson 1.1, Lesson Brief, [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa2015269c55ff37873\_californiaintegrated/chapter/ff8080815a81104f015ab9338ad7321e\_californiaintegrated/lesson/ff8080815a81104f015ab937c1493230\_californiaintegrated](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa2015269c55ff37873_californiaintegrated/chapter/ff8080815a81104f015ab9338ad7321e_californiaintegrated/lesson/ff8080815a81104f015ab937c1493230_californiaintegrated)
* Grade 8, Ch. 1, Lesson 1.1, Lesson Brief, [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa2015269c55ff37873\_californiaintegrated/chapter/ff8080815a81104f015ab9338ad7321e\_californiaintegrated/lesson/ff8080815a81104f015ab937c1493230\_californiaintegrated](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa2015269c55ff37873_californiaintegrated/chapter/ff8080815a81104f015ab9338ad7321e_californiaintegrated/lesson/ff8080815a81104f015ab937c1493230_californiaintegrated)
* Criterion #4: The integrated program allows teachers to address needs of English learners by providing different reading strategies. The unit overviews and lesson briefs show teachers how to address academic vocabulary and literacy skills for English learners. The program provides differentiation for English learners, learners who need deeper supports, and those that need more challenge.
* Grade 3, Ch. 1.1, Lesson Brief, [https://web.learning.amplify.com/#/unit/8a31e0f9506c8fa2015269ce3b1378cd\_californiaintegrated/chapter/ff8080815a81104f015b028de9451e15\_californiaintegrated/lesson/ff8080815a81104f015b35ce692e58fd\_californiaintegrated](https://web.learning.amplify.com/%23/unit/8a31e0f9506c8fa2015269ce3b1378cd_californiaintegrated/chapter/ff8080815a81104f015b028de9451e15_californiaintegrated/lesson/ff8080815a81104f015b35ce692e58fd_californiaintegrated)
* Grade 6, Unit Overview, Getting Ready to Teach, Ocean, Atmosphere and Climate, [https://web.learning.amplify.com/#/unit/2d1244fc-3801-47ac-b93e-a2c42a97a851\_5a8dcca8a8d1b1bd3600f609/chapter/b3f37745-f18d-422a-859e-392a0efe3aa9\_5a8dcca8a8d1b1bd3600f609#getting-ready-to-teach](https://web.learning.amplify.com/%23/unit/2d1244fc-3801-47ac-b93e-a2c42a97a851_5a8dcca8a8d1b1bd3600f609/chapter/b3f37745-f18d-422a-859e-392a0efe3aa9_5a8dcca8a8d1b1bd3600f609%23getting-ready-to-teach)
* Grade 7, Geology on Mars, Lesson 1.3, Lesson Overview [https://web.learning.amplify.com/#/unit/ae850f5b-fd2b-402c-8555-7c5dcdd44537\_5a8dcca8a8d1b1bd3600f60a/chapter/099ff8f8-ea88-412c-8cf2-6bce5294351f\_5a8dcca8a8d1b1bd3600f60a/lesson/f2dd97a2-bd7f-40f6-9460-ecb16be82760\_5a8dcca8a8d1b1bd3600f60a?cardkey=1c72f0dc-0d1f-42b0-908c-4db59c11fcc4\_5a8dcca8a8d1b1bd3600f60a](https://web.learning.amplify.com/%23/unit/ae850f5b-fd2b-402c-8555-7c5dcdd44537_5a8dcca8a8d1b1bd3600f60a/chapter/099ff8f8-ea88-412c-8cf2-6bce5294351f_5a8dcca8a8d1b1bd3600f60a/lesson/f2dd97a2-bd7f-40f6-9460-ecb16be82760_5a8dcca8a8d1b1bd3600f60a?cardkey=1c72f0dc-0d1f-42b0-908c-4db59c11fcc4_5a8dcca8a8d1b1bd3600f60a)

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #3: Grades 2 and 6 are exemplars of how the teacher resources provide guidance in daily lessons and units of instructions through the Lesson Briefs. Appropriate opportunities for checking for understanding and adjusting lessons, if necessary, to ensure three dimensional learning are found in the On-The-Fly assessments.

Grade 3, Inheritance and Traits, Chap.4 lesson 2, Lesson Brief [https://web.learning.amplify.com/#/unit/0db38b6c-b80f-43ad82eeab810e306c63\_5a8dcca8a8d1b1bd3600f606/chapter/1f106da7d8154e5f8d4201d5bea6888c\_5a8dcca8a8d1b1bd3600f606/lesson/a3a7fd4029015ee9568515613f32e89\_5a8dcca8a8d1b1bd3600f606](https://web.learning.amplify.com/%23/unit/0db38b6c-b80f-43ad82eeab810e306c63_5a8dcca8a8d1b1bd3600f606/chapter/1f106da7d8154e5f8d4201d5bea6888c_5a8dcca8a8d1b1bd3600f606/lesson/a3a7fd4029015ee9568515613f32e89_5a8dcca8a8d1b1bd3600f606)

and On-The-Fly Assessments for Inheritance and Traits, Chap.2 Lesson 5 [https://web.learning.amplify.com/#/unit/0db38b6c-b80f-43ad-82ee-ab810e306c63\_5a8dcca8a8d1b1bd3600f606/chapter/78a04c9b-21ea42188338ec17eae4b596\_5a8dcca8a8d1b1bd3600f606/lesson/c3a59afb7d1b4429bf8f3c214ddb8db7\_5a8dcca8a8d1b1bd3600f606/cardstack/d3592c1259494731889a830b9ed4e9e2\_5a8dcca8a8d1b1bd3600f606?cardkey=bc339608-d7c9-42a5-b6d6-af65fbdd3438\_5a8dcca8a8d1b1bd3600f606](https://web.learning.amplify.com/%23/unit/0db38b6c-b80f-43ad-82ee-ab810e306c63_5a8dcca8a8d1b1bd3600f606/chapter/78a04c9b-21ea42188338ec17eae4b596_5a8dcca8a8d1b1bd3600f606/lesson/c3a59afb7d1b4429bf8f3c214ddb8db7_5a8dcca8a8d1b1bd3600f606/cardstack/d3592c1259494731889a830b9ed4e9e2_5a8dcca8a8d1b1bd3600f606?cardkey=bc339608-d7c9-42a5-b6d6-af65fbdd3438_5a8dcca8a8d1b1bd3600f606)

Grade 6, Ocean Atmosphere and Climate, Chap.2, Lesson 1, Lesson Brief [https://web.learning.amplify.com/#/unit/2d1244fc-3801-47acb93ea2c42a97a851\_5a8dcca8a8d1b1bd3600f609/chapter/b3f37745f18d422a859e392a0efe3aa9\_5a8dcca8a8d1b1bd3600f609/lesson/51f43485298a461991f30785308e3f40\_5a8dcca8a8d1b1bd3600f609?cardkey=9ed9b46c29c84c9da1013de70f3cd343\_5a8dcca8a8d1b1bd3600f609](https://web.learning.amplify.com/%23/unit/2d1244fc-3801-47acb93ea2c42a97a851_5a8dcca8a8d1b1bd3600f609/chapter/b3f37745f18d422a859e392a0efe3aa9_5a8dcca8a8d1b1bd3600f609/lesson/51f43485298a461991f30785308e3f40_5a8dcca8a8d1b1bd3600f609?cardkey=9ed9b46c29c84c9da1013de70f3cd343_5a8dcca8a8d1b1bd3600f609)

and On-The-Fly Assessments for Ocean Atmosphere and Climate, Chap.2, Lesson 1.2 [https://web.learning.amplify.com/#/unit/2d1244fc-3801-47ac-b93e-a2c42a97a851\_5a8dcca8a8d1b1bd3600f609/chapter/b3f37745-f18d-422a859e392a0efe3aa9\_5a8dcca8a8d1b1bd3600f609/lesson/51f4485298a461991f30785308e3f40\_5a8dcca8a8d1b1bd3600f609/cardstack/93d4b42883ec43859dbeba583adbaf7c\_5a8dcca8a8d1b1bd3600f609?cardkey=9ed9b46c-29c8-4c9d-a101-3de70f3cd343\_5a8dcca8a8d1b1bd3600f609](https://web.learning.amplify.com/%23/unit/2d1244fc-3801-47ac-b93e-a2c42a97a851_5a8dcca8a8d1b1bd3600f609/chapter/b3f37745-f18d-422a859e392a0efe3aa9_5a8dcca8a8d1b1bd3600f609/lesson/51f4485298a461991f30785308e3f40_5a8dcca8a8d1b1bd3600f609/cardstack/93d4b42883ec43859dbeba583adbaf7c_5a8dcca8a8d1b1bd3600f609?cardkey=9ed9b46c-29c8-4c9d-a101-3de70f3cd343_5a8dcca8a8d1b1bd3600f609)

* Category #6: Grades 1 and 7 are exemplars of how suggested student tasks, including classroom activities, end of chapter tasks, suggested out of school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Possible responses, assessment keys, and rubrics are provided.

Grade 1, Spinning Earth, Ch. 4, Lesson 4.2, Activity 4 [https://web.learning.amplify.com/#/unit/59ca8afe-7169-4f8f-84af-7a3db1a65f8e\_5a8dcca8a8d1b1bd3600f604/chapter/92f44537-4a0c-4947-8d4e-2704255d1384\_5a8dcca8a8d1b1bd3600f604/lesson/3b0dd5c0-2901-424e-8464-b9530d6884b5\_5a8dcca8a8d1b1bd3600f604/cardstack/7e641cdb-9b6f-4713-b3a6-a576a588be9c\_5a8dcca8a8d1b1bd3600f604?cardkey=1900843b-3fe9-4fce-8b10-1315abf1108b\_5a8dcca8a8d1b1bd3600f604](https://web.learning.amplify.com/%23/unit/59ca8afe-7169-4f8f-84af-7a3db1a65f8e_5a8dcca8a8d1b1bd3600f604/chapter/92f44537-4a0c-4947-8d4e-2704255d1384_5a8dcca8a8d1b1bd3600f604/lesson/3b0dd5c0-2901-424e-8464-b9530d6884b5_5a8dcca8a8d1b1bd3600f604/cardstack/7e641cdb-9b6f-4713-b3a6-a576a588be9c_5a8dcca8a8d1b1bd3600f604?cardkey=1900843b-3fe9-4fce-8b10-1315abf1108b_5a8dcca8a8d1b1bd3600f604)

Grade 7, Matter and Energy in Ecosystems, Ch. 3, Lesson 3.4, Activity 3 [https://web.learning.amplify.com/#/unit/7436ca5b-a855-48af-b235-1c68abff83d3\_5a8dcca8a8d1b1bd3600f60a/chapter/bb01d4e3-b434-4011-ad45-285a7fd18b5d\_5a8dcca8a8d1b1bd3600f60a/lesson/f1309c36-b4d0-4e80-8b1b-89b3a2639d3b\_5a8dcca8a8d1b1bd3600f60a/cardstack/7ac09e1e-bbd7-457b-be80-39628ea66eb6\_5a8dcca8a8d1b1bd3600f60a?cardkey=b65f2212-cba1-4bf9-9902-9f2e1b073049\_5a8dcca8a8d1b1bd3600f60a](https://web.learning.amplify.com/%23/unit/7436ca5b-a855-48af-b235-1c68abff83d3_5a8dcca8a8d1b1bd3600f60a/chapter/bb01d4e3-b434-4011-ad45-285a7fd18b5d_5a8dcca8a8d1b1bd3600f60a/lesson/f1309c36-b4d0-4e80-8b1b-89b3a2639d3b_5a8dcca8a8d1b1bd3600f60a/cardstack/7ac09e1e-bbd7-457b-be80-39628ea66eb6_5a8dcca8a8d1b1bd3600f60a?cardkey=b65f2212-cba1-4bf9-9902-9f2e1b073049_5a8dcca8a8d1b1bd3600f60a)

* Criterion #11: Grades 1 and 8 provide examples of instructional strategies aligned to the CA NGSS and CA Science Framework and based on current and confirmed research. These resources are clearly connected to and support the goals of the CA CCSSM and CCSS for ELA/Literacy.

Grade 1, Plant and Animal Defenses, Chapter 1, Lesson1.2, steps 4–8, Instructional Guide, [https://web.learning.amplify.com/#/unit/789a4bac-147f-4f35-88f3-b535faccde96\_5a8dcca8a8d1b1bd3600f604/chapter/12af2fae-410d-4e7393941bc82fbdd433\_5a8dcca8a8d1b1bd3600f604/lesson/df1353a04627413595a72d621845b807\_5a8dcca8a8d1b1bd3600f604/cardstack/68798197d6eb4c3ab4e6a500026b6f30\_5a8dcca8a8d1b1bd3600f604?cardkey=26966b71ae5d4416952d95f920cc70ed\_5a8dcca8a8d1b1bd3600f604](https://web.learning.amplify.com/%23/unit/789a4bac-147f-4f35-88f3-b535faccde96_5a8dcca8a8d1b1bd3600f604/chapter/12af2fae-410d-4e7393941bc82fbdd433_5a8dcca8a8d1b1bd3600f604/lesson/df1353a04627413595a72d621845b807_5a8dcca8a8d1b1bd3600f604/cardstack/68798197d6eb4c3ab4e6a500026b6f30_5a8dcca8a8d1b1bd3600f604?cardkey=26966b71ae5d4416952d95f920cc70ed_5a8dcca8a8d1b1bd3600f604)

Grade 8, Natural Selection, Chap.3, Lesson 3, activity 2, Teacher Support  
[https://web.learning.amplify.com/#/unit/af0ed2b5-931a-4fbf-9536-529782ed52ca\_5a8dcca8a8d1b1bd3600f60b/chapter/119acdc2-9f6441d7baee433413939905\_5a8dcca8a8d1b1bd3600f60b/lesson/79f5cc7b4db34759a2f1a68f81060b56\_5a8dcca8a8d1b1bd3600f60b/cardstack/e57899e1-47d3-49a6-a581-](https://web.learning.amplify.com/%23/unit/af0ed2b5-931a-4fbf-9536-529782ed52ca_5a8dcca8a8d1b1bd3600f60b/chapter/119acdc2-9f6441d7baee433413939905_5a8dcca8a8d1b1bd3600f60b/lesson/79f5cc7b4db34759a2f1a68f81060b56_5a8dcca8a8d1b1bd3600f60b/cardstack/e57899e1-47d3-49a6-a581-)

Grade 1, Plant and Animal Defenses, Unit Overview, Standards at a Glance [https://web.learning.amplify.com/#/unit/789a4bac-147f-4f35-88f3-b535faccde96\_5a8dcca8a8d1b1bd3600f604#standards-at-a-glance](https://web.learning.amplify.com/%23/unit/789a4bac-147f-4f35-88f3-b535faccde96_5a8dcca8a8d1b1bd3600f604%23standards-at-a-glance)

Grade 8, Natural Selection, Unit Overview, Standards at a Glance [https://web.learning.amplify.com/#/unit/af0ed2b5-931a-4fbf-9536-529782ed52ca\_5a8dcca8a8d1b1bd3600f60b#standards-at-a-glance](https://web.learning.amplify.com/%23/unit/af0ed2b5-931a-4fbf-9536-529782ed52ca_5a8dcca8a8d1b1bd3600f60b%23standards-at-a-glance)

* Criterion #15: Grades K and 6 are exemplars of how teacher resources have provided background information about important events, diverse people, places, ideas, and scientific principles appearing in, but not limited to the CA NGSS and CA Science Framework.

Grade K, Needs of Plants and Animals, Ch. 1, Lesson 1.1, Activity 1 [https://web.learning.amplify.com/#/unit/835d6a0c-de05-4670-a826-cb81269d13c4\_5a8dcca8a8d1b1bd3600f603/chapter/050854cf-b833-44d0-8abe-333953d2b60f\_5a8dcca8a8d1b1bd3600f603/lesson/6e9dd335-a681-4276-8919- 9ab9b4ce6c8c\_5a8dcca8a8d1b1bd3600f603/cardstack/f3244031-ab67-4a1b-a662-0567765cf771\_5a8dcca8a8d1b1bd3600f603?cardkey=5b26a531-712c-4a89-a4bf-d3cc1683740c\_5a8dcca8a8d1b1bd3600f603](https://web.learning.amplify.com/%23/unit/835d6a0c-de05-4670-a826-cb81269d13c4_5a8dcca8a8d1b1bd3600f603/chapter/050854cf-b833-44d0-8abe-333953d2b60f_5a8dcca8a8d1b1bd3600f603/lesson/6e9dd335-a681-4276-8919-%209ab9b4ce6c8c_5a8dcca8a8d1b1bd3600f603/cardstack/f3244031-ab67-4a1b-a662-0567765cf771_5a8dcca8a8d1b1bd3600f603?cardkey=5b26a531-712c-4a89-a4bf-d3cc1683740c_5a8dcca8a8d1b1bd3600f603)

Grade 6, Metabolism Internship, Ch. 1, Activity: Introducing Futura, video [https://web.learning.amplify.com/#/unit/c19b3e72-7a1a-4ddd-acc6-798770f11c38\_5a8dcca8a8d1b1bd3600f609/chapter/1d513216-46fd-4719-b572-58ba4f8d7fde\_5a8dcca8a8d1b1bd3600f609/lesson/976214c1-ee72-4e0d-b551-ffe7f0295cbd\_5a8dcca8a8d1b1bd3600f609/cardstack/1b6666a7-2ae5-47dd-89b2-754b6b3c39d0\_5a8dcca8a8d1b1bd3600f609?cardkey=075b4ea2-2e49-4f88-8ad4-2a66a838081b\_5a8dcca8a8d1b1bd3600f609](https://web.learning.amplify.com/%23/unit/c19b3e72-7a1a-4ddd-acc6-798770f11c38_5a8dcca8a8d1b1bd3600f609/chapter/1d513216-46fd-4719-b572-58ba4f8d7fde_5a8dcca8a8d1b1bd3600f609/lesson/976214c1-ee72-4e0d-b551-ffe7f0295cbd_5a8dcca8a8d1b1bd3600f609/cardstack/1b6666a7-2ae5-47dd-89b2-754b6b3c39d0_5a8dcca8a8d1b1bd3600f609?cardkey=075b4ea2-2e49-4f88-8ad4-2a66a838081b_5a8dcca8a8d1b1bd3600f609)

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

The Commission recommends all edits as submitted by the publisher public comment in response to the Report of Findings.

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L1 | K | Big book/little book What does a scientist look like? | 7 | Picture brand name of kayak: Old Town Loon 26 | Blur wording | Brand names and corporate logos |
| 2 | L1 | K | Big Book/ little book What does a scientist look like? | 8 | Picture contains brand name of microscope Leica | Blur wording or remove | Brand names and corporate logos |
| 3 | L1 | K | Big book/ little book  What does a scientist look like? | 15 | Image contains brand name of bow Prostyle | Blur wording or remove | Brand names and corporate logos |
| 4 | L1 | K | Big book/little book  What does a scientist look like? | 19, 33 | Scientist wearing shirt with Under Armor Logo on front | Remove logo from Image | Brand names and corporate logos |
| 5 | L1 | 1 | Big book/shared reading book  What Vibrates? | 8, 10 | Drums contain name “Evans” on them in the picture | Blur wording or remove | Brand names and corporate logos |
| 6 | L1 | 1 | Big book/little book | 30 | Keytar in picture says, “Ax Synth” | Blur wording or remove | Brand names and corporate logos |
| 7 | L1 | Grade 4 | Waves, Energy and Information  Chapter 1 lesson 2 | Instructional guide Step 1, Activity 3 and then again in Act 4  INB p. 7 | Hold up a rope and a Slinky. (used throughout lesson 2) | Change slinky to spring toy | Brand names and corporate logos |
| 8 | L1 | 4 | Seeing Sound | Reader p. 15 | Picture of doctor at desk looking at computer with Philips written on it | Blur or remove Philips | Brand Names and corporate logos |
| 9 | L1 | 6 | Traits and Reproduction> | Chapter 2>lesson 2 line #6 | Remind students that, in this model, the K’NEX pieces represent the building blocks of proteins | Remind students that, in this model, the linking block pieces represent the building blocks of proteins | Brand Names and corporate logos |

### Carolina Biological Supply Company, *Building Blocks of Science 3D*, Grades K–5

#### Program Summary:

Building Blocks of Science 3D includes the following: Teacher’s Guide (TG); AOS- Assessment Observation Sheet; AP- Anchoring Phenomenon; AS- Assessment Strategies; EXT- Extensions; INV- Investigations; IP- Investigative Phenomenon; LA- Literacy Article; L&S- Literacy and Science; SIS- Student Investigation Sheet; SA- Summative Assessment; TMM- Tell Me More; Student Edition: LR- Literacy Reader; Digital Review: SIM- Simulation, ISS- Innovators in Science, IWB- Interactive Whiteboard, SBA- Scenario-Based Assessment, Video-Phenomena Video.

#### Recommendation:

Carolina Biological Supply Company is recommended for adoption for K–5 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1, Grade K, Living Things and Their Needs (TG) pp. 30–42. The materials support teachers in instructing students how to use observations to describe patterns of what plants and animals (including humans) need to survive.
* Criterion #1, Grade 1, Light and Sound Waves (TG) pp. 48–59. The materials help teachers instruct students how to plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make things vibrate.
* Criterion # 1: Grade 2, *Ecosystem Diversity* (TG) pp. 74–81. The materials align to the CA NGSS in order to facilitate students’ understanding of performance expectations.
* Criterion #1: Grade 3, Weather and Climate Patterns (TG) pp. 67–76. The materials align with 3-ESS2-1 by having students represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
* Criterion # 1: Grade 4, *Energy Works* (TG), pp. 168–181 as well as (LR) pp. 10–11, and 14. The materials align to the CA NGSS in order to facilitate students’ understanding of performance expectations.
* Criterion #1: Grade 5, Matter and Energy in Ecosystems (TG) pp. 171–173. The materials have students examine the human impact on ecosystems and provide solutions to reduce the human impact, which aligns with the CA NGSS.
* Criterion #2, Grade 1, Exploring Organisms (TG) pp. 52–66, vi, ix, and xi-xv. The materials engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS.
* Criterion # 4: Grade 4, *Plant and Animal Structures* (TG), pp. 34–42, 48–62, and 118–131. The materials progressively build students’ abilities to meet grade-level performance expectations through a three-dimensional sequence.
* Criterion #5: Grade 1, Sky Watchers (TG) pp. 38–40 and SIS 1B. The materials provide instructional opportunities and assessments that engage students in three-dimensional learning.
* Criterion #7: Grade 1, Exploring Organisms (TG) pp. 74–80 and (LR) pp. 2–15. The materials include primary sources, such as scientific resources and photographs, which are integrated into the three-dimensional learning.
* Criterion #11: Grades K–5, Innovators in Science (www.carolina.com/capanelreview). This resource provides examples of people and groups who used their context, learning, and intelligence to make important contributions to society through science and technology from different demographic, ethnic, and cultural groups.
* Criterion #15: Grade 2, Ecosystem Diversity (TG) pp. 115–116 and SIS 5A. The materials help students place humans in their ecological system and emphasize the necessity for protecting the environment.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2: Grade 3, Weather and Climate (TG) pp. 108–111. The materials provide support for teacher questioning strategies as a tool to assess students’ knowledge and skills and guide student learning.
* Criterion #4: Grade 4, Energy Works (TG) pp. 88–102. The materials give support to engage students in three-dimensional learning and suggest research-based strategies to elicit student thinking and support student discourse.
* Criterion #11: Grade K, Push, Pull, Go (TG) p. 45. The materials include references to where related supplemental open educational resources may be found.
* Criterion #12: Grade 2, Ecosystem Diversity (TG) pp. 54–62. The materials show ancillary and support resources that are an integral part of the instructional program, including support kits, online literacy readers in both English and Spanish, as well as various phenomena videos.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #2: Grade K, *Weather and Sky* (TG) pp. xvi and 32–35. The materials provide pre-unit assessments to help teachers elicit students’ prior knowledge and preconceptions.
* Criterion #2: Grade 1, *Sky Watchers* (TG) pp. xvi and 32–37. The materials provide pre-unit assessments to help teachers elicit students’ prior knowledge and preconceptions.
* Criterion #3: Grade 3, *Forces and Interactions* (TG) pp. xvi and 95–98. The materials provide investigation activities to engage students in tasks that afford both learning and formative assessment opportunities.
* Criterion #5: Grade 2, *Earth Materials* (TG) pp. xvi and 34–50. The materials provide investigations and activities that yield information teachers can use in planning and modifying instruction to help students meet or exceed the NGSS standards.
* Criterion #7: Grade 4, *Energy Works* (TG) pp. 208–215. The materials provide summative unit assessment for teachers with a valid and reliable evaluation of student understanding of key unit concepts.
* Criterion #7: Grade 5, *Structure and Properties of Matter* (TG) pp. 170–179. The materials provide unit summative assessment for teachers with a valid and reliable evaluation of student understanding of key unit concepts.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade K, Weather and Sky (TG) pp. xi–xv and 153–156. The materials reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #1: Grade 3, Weather and Climate Patterns (TG) pp. xi–xv, 37–38, and 212–218. The materials reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grade 4, Plant and Animal Structures (TG) pp. 124–126. The materials include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #2: Grade 1, Light and Sound Waves (TG) pp. 51–52 and 150–151. The materials include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #2: Grades K–5, all TGs pp. xxv–xxx. The materials provide an estimated instructional time for each activity, lesson, and unit, which allows for student engagement.
* Criterion #3: Grade 3, Life in Ecosystems (TG) pp. 38–41. The materials contain a pre-unit assessment that provides guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons, if necessary, to ensure three-dimensional learning.
* Criterion #18: Grade 4, Changing Earth (TG). The “Take-Home Science” letter and the assignment “Rocksicle” inform families about the CA NGSS and student progress.
* Criterion #20: Grade 1, Exploring Organisms (TG) p. xiii. The materials inform teachers about literacy readers, literacy articles, and “Science in the News” articles that can best complement the standards.
* Criterion #21: Grade 2, Ecosystem Diversity (TG) pp. 97–98. The materials provide guidance and support for engaging students in collaborative conversations using grade-level-appropriate academic vocabulary for scientific discourse.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page number(s) | Current text | Proposed corrected text | Reason for edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | K | TG: Weather and Sky | SIS 1B | “In the daytime sky. I can see…” | “In the daytime sky, I can see…” | Grammatical error,  fragmented sentence |
| 2 | 1 | TG: Explaining Organisms | 37 (multiple places) | Finalize the list to make sure students understand that all living things move, grow, breathe, reproduce, and need food. | Finalize the list to make sure students understand that all living things move, grow, reproduce, and need air and food. | Factual error Saying that plants “breathe” is a misconception. All cells use oxygen and release carbon dioxide- but that is NOT the same as breathing. They all need “air”? |
| 3 | 1 | LR: Sky Watchers | 12 | In summer sunrise happens early. | In summer, sunrise happens early. | Grammatical error  Missing a comma |
| 4 | 1 | LR: Sky Watchers | 12 | In winter the Sun rises later. | In winter, the Sun rises later. | Grammatical error  Missing a comma |
| 5 | 2 | TG: Matter | LA 3C | Oh, no! | Oh no! | Grammatical error  Remove the comma |
| 6 | 2 | TG: Ecosystem Diversity | 98 | “magine you have to design an ideal…” | “Imagine you have to design an ideal…” | Typographical error  Missing a capital I to begin the sentence |
| 7 | 2 | TG: Ecosystem Diversity | SIS 4A (Take Home Science Letter) | Take-Home Sicience Letter (footer) | Take-Home Science Letter | Typographical error  Misspelled “science” |
| 8 | 2 | TG: Ecosystem Diversity | 144 | “leave the paper towel loosely crumpled in the habitat Leave the habitat…” | “leave the paper towel loosely crumpled in the habitat. Leave the habitat…” | Typographical error  Missing a period after “habitat” |
| 9 | 2 | TG: Ecosystem Diversity | 145 | “For the best observation…” | End of sentence is missing. | Typographical/ grammatical error  Sentence is incomplete |
| 10 | 2 | TG: Earth Materials | Lesson 2 take-home activity | “earth material:” | “Earth Material” | Grammatical error  Earth is always capitalized, proper noun |
| 11 | 2 | TG: Earth Materials | 109 | “Be sure that each group gets you approval” | “Be sure that each group gets your approval” | Grammatical error  Changing the pronoun |
| 12 | 3 | LR: Weather and Climate Patterns | 6 | “This process is call condensation.” | “This process is called condensation.” | Grammatical error |
| 13 | 3 | TG: Weather and Climate Patterns | 71 | 62°F/ 5 = 62°F | 310° F / 5 = 62° F | Mathematical error |
| 14 | 3 | TG: Forces and Interactions | LAC2C-Teacher’s Version | “Literacy and and Science” (footer) | “Literacy and Science” | Grammatical error  Extra “and” |
| 15 | 3 | TG: Life in Ecosystems | 50 | “Ask them to discuss how ecosystems and life cycles relate to their …” | End of sentence is missing | Grammatical error  Sentence is incomplete |
| 16 | 4 | TG: Changing Earth | 58 | “Students s are likely to suggest…” | “Students are likely to suggest…” | Typographical error  Unneeded “s” |
| 17 | 4 | TG: Changing Earth | SIS 2C | “Unique features if the rock:” | “Unique features of the rock:” | Typographical error  Should be “of” not “if.” |
| 18 | 4 | TG: Energy Works | SIS 5B | “Do not to cut through the center of the paper!” | “Do not cut through to the center of the paper!” OR “Do not cut through the center of the paper!” | Typographical error  Extra word in the sentence |
| 29 | 4 | TG: Plant and Animal Structures | 41 | “(If the seeds touch each other, there may not be enough space for theplants to grow.)” | “(If the seeds touch each other, there may not be enough space for the plants to grow.)” | Typographical error: space needed between “the” and “plants” |
| 20 | 4 | TG: Plant and Animal Structures | SIS 2B:2: Teacher’s Version | “What do you think is does?” | “What do you think it does?” | Grammatical error - wrong word/mistype |
| 21 | 5 | TG: Matter and Energy in Ecosystems | 42 | “(The tall trees shade theplants on the forest floor…)” | “(The tall trees shade the plants on the forest floor…)” | Grammatical error: space needed between “the” and “plants” |
| 22 | 5 | TG: Matter and Energy in Ecosystems | 65 | “A dissection is the cutting or taking apart of something to examine it and learn…” | “A dissection is the cutting or taking apart of something once living to examine it and learn” | Imprecise definition: for something to be “dissected,” it MUST have been living at some point. |
| 23 | 5 | TG: Earth and Space Systems | 100–101 | “Set out the inflatable globe and a bucket of water at the front of the room. Explain that you will perform a demonstration to help students visualize tides:  a. Place the globe gently in the water so it is floating in the middle of the bucket. b. Put both of your hands on top of the globe and push the globe down into the water in a slow, firm motion. Then let the globe rise back up. You may need to repeat this a couple of times. Explain that the force you exert on the globe represents gravity acting on Earth.” | Remove: incorrect | Factual error: the force of pushing your hands down on an inflated ball in water has no relation to Earth’s tides. That would insinuate that the Earth’s gravitational pull is greater and less throughout the day, which is absolutely incorrect. |
| 24 | K–5 | Innovators in Science | Ellen Ochoa (11) | “Currently, Ochoa is the director of NASA’s Johnson Space Center.” | “Ochoa is the former director of NASA’s Johnson Space Center.” | Factual error: Ochoa left the position in May 2018. |
| 25 | K–5 | Innovators in Science | Ian Joughin (16) | “Ian Joughin is a pioneer in polar research. As a glaciologist at the University of Washington.” | “Ian Joughin is a pioneer in polar research as a glaciologist at the University of Washington.” | Grammatical error: Fragmented sentence |
| 26 | K–5 | Innovators in Science | Jocelyn Bell Burnell (19) | “The lead scientist on Burnell’s team was awarded part of prize.” | “The lead scientist on Burnell’s team was awarded part of the prize.” | Typographical error  Missing the word “the.” |
| 27 | 3 | TG: Life in Ecosystems | 211 | “The container may then be disposed of in the …” | Complete the sentence | Incomplete sentence |
| 28 | K | TG: Living Things and Their Needs | 86 | “changes a slight as wearing down a path” | “changes as slight as wearing down a path” | Grammatical error |
| 29 | 3 | TG: Forces and Interactions | 35 | noncontact | non-contact | spelling error |
| 30 | 1 | TG: Exploring Organisms | SIS 1D | Correct answer for “air” should include “nose.” | “Nose” is not currently included as a correct answer for “air.” | Factual error |
| 31 | 1 | TG: Exploring Organisms | SIS 1D | Remove “mouth” as a correct answer for “space.” | “Mouth” is currently a correct answer for “space.” | Factual error |
| 32 | 1 | TG: Exploring Organisms | 65 EXT “How many is that?” | “uses multiples of ten” | Remove phrase since this does not involve multiples of ten. | Mislabeling/factual error |
| 33 | 1 | TG: Exploring Organisms | 103 | Question asks students to predict traits in next generation. | Remove | Factual error:  It is unknown if the parent is homoallele or heteroallele, so this info should be included (different words). |
| 34 | 1 | TG: Exploring Organisms | Summative Assessment Question #3 | “Who does the twin look more like?” | “Who does the identical twin look more like?” | Factual error (twin could look more like Dad than twin if the twins are not identical). |
| 35 | 2 | TG: Matter, Lit. Article 4B | LA4B | “Adobe can hold heat when cold and release heat when warm.” | “When adobe is cold, heat can flow into it, and when adobe is hot, heat can flow out of it.” | Factual error: adobe is not a heat pump. |
| 36 | 2 | TG: Matter, 5B, fourth bullet | 124 | “When fireworks are set off, heat and light are created.” | “When fireworks are set off, heat and light are released and are the result of a chemical change.” | Correct grammar |
| 37 | 2 | TG: Matter, INV 5B, third bullet | 126 | “Painting a pumpkin” | Remove bullet | Factual error: although the pumpkin does not change (not a physical or chemical change), the paint might undergo a chemical change or it might just be an evaporation of solvent – either way, this is not an example of a physical change, which requires a change of state of a material (and evaporation of solvent does not qualify for this since it is a separation of materials in a mixture). |
| 38 | 2 | TG: Matter Summative assessment 5 | End of book (no page numbers) | Theresa wants to make blue dye. Choose one of the following materials that she could use to make blue dye.   1. Blue chalk 2. Blueberries 3. Ocean water 4. Blue thread | remove | Not tied to instruction. |
| 39 | 2 | TG: Earth Materials | 164 | “They noticed about the slope of hill” | “They noticed about the slope of the hill” | Grammatical error |
| 40 | 2 | TG: Ecosystem Diversity, Lesson 1A | 37 | “Food is abiotic.” | “Food is a biotic factor.” | Factual error |
| 41 | 2 | TG: Ecosystem Diversity | 57 | “Isopods are insects.” | “Isopods are crustaceans.” | Factual error |
| 42 | 3 | TG: Forces and Interactions | 96, item 5, second bullet | “Distance from which the paperclip is attracted to the two magnets increases when the magnetic force increases.” | “Distance from which the paperclip is attracted to the two magnets decreases when the magnetic force increases.” | Factual error |
| 43 | 3 | TG: Forces and Interactions | SIS 4D. | “Electric forces have poles.” | “Electric forces do not have poles.” | Factual error |
| 44 | 4 | TG: Energy Works | 99 | “light bulb” | “buzzer” or “mystery box” | Factual error: the mystery box is a buzzer not a light bulb. |
| 45 | 4 | TG: Changing Earth | SIS 2A | “metamorphic” | “sedimentary” | Factual error |
| 46 | 4 | TG: Changing Earth | SIS 2A | “sedimentary” | “metamorphic” | Factual error |
| 47 | 5 | TG: Structure and Properties of Matter, Teacher background | 65 | “because every substance has a different density, each material has its own boiling point, freezing point, and melting point.” | delete | Factual error: not fixable since lesson builds on this idea. |
| 48 | 5 | TG: Structure and Properties of Matter | 73 | “having a campfire” and “baking bread” | delete | Factual error: these are chemical changes. Just because the bread (or cookie or cake) dough “solidifies” does not make it a physical (phase) change. You have to examine the sum total of all of the physical properties of the before and after materials to decide whether a chemical reaction has occurred (which is not actually done in this TG/set of lessons). |
| 49 | 5 | TG: Structure and Properties of Matter | 94 | “(salt for example, is made up of sodium and chlorine atoms)” | “(salt, for example, is made up of sodium and chlorine ions)” | Factual error |
| 50 | 5 | TG: Structure and Properties of Matter | 95 | “Evaporation occurs when liquid water becomes a gas without reaching its boiling point.” | “Evaporation and vaporization are the same thing when a gas or vapor is formed from a liquid.” | Factual Error: after checking both the Oxford and Webster (unabridged) dictionaries and multiple chemistry textbooks, vaporization and evaporation are defined as being the same thing. There is no distinction between turning into vapor below or at the boiling point. |
| 51 | 5 | TG: Structure and Properties of Matter, Teaching Tip | 96 | “Buoyancy is a physical property.” | Replace the word “buoyancy” with “density.” | Factual error: Buoyancy is not a physical property, density is. |
| 52 | 5 | TG: Structure and Properties of Matter | 97 | “Heavier objects are harder and tend to sink while lighter objects are softer and tend to float. Also, magnetic items tend to be made of metal.” | delete | Factual error |
| 53 | 5 | TG: Structure and Properties of Matter, Digital Tip | 99 | “Explain that milk and water have similar dense and will mix.” | delete | Grammatical error/typo AND factual error – by this definition, sand and corn syrup should mix to form a solution. |
| 54 | 5 | TG: Structure and Properties of Matter | SIS3A | “buoyancy” | “buoyant in water” | Universal swap is needed throughout the program since these are not the same, and they mean buoyant in water. |
| 55 | 5 | TG: Structure and Properties of Matter | 158 | recipe | Need to add a liquid. | A batter will not form with one egg and only dry ingredients. |
| 56 | 5 | TG: Matter and Energy in Ecosystems | 61 | “Producers have the most energy because they obtain it directly from the sun.” | “Producers do NOT have the most energy because they obtain it directly from the sun.” | Factual error |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L1 | 1 | TG: Sky Watchers | 110 | “Oreo Moon Phases” | “Chocolate sandwich cookie moon phases” | “Oreo” is a trademark name. |
| 2 | L1 | 4 | TG: Changing Earth | 69 | “Velcro” | Substitute with generic hook and loop. | “Velcro” is a trademark name. |
| 3 | L1/L2 | 4 | TG: Energy Works | 55 | “Ping Pong” | Table tennis product. | “Ping Pong” is a trademark name. |

### Carolina Biological Supply Company, *STCMS (Science and Technology Concepts Middle School)*, Grades 6–8 (discipline specific)

#### Program Summary:

STCMS (Science and Technology Concepts Middle School) includes: Teacher Edition (TE), Student Guide (SG).

#### Recommendation:

STCMS (Science and Technology Concepts Middle School) is not recommended for adoption for grades 6–8 because the instructional materials do not include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and do not meet all the Criteria in Category 1 or have strengths in Category 4.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program does not include content as specified in the CA NGSS and does not include a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Standards Not Met:
  + Grade 6, PE MS-ESS3-5, Weather and Climate Systems TE, Tab 6 Lesson 10 pp. 156–157, student sheets 10.1 A-I p. 2 of 3 Question 3. The performance expectation requires students to ask questions to clarify evidence of the factors that have caused the rise in global temperatures. Instead students are asked to respond to questions and write an “additional question” without guidance related to clarifying evidence.
  + Grade 7, PE MS-ETS1-4, Ecosystems and Their Interactions, TE, Tab 6, Lesson 11, pp. 246–247. The performance expectation asks students to develop a model to generate data for iterative testing such that an optimal design can be achieved. The cited performance assessment lacks development of a model to generate data and only asks students to discuss existing solutions and come to a consensus on one plan. No iterative testing is required of the students.
* Criterion #12: Grade 6, Earth’s Dynamic Systems, TE, Tab 1, Lesson Planner pp. 16–41; Grade 7, Structure and Function: TE: Tab 6, Lesson 7 Receptors pp. 159–160; Grade 8, Energy, Forces and Motion, TE, Tab 3, Meeting Standards, pp. 2–22. In grades 6–8, student assignments do not make linkages and are not consistent with the California English Language Development Standards: Kindergarten Through Grade Twelve (CA ELD Standards).

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grade 6–8 (all components) TE, Tab 1, Lesson Planner. We found evidence in all grades where sequential organization of the material provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
* Criterion #5: Grade 6–8 (all components) TE, Tab 1, Lesson Planner Pacing Guide. Examples exist in all grade levels where the instructional resources are grade-level specific and provide content for 180 days of instruction for at least one daily class period, including an estimate of the necessary instructional time.
* Criterion #6: Grade 6, Earth’s Dynamic Systems TE, Tab 1, Lesson Planner, pp. 4–32; Tab 3 All Standards, All Students, pp. 19–22; Grade 7, Genes and Molecular Machines TE: Tab 1 Lesson Planner pp.4–35; Tab 3, All Standards, All Students, pp. 19–22. We found evidence in all grades where the content was well organized and presented in a manner consistent with providing all students an opportunity to achieve the essential knowledge and skills described in the CA NGSS and the CA Science Framework.
* Criterion #9: Grade 6, Earth’s Dynamic Systems <https://ssec.si.edu/earths-dynamic-systems> (Lesson Links, Lesson 2–When the Earth Shakes); Grade 7, Structure and Function [https://ssec.si.edu/structure-and-function](https://ssec.si.edu/structure-and-function%20) (Extension Activities), Lesson 1 Pre-Assessment, Grade 8, Matter and its Interactions, TE, Tab 6, Lesson 4, pp. 72–73. We found evidence in each grade level of resources that encourage the meaningful use of technologies to investigate phenomena that cannot be directly experienced. The materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #2: Grade 6, Earth’s Dynamic Systems, TE; Tab 6, Lesson 1, pp. 1a–13a; Grade 7, Ecosystems and Their Interactions, TE, Tab 6, Lesson 1, pp. 1a–27; Grade 8, Energy Forces, and Motion, TE: Tab 6 Lesson 1 pgs. Iv–13. In grades 6–8, entry-level assessments for each unit are provided to help teachers elicit students’ prior knowledge and preconceptions and gauge their facility for using the SEPs and CCCs.
* Criterion #7: Grade 6, Earth’s Dynamic Systems, TE, Tab 6 Lesson 12, pp. 319c–329. This is an example of a summative assessment designed to provide measures of student progress and attainment of three dimensional learning at the end of a unit.
* Criterion #8: Grade 8, Energy Forces and Motion, TE, Tab 6, Lesson 9, pp. 144–145. This is an example of each unit including both a writing and performance task to assess student progress towards meeting the three dimensions of the CA NGSS.
* Criterion #10: Grade 6, Earth’s Dynamic Systems, TE, Tab 6, Lesson 1, pp. 2–8; Grade 7, Ecosystems and Their Interactions, TE, Tab 6, Lesson 4, pp. 72–84; Grade 8, Energy, Forces and Motion TE, Tab 6, Lesson 7, pp. 104–109. In grades 6–8, assessment tools include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework.

#### Criteria Category 4: Access and Equity

Program materials do not ensure universal and equitable access to high-quality curriculum and instruction for all students and do not provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grades 6–8, all TEs; Tab 3, All Standards, All Student, pp. 19–22; Grades 6–8, all TEs, Tab 2, STCMS in the Classroom, pp.2–5; Grade 6, Space Systems Exploration, Tab 1: Unit Overview, pp. 4–9; Grade 7, Ecosystems and Their Interactions, Tab 1, Unit Overview, pp. 4–9; Grade 8, Matter and Its Interactions, Tab 1, Unit Overview, pp. 4–9. The materials did not provide differentiated instructional resources sensitive to the needs of individual students and particular assets of all students as outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grades 6–8, All TEs, Tab 3, All Standards, All Students, pp. 19–22; Grades 6–8, All TEs, Tab 3, Meeting Standards with STCMS, pp. 6–9; Grades 6–8, All TEs, Tab 2, STCMS in the Classroom, pp. 2–5; Grade 7, Gene and Molecular Machines Tab 6, p. 104, Questions 5; Grade 8, Energy, Forces, and Motion, Tab 6, p. 114, Question 4d; Grade 6, Weather and Climate System Tab 6, p. 157, Steps 8, 9, and 11. The instructional resources fail to provide research-based strategies to address the continuum of English language development levels as outlined in the CA ELD Standards.
* Criterion #4: Grade 6–8 (all Components), Tab 3, All Standard, All Students, pp. 19–22. The teacher resources do not provide sufficient guidance to support all students with respect to differentiation. On page 19, in the strategy section, the Lesson Overview purpose states, “This should be used to assist UDL planning and differentiation for diverse student groups,” but actual differentiation strategies are missing. In the strategy section, the Extension Activities purpose states, “Extension activities allow for differentiated instruction for students who need to be challenged”; however, what is provided (such as G6, Space Systems Exploration Lesson 1): Science [pinhole projectors] found at [https://ssec.si.edu/space-systems-exploration](https://ssec.si.edu/space-systems-exploration" \o "space systems exploration)) does not include differentiation guidance. Instead, extra activities are given.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #2: Grade 6, Earth’s Dynamic Systems, TE, Tab 1, Unit Overview and Lesson Planner, pp. 12–13; Grade 7, Ecosystems and Their Interactions TE: Tab 6 lesson 2, pp. 27a–29; Grade 8, Electricity, Waves and Information Transfer, TE, Tab 6, Lesson 5, pp. 91a–91b. In Grades 6–8, the teacher resources provide an estimated instructional time for each activity, lesson, and unit which allows for student engagement in the SEPs and engineering design projects.
* Criterion #6: Grade 6, Earth’s Dynamic Systems, TE, Tab 6, p. 31, Exit Slip; Grade 7, Ecosystems and Their Interactions, TE, Tab 4 pp. 1–5; Grade 8, Energy, Forces, and Motion, TE, Tab 7, p. 4 (Lesson Master 8.2, pp. 1–3). In grades 6–8, classroom activities, end-of-chapter tasks, and assessment tasks are supported with teacher guidance. Assessment Keys and rubrics are provided.
* Criterion #10: Grade 6, Weather and Climate System Tab 6, p. 102; Grade 7, Ecosystems and Their Interactions, Tab 6, p. 200; Grade 8, Energy, Forces, and Motion, Tab 6, p. 2. These are examples of each grade introducing a guiding question instead of explicitly stating learning goals to students.
* Criterion #16: Grade 6, Earth’s Dynamic Systems, Tab 6, p. 39e; Grade 7, Structure and Function, Tab 6, p. 111c; Grade 8, Electricity, Waves, and Information Transfer, p. 115e. All grade level teacher resources identify preconceptions typical at a grade span.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | Weather & Climate Systems | Inside front cover | List of standards | Add MS-ESS 3-3 | Part of Grade |

#### Social Content Citations: none

### Delta Education LLC, *FOSS Next Generation Elementary*, Grades K–5

#### Program Summary:

FOSS® Next Generation includes Investigations Guide (IG), Science Resource Book (SRB), Digital-Only Resources (DOR), Teacher Resources (TR), Science Notebook Masters (SNM), Teacher Masters (TM), Assessment Coding Guide (ACG), Assessment Charts (AC), Interim Assessment Master (IAM).

#### Recommendation:

Delta Education LLC is recommended for adoption for K–5 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion # 1: Grade K, Trees and Weather IG, pp. 179–189 align to K-ESS2-1.
* Criterion # 1: Grade 1, Sound and Light SRB, p. 9, and IG, pp. 75–120 (Investigation 1: “Sound and Vibrations”) facilitate students’ full understanding of the topic.
* Criterion # 1: Grade 2, Insects and Plants IG, pp. 314–318 (2-LS2-2) help students develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
* Criterion # 1: Grade 3, Structures of Life IG, p.170 aligns to the CA NGSS 3-LS1-1 by having students develop a model to describe an organism’s life cycle, showing that organisms all have in common birth, growth, reproduction, and death.
* Criterion # 1: Grade 4, Environments IG, pp. 125–126, 128, and 141; TR pp. C27–31, C54–55, D15–17, and D32–33; and SRB, pp. 16–17 and 91–92 demonstrate how all three NGSS strands are woven together in the investigations for 4-LS1-1.
* Criterion # 1: Grade 5, Living Systems IG “Animal Nutrition,” pp. 181–193 demonstrate how all three NGSS strands are woven together in a single investigation.
* Criterion # 4: Grades K–5, Framework and NGSS tab in each IG for the physical, life, and earth sciences books include explanations of performance expectations, disciplinary core ideas, science and engineering practices, cross cutting concepts, conceptual framework including background, and how NGSS standards are connected to each investigation.
* Criterion # 7: Grade 5, Earth and Sun SRB, p. 77 contains an image of Galileo’s original notebook pages with images of the moons of Jupiter and their movement over time, and the SRBs contain multiple photographs.
* Criterion # 8: Grade 1, Sound and Light IG, pp. 169–171 students explore the phenomenon of light and shadows.
* Criterion # 10: Grade 3, Structures of Life SRB, pp. 12–15 include a story of Barbara McClintock and her research, and on pp. 78–80 there is the story of barn owls and how Rebecca Terry learned from owl pellets how the climate in the Great Basin changed over time.
* Criterion # 13: Grades K–5 IGs include (1) new word icons, (2) review vocabulary, (3) English-learner notes, and (4) scaffolded in-class readings/sense-making discussions; and the TR, pp. B12–14 contain the grade-level planning guides with information about using science notebooks, science-centered language development, and student access and equity.
* Criterion # 18: Grade K, Materials and Motion IG, pp. 138–141 have students observe particleboard and then engineer their own particleboard.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion # 2: Grade 1, Air and Weather IG, p. 183 provides instructional resources to support teacher questioning strategies.
* Criterion # 3: Grade 2, Insects and Plants IG, p. 39 explicitly states which knowledge and skills learned in prior grades or units are applied.
* Criterion # 4: Grade 4, Energy IG, p. 270 supports research-based strategies to elicit students thinking and supports student discourse.
* Criterion # 7: Grade K, Animals Two by Two IG, pp. 74–77 include explanations to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena.
* Criterion # 9: Grade 3, Structures of Life IG, pp. 67–80 encourage the meaningful use of technologies such as video clips or computer simulations to investigate phenomena.
* Criterion # 12: Grade 5, Mixtures and Solutions IG, pp. 31–56 provide support resources that are an integral part of the instructional program and are clearly aligned with the CA NGSS.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion # 1: Grade 5, Living Systems IG, pp. 344–347 reflect the three-dimensional nature of the CA NGSS and the CA Science Framework in that assessments stress performance tasks rather than rote memorization.
* Criterion # 3: Grade K, Trees and Weather IG, pp. 180–181 provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time.
* Criterion # 5: Grade 3, Structures of Life IG, pp. 368–369 yield information teachers can use in planning and modifying instruction to help all students.
* Criterion # 8: Grade 1, Air and Weather IG, p. 158 shows teachers how to measure student progress toward meeting the three dimensions of the CA NGSS through both writing and performance tasks.
* Criterion # 9: Grade 4, Energy ACG pp. 1-54 and IG, pp. 391–417 provide resources that include student work expectations and analytical rubrics for scoring performance tasks and, where possible, examples of student work.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion # 2: Grades K–2, TR, pp. H31–47 contain information for teachers about science-centered English language development.
* Criterion # 2: Grades 3–5, TR, pp. H37–53 contain information for teachers about science-centered English language development.
* Criterion # 2: Grades K–5, TR Section J (“CA ELD and FOSS”) contains sections about stages for implementing ELD instruction, integrated ELD instruction with FOSS (including science-centered language objectives), and “Guiding Principles for Science” and “Guiding Principles for ELD” instructional sections.
* Criterion # 3: Grades K–5, TR, pp. F34–35 contain information on teaching science effectively to students with disabilities.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning California NGSS aligned three-dimensional science instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion # 2: Grade K, Trees and Weather IG, pp. 70–71 provide an estimated instructional time for each activity, lesson, chapter, and unit.
* Criterion # 3: Grade 2, Insects and Plants IG, p. 107 gives guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons, if necessary.
* Criterion # 4: Grade 4, Environments IG, pp. 31–52 provide the articulation of three-dimensional learning by identifying the knowledge and skills learned in prior grades and prior grade-level units, as well as addressing how to connect and build on those learnings.
* Criterion # 5: Grades K–5, TR include the following: (1) grade 2, pp. B2–3 preview each instructional segment including which PEs are covered; (2) grade 2, pp. C1–47 contain information about what the science and engineering practices are as well as what is expected of students; and (3) grade 2, pp. D1–32 contain information about crosscutting concepts, how to integrate them into science instruction, and grade-level expectations.
* Criterion # 21: Grade K–5, IG for the earth and space, life, and physical sciences books contain a sense-making conversation between students and teachers (e.g., grade 4, “Soils, Rocks, and Landforms,” pp. 140 and 236).

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

The Commission recommends all edits as submitted by the publisher public comment in response to the Report of Findings.

#### Social Content Citations: None

### Delta Education LLC, *FOSS Next Generation Middle School*, Grades 6–8 (integrated)

#### Program Summary:

FOSS Next Generation Middle School includes: FOSS® Next Generation Middle School includes: Investigations Guide (IG), Science Resources Book (SRB), Digital-Only Resources (DOR), Teacher Resources (TR), Science Notebook Masters (SNM), Teacher Masters (TM), Assessment Coding Guide (ACG), Assessment Charts (AC).

#### Recommendation:

FOSS Next Generation Middle School is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 6, LS1-1 Diversity of Life Instructional Guide, pp. 231, 241–242, and 256. ESS3-5 Weather and Water Instructional Guide, pp. 598, 611, 647 and Assessment Coding Guide, p. 66; Grade 7, LS2-1 Populations and Ecosystems Instructional Guide, pp. 504–506, 515. ESS2-3 Earth History Instructional Guide, pp. 480–482. PS 1-2 Chemical Interactions Instructional Guide, pp. 126, 140 and Assessment Coding Guide, pp. 16, 22, 44, and 48; Grade 8, LS4-1 Heredity and Adaptation Instructional Guide, pp. 116, 118, 132 and Assessment Coding Guide, pp. 12, 14, and 34. ESS1-1 Instructional Guide, pp. 288 and Assessment Coding Guide, pp. 10, 22, and 24. PS1-1 Gravity and Kinetic Energy Instructional Guide, pp. 274–279. The program contains numerous examples of the standard being fully covered.
* Criterion #7: Grade 7, Populations and Ecosystems IG: pp. 531-534, SRB: 141-143. Grade 8, Waves IG: pp. 144-145, DOR: Tacoma Narrows Bridge Collapse 1 video <https://archive.org/details/SF121>. Tacoma Narrows Bridge Collapse 2 video <https://www.youtube.com/watch?v=qbOjxPCfaFk>. The program provides examples that use primary sources, such as scientific research, case studies, and photographs that are integrated into the three-dimensional learning, as grade-level appropriate.
* Criterion #13: Grade 6, TR, pp. H1–H54, pp. E1–E21; Grade 7, Earth History, IG, pp. 435–441. The program contains examples that the materials provide support for students to develop grade-level appropriate academic language and discipline-specific vocabulary through their use in context in classroom around science phenomena (science talk), and through well-written and grade-level appropriate text resources.
* Criterion #19: Grade 6, Diversity of Life IG, pp. 67–84 Material chapter, Safety data sheets, <https://www.deltaeducation.com/resources/materials-management/sds>. There is strong evidence that instructional resources engage students in the SEPs. Teacher resources will include discussion of expendable and permanent equipment and materials necessary to conduct activities, guidance on obtaining those materials inexpensively, recycling or disposing of materials, and explicit instructions for organizing and safely conducting instruction, labs and activities. (Aligned to the Science Safety Handbook for California Public Schools, California Department of Education 2014).

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grade 6, FOSS Human Systems Interactions IG, pp. 38–39 and 44–50. The program contains evidence where there is sequential organization of the material and provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the California Next Generation Science Standards.
* Criterion #2: Grade 7, TR, pp. E1–E22. There is evidence within the program where instructional resources support teacher questioning strategies as a tool to assess students’ knowledge and skills, promotes student-to-student discourse, and guide student learning.
* Criterion #11: Grade 8, Planetary Science IG, p. 3. The program contains evidence where teacher resources include references to locate related supplemental open educational resources.
* Criterion #13: Grades 6–8, TR. The program contains exemplars for each grade level that ancillary and support resources are an integral part of the instruction and are aligned with the California Next Generation Science Standards with fundamental guidance on multiple topics.
* Criterion #13: Grade 7, Foss Earth History IG, pp. 50–55. The program shows strength with course descriptions aligned to specific progression of so that students completing each course sequence can build on the progression through the planned sequence of the units.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3: Grade 6, Weather and Water IG, pp. 696–698; Grade 7, Chemical Interactions, pp. 663–665; Grade 8, Electromagnetic Force, pp. 316–318. The teacher material provided support to engage students in tasks that afford both learning and formative assessment opportunities.
* Criterion #4: Grades 6, 7, and 8, Instructional Guides and Assessment Coding Guide. There are formative assessment tools and practices at key stages in the unit of instruction designed to elicit current understandings and preconceptions.
* Criterion #8: Grade 8, Waves Student Notebook pp. 50–57, Student Notebook, p. 20, and Assessment Coding Guide, pp. 22–23. The writing and performance tasks provide evidence of student progress toward meeting the three dimensions of the CA NGSS.
* Criterion #9: Grade 7, Earth History Instructional Guide, p. 678 and Assessment Coding Guide, pp. 3–59. The materials include analytical rubrics for teachers to use and student work expectations for completing assessment tasks.
* Criterion #11: Grade 6, Weather and Water Instructional guide, p. 650 Teacher Master OO. The materials include guidance on measuring students’ ability to apply information literacy skills when obtaining and evaluating information about science topics.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.1: Grades 6–8, TR, pp. F1–F42. The program’s teacher resource guide shows strength by including strategies that align with the access and equity goal, outlined in the California Next Generation Science Standards.
* Criterion #4.2: Grades 6–8, TR, pp. F17–F20. The program contains exemplars with suggested research-based strategies to address the needs of English learners consistent with the California English Language Development Standards.
* Criterion #4.3: Grades 6–8, TR, pp. F34–F35. The program shows strength with the suggested research-based strategies to address the needs of students with disabilities.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #3: Grade 6, FOSS Diversity of Life, IG, pp. 181 (Step 13), 192 (Step 16), 201 (Step 7), 663–667, 670–673. The program contains examples of guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons, if necessary, to ensure three-dimensional learning.
* Criterion #10: Grade 7, FOSS Earth History, IG, pp. 95, 109, 165, 183, 240 (Step 22). The program contains examples of student resources that provide experiences that clearly build to the development of those learning goals without explicitly stating those goals prior to the instruction.
* Criterion #15: Grade 8, FOSS Electromagnetic Force, IG, pp. 84–89, 140–145, 196–201, 260–265. The program includes examples of teacher resources that provide background information about important events, diverse people, places, ideas, and scientific principles.
* Criterion #13: Grade 7, FOSS Chemical Interactions, IG, pp. 37–39, 60–79, 114–117, 162–165, 210–213, 266–269, 326–329, 380–383, 426–429, 478–481, 550–553, and 634–637. The materials include terms from the CA NGSS and CA Science Framework and they are used appropriately and accurately in the instructions.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 8 | IG/SRB | 106/77 | One opinion is that an asteroid impact in southern Mexico led to a catastrophic event. | Some evidence suggests that an asteroid impact in southern Mexico led to a catastrophic event. | Clarity |
| 2 | 7 | IG | 102, 108, 126 | Gender | Replace “gender” with “sex.” | Clarity |
| 3 | 7 | IG | 560 | Ozone is an element… | Ozone is a molecule… | Simple factual error |
| 4 | 7 | IG | 574 | O2 is an element… | Use publisher response with correct page reference. | Simple factual error |
| 5 | 8 | IG | 172, Step 20 | In the 1950s… | In the 1950s and with data from Roselind Franklin… | Clarity |
| 6 | 7 | SRB | 30 | Solids: “particles... are touching tightly and bonded”. | Solids: “particles… are touching tightly”. | Simple factual error |
| 7 | 8 | SRB | 30 | Mendel called the first offspring from the P generation the first filial generation... He identified them as the F1 generation. | Mendel called the first offspring from the P generation the first filial generation... He identified them as the F1 hybrid generation (hybrid, because F1 plants had pure bred parents with opposite traits). | Simple factual error |
| 8 | 8 | SRB | 31 | ...the ratio was 3:1. | …the ratio was consistently close to 3:1. | Simple factual error |
| 9 | 8 | SRB | 32 | ...that would happen for every 3. | …that would happen for about every 3. | Simple factual error |
| 10 | 8 | SRB | 35 | ...he could predict the number of offspring that would be tall or short. | …he could predict the approximate number of offspring that would be tall or short. | Simple factual error |
| 11 | 8 | DOR | ~~https://foss-ca.schoolspecialty.com/delegate/ssi-wdf-ucm-webContent/Contribution%20Folders/FOSS/multimedia/Heredity\_Adaptation/HereditySlideshow/index.html~~ (Heredity Slideshow) [no longer available] | n/a | When they are describing protein, the figures are of body cells or bacteria, but none of the figures actually show protein molecules, until slide 19 | Simple factual error |
| 12 | 8 | SRB | 49 | Mutations are the source for adaptation | Mutations are one source for adaptation. | Clarification. |
| 13 | 8 | IG | 272 | Unless a mutation leads to death the mutation will be passed on to the offspring and might lead to variation. | Unless a mutation leads to death, the mutation might be passed on to offspring which would increase the variation. | Clarification. |
| 14 | 8 | SNM | 2 | Question 1 | Question 1: Pause the video at 4:59 and ask students to compare the embryos of the three species, make observations, and identify any patterns they see. Question 2: Previous “Question 1.” | Simple factual error. |
| 15 | 6 | IG | 352, Step 13 Diagram | Continue by telling students. | Would 1 kg. of water heat up at the same rate as 10 kg. of water? Continue by telling students. | Clarification. |

#### Social Content Citations: None

### Discovery Education, Inc., Discovery Education Science Techbook for California NGSS, Grades K–8 (integrated)

#### Program Summary:

Discovery Education Science Techbook for California NGSS includes: Digital Core Resource; Optional: Core Text Companion; abbreviations include Technology Enhanced Item (TEI), Hands-On Activity (HOA), Hands-On Lab (HOL), Core Interactive Text (CIT), Reading Passage (RP), STEM Project Starter (STEM PS), Performance Based Assessment (PBA), Video (V).

#### Recommendation:

Discovery Education, Inc., Discovery Education Science Techbook for California NGSS is recommended for adoption for K–8 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1:

GK, Living Things and the Environment, Helping the Environment, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/fd37a9b6-7d37-4c87-a021-e3b6d62378ea/concepts/1df9c448-f9d0-4808-b5c2-48c0d02bb050/lesson>

G1, Plant Shapes, Concepts: Growing Plants, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/8fdeefc9-9522-439c-99a8-15a26ecac98c/concepts/3d0a2ef3-01d9-48a2-ae2a-6ea27040adfb/lesson>

G2, Landscape Shapes, Concept: Mapping Landscapes, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/9b3ad964-0c66-4a4e-90bb-705a08876a5d/concepts/3df5e3da-1ab7-4181-b8e2-4dd841148f31/lesson>

G3, Life Cycles for Survival, Concept: Inherited Traits, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/99ef9623-0e95-45bc-bfe2-62d98a51fa22/concepts/9c765a3a-f82c-43dc-af8d-79059ae1be02/lesson>

G4, Earthquakes, Concept: Earthquake Waves, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/3cee9919-e807-4a9e-a5a9-a7b1001affb4/concepts/cc233e10-3a67-4a61-ab75-b5842047d730/lesson>

G5, Interacting Earth Systems, Concept: Water as a Valuable Natural Resource, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/07bba5d6-b9d3-429b-a395-ab9c8dde13a4/concepts/5af92c15-e14b-4fef-a6be-e3abeb9dab43/lesson>

G6, Causes of Weather, Concept: Weather Patterns, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/918b8ab7-070f-45d5-9711-05ad0ad07514/concepts/1b7e5850-9b8b-4b8d-a0e3-124ff8975340>

G7, Matter Cycles and Energy Flow, Concept: Formation of Rocks, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/615fea87-6e04-4769-9836-27fe50b57aff/concepts/ddcd5931-a584-4b35-af12-6619bb236ee3/lesson>

G8, Moving Planets, Concept: Observing Planetary Objects, Model Lesson

<https://app.discoveryeducation.com/learn/techbook/units/080b22a8-fb6d-4a66-9231-98d10c3e2c43/concepts/ee7933e1-0bd7-45df-9039-e5fbf3fe247c>

These citations meet the criterion of full year-long alignment for every grade level of the CA Framework.

* Criterion #2:

GK, Motion and Change,Concept: Push and Pull, Model Lesson,

[NGSS Standards Overview](https://app.discoveryeducation.com/learn/techbook/units/12b141ea-1b32-4396-942e-06e8827bf0ea/concepts/b70a82d6-3b7c-46bc-99ca-51bcd92c6b6e/lesson/sections/e051ae94-779c-47df-b06a-afd9491e9ff7)

<https://app.discoveryeducation.com/learn/techbook/units/12b141ea-1b32-4396-942e-06e8827bf0ea/concepts/b70a82d6-3b7c-46bc-99ca-51bcd92c6b6e/lesson/sections/e051ae94-779c-47df-b06a-afd9491e9ff7>

In this criteria, there is evidence of instructional resources that engage students in using text, discourse, and experiential learning to develop mastery of the three dimensions.

* Criterion #3:

G4, Car Crashes, Energy and Motion, Explore, Fifth [Teacher Note](https://app.discoveryeducation.com/learn/techbook/units/17ad9d17-7835-43d9-9d51-5062e6a2f9c0/concepts/73013bef-2756-4877-bcac-0172caf8489a/tabs/759da9a7-2edf-4cde-9515-7081ca990764/pages/6e44b5ab-b706-4e7e-88aa-800f75d56e62/language/eng/reading_level/10),

<https://app.discoveryeducation.com/learn/techbook/units/17ad9d17-7835-43d9-9d51-5062e6a2f9c0/concepts/73013bef-2756-4877-bcac-0172caf8489a/tabs/759da9a7-2edf-4cde-9515-7081ca990764>

The instructional resources reflect the full content of the CA Science Framework allowing teachers to engage students in using each of SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.

* Criterion #5:

GK, Unit Page: Plant and Animal Needs

<https://app.discoveryeducation.com/learn/techbook/units/64b0881b-e992-4fc6-9cc4-21c9bb7896f1>

This example shows that teacher resources support instructional opportunities and assessments that engage students in three-dimensional learning.

* Criterion #11:

G3, Understanding Fossils, Surviving in Changing Environments, Explore, How Can You Find Clues in Fossils? 2nd Teacher Note & Fossil Images 1–4

<https://app.discoveryeducation.com/learn/techbook/units/a555118c-9e0a-4c27-9466-185f1e787bff/concepts/a4fd709c-53fb-499e-b51c-f1193fced47b>

This exemplar shows that resources include examples of people and groups from different demographics that make important contributions to society through science and technology.

* Criterion #12:

G2, Materials from the Land, Material Properties, Model Lesson, Differentiation Strategies

<https://app.discoveryeducation.com/learn/techbook/units/3c94ea36-5a25-4e6a-8af7-d5860d90ae3f/concepts/d09988ab-bc12-4180-ae95-af88febed2c5/lesson/sections/f7f5752b-c7c9-4e37-9082-34b2c2a2131e>

[This citation shows](https://app.discoveryeducation.com/learn/techbook/units/3c94ea36-5a25-4e6a-8af7-d5860d90ae3f/concepts/d09988ab-bc12-4180-ae95-af88febed2c5/lesson/sections/f7f5752b-c7c9-4e37-9082-34b2c2a2131e) the linkages to CA Common Core State standards for English Language Arts, ELD, Math, and History/Social Studies.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #3:

G3, Life Cycles for Survival, Inherited Traits, Model Lesson, Teacher Preparation

<https://app.discoveryeducation.com/learn/techbook/units/99ef9623-0e95-45bc-bfe2-62d98a51fa22/concepts/9c765a3a-f82c-43dc-af8d-79059ae1be02/lesson/sections/11d35ae4-cd10-4766-9d88-d6da2ec11712>

G6, Causes of Weather, Weather Patterns, Engage, TEI: Mountain Effects, TEI: Changes in Atmosphere, TEI: Explain Your Answer.

<https://app.discoveryeducation.com/learn/techbook/units/918b8ab7-070f-45d5-9711-05ad0ad07514/concepts/1b7e5850-9b8b-4b8d-a0e3-124ff8975340/tabs/5a1b6f8b-c6bf-4208-87dd-7b3b66692147>

In the above citations and throughout the program, instructional resources explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.

* Criterion #4:

G4, Energy Resources, About Fuels, Model Lesson, Differentiation Strategies

<https://app.discoveryeducation.com/learn/techbook/units/d3eadfcf-ab8d-4c71-b48c-74a86c6dac86/concepts/87edea6b-8637-4ecf-bed9-aa256b928327/lesson/sections/cb3db916-2f01-41af-8268-49d0ccc457ef>

G6, Our Changing Climate, Causes of Climate Change, Model Lesson, Differentiation Strategies

<https://app.discoveryeducation.com/learn/techbook/units/881ed9b5-88fb-4334-8b92-2f5a98b58dbc/concepts/8d692aff-57be-409b-8ad8-6435b132f4b7/lesson/sections/0bb9b34f-ac67-4b8c-a589-4bf14d05988e>

GK, Motion and Change, Controlling Motion, Engage, First Teacher Note

<https://app.discoveryeducation.com/learn/techbook/units/12b141ea-1b32-4396-942e-06e8827bf0ea/concepts/c92c6480-b155-4679-b747-3725f407a393/tabs/5a1b6f8b-c6bf-4208-87dd-7b3b66692147>

There is evidence in the above citations of how teacher resources provide support to engage students in three-dimensional learning. Research-based strategies are available to assist in eliciting student thinking and supporting student discourse.

* Criterion #7:

G1, Animal Sounds, Response to Sound, Explore, Teacher Notes

<https://app.discoveryeducation.com/learn/techbook/units/968cfa53-096e-4665-9be9-1e2865887453/concepts/a55cfdec-e0f0-4f30-8d68-c4bad68bf048/tabs/759da9a7-2edf-4cde-9515-7081ca990764>

G5, Interacting Earth Systems, Hydrosphere and Biosphere Interactions, Explore, Teacher Notes

<https://app.discoveryeducation.com/learn/techbook/units/07bba5d6-b9d3-429b-a395-ab9c8dde13a4/concepts/33e64e91-6cc1-4619-b771-61b0b79d0a17/tabs/759da9a7-2edf-4cde-9515-7081ca990764>

All examples cited by the publisher, including the two above, include explanations to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in working sense of phenomena and/or to design solutions to problems and build toward the performance expectations (PEs) of the CA NGSS.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1:

GK, Living Things and the Environment, Helping the Environment, Explore, What Are Some Ways to Reduce Our Use of Natural Resources? TEI: Graph the Data

<https://app.discoveryeducation.com/learn/techbook/units/fd37a9b6-7d37-4c87-a021-e3b6d62378ea/concepts/1df9c448-f9d0-4808-b5c2-48c0d02bb050/tabs/759da9a7-2edf-4cde-9515-7081ca990764>

Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and the CA Science Framework. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS.

* Criterion #3:

G5, Interacting Earth Systems, Hydrosphere and Biosphere Interactions, Explain

<https://app.discoveryeducation.com/learn/techbook/units/07bba5d6-b9d3-429b-a395-ab9c8dde13a4/concepts/33e64e91-6cc1-4619-b771-61b0b79d0a17/tabs/0df56444-5400-41eb-a6ce-de52b7efb950>

Explaining Hydrosphere and Biosphere Interactions (see also the Teacher’s Guide), shows evidence of how teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.

* Criterion #6:

G2, Materials from the Land, Changing Materials, Explore, How Can Mixtures Be Separated? HOA: Separating a Mixture (see also the Teacher Guide)

<https://app.discoveryeducation.com/learn/techbook/units/3c94ea36-5a25-4e6a-8af7-d5860d90ae3f/concepts/35a99a2c-364d-4a9f-990d-db45f1c701fd/tabs/759da9a7-2edf-4cde-9515-7081ca990764>

This shows evidence of how teacher resources supply a differentiated path for diverse students to build toward the PEs of the CA NGSS. The formative assessment tasks are designed to support teachers in collecting and analyzing data about student conceptual understanding.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criteria #2:

G6, Causes and Effects of Regional Climates, Concept: Creating Climate Regions, Model Lesson, Differentiation Strategies

<https://app.discoveryeducation.com/learn/techbook/units/9109bf96-1bd0-48a3-b52c-0d1a2f7c0308/concepts/bc0bff4f-1b03-4b12-a1e4-97584c91b175/lesson/sections/48478e18-ddd9-45d7-ad9b-85d327964b71>

This citation provides evidence that resources meet the needs of English learners as a specific category of students.

* Criteria #3:

G1, Animal Sounds, Animal Noises, Model Lesson, Differentiation Strategies

<https://app.discoveryeducation.com/learn/techbook/units/968cfa53-096e-4665-9be9-1e2865887453/concepts/9f3e9415-c46b-490c-a85f-f0cad7958aa0/lesson/sections/e5500be1-82d6-4212-992b-f7d2dbac2970>

This citation provides further evidence that all student needs are met through diversity in scaffolds and differentiation.

* Criteria #4:

G7, Matter Cycles and Energy Flow, Matter and Energy in Living Systems, Click on Toolbar, Language and Display Options button (Aa)

<https://app.discoveryeducation.com/learn/techbook/units/615fea87-6e04-4769-9836-27fe50b57aff/concepts/9c98cadb-d631-4673-ad4a-586a7acfaa05>

This resource provides differentiated paths for all students within instructional resources, and guidance to support students whose special needs include ELs, foster youth, girls and young women, advanced learners, and students with disabilities in science skills, three-dimensional learning, literacy or math skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #6:

G2, Biodiversity in Habitats, Unit: Performance-Based Assessment: [Eco-Friendly Outdoor Area](https://app.discoveryeducation.com/learn/player/5f1073c7-831a-4601-834a-85dd630b7995) (see also the [Teacher Guide](https://gtm-media-3.discoveryeducation.com/v3.4/DSC/data/STB_CA_G2_U4_EcoFriendlyArea_PBA_HOA_TG_FINAL.pdf))

<https://app.discoveryeducation.com/learn/techbook/units/1121860a-105f-4ecf-9f57-f072ce384f22/resources>

G1, Plant Shapes, Designing for Plants, Elaborate, STEM Project Starter: Comparing Bridges, [TEI: Bridge Design, TEI: Comparing Bridges, TEI: Making a Conclusion, TEI: Improving Your Design](https://app.discoveryeducation.com/learn/techbook/units/8fdeefc9-9522-439c-99a8-15a26ecac98c/concepts/43953b51-a593-42c7-ad05-d9fde851fe08/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/E9AC305B-7C29-464E-BF3D-0B224823A699)

<https://app.discoveryeducation.com/learn/techbook/units/8fdeefc9-9522-439c-99a8-15a26ecac98c/concepts/43953b51-a593-42c7-ad05-d9fde851fe08/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/39af2bcf-54af-45ae-af27-11ff8588ba4f>

G8, Moving Planets, Energy in the Universe, Explore, p1, What is the Kinetic Energy of Orbits in the Solar System?, [HOA: Kinetic Energy of Orbits](https://app.discoveryeducation.com/learn/player/14e3deac-2046-4280-a7ed-194f1a55dd5b) (see also the [Teacher Guide](https://gtm-media-3.discoveryeducation.com/v3.4/DSC/data/STB_CA_G8_U2_C4_EnergyUniverse_KineticEnergyOrbit_HOA_TG_FINAL.pdf))

<https://app.discoveryeducation.com/learn/techbook/units/080b22a8-fb6d-4a66-9231-98d10c3e2c43/concepts/2d6d353b-d274-4dd5-bf77-e8fd8166d938/tabs/759da9a7-2edf-4cde-9515-7081ca990764>

These citations show how student tasks and assessments are supported with guidance for the teacher on implementation and evaluation.

* Criterion #15:

G5, What is Matter Made Of, Changes to Matter, Explore, Explore More Resources, Reading Passage:Shuttle Launch!

<https://app.discoveryeducation.com/learn/techbook/units/5e011d97-98f2-449d-8765-18043eb88141/concepts/e079bea7-516b-4734-996b-f24af4665e12/tabs/759da9a7-2edf-4cde-9515-7081ca990764/pages/2724f5b3-144b-40cd-b031-4748c003bd42>

G8, Life’s Unity and Diversity, Evolution and Natural Selection, Model Lesson, Teacher Preparation,Background for Teacher <https://app.discoveryeducation.com/learn/signin?next=https%3A%2F%2Fapp.discoveryeducation.com%2Flearn%2Ftechbook%2Funits%2Fd634d618-3648-4039-98ec-0d6ebb3cb9b7%2Fconcepts%2F2b60427d-916b-410c-973e-bea248dc8d5d%2Flesson%2Fsections%2Feedad2e1-a568-439d-86c9-bad01f28757d>

These examples demonstrate that the program provides information for teachers and students about important people, ideas, and scientific principles.

* Criterion #20:

G3, Weather Impacts, Predicting Weather, Elaborate, STEM Project Starter: [Graphical Weather Maps](https://app.discoveryeducation.com/learn/techbook/units/d4f0896d-0754-405b-9466-55dd873c3ca0/concepts/360d6986-f4ff-463f-96a3-770d8674eea9/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/9065678d-f56c-499d-8ae8-8064438a906e)

<https://app.discoveryeducation.com/learn/techbook/units/d4f0896d-0754-405b-9466-55dd873c3ca0/concepts/360d6986-f4ff-463f-96a3-770d8674eea9/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/bc910fac-44c8-41b1-a1f0-799df9cddcad>

G4 Senses and Survival, Communication and Information Transfer, Elaborate, STEM Project Starter: [Bat Chat](https://app.discoveryeducation.com/learn/techbook/units/8bc8b2f3-e1b4-4fe6-b9b2-c15ee76c7427/concepts/2e983df2-112a-4972-a870-b4f9c54e8bc0/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/a8ddc8fc-65e8-4000-8f5b-1cf82a488206)

<https://app.discoveryeducation.com/learn/techbook/units/8bc8b2f3-e1b4-4fe6-b9b2-c15ee76c7427/concepts/2e983df2-112a-4972-a870-b4f9c54e8bc0/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/ab9db098-e146-4941-8bf7-39fd5d2c298d>

G7, Shaping Earth’s Resources and Ecosystems, Earth’s Moving Surface, Elaborate, STEM Project Starter: [Tectonic Activity in My State](https://app.discoveryeducation.com/learn/techbook/units/94f58423-3d4a-47f4-8b35-569800b108f3/concepts/17e66da9-4220-4188-bc52-0a6c91176978/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/47434F31-3BA9-4925-AE40-DF2E8DDF6A63)

<https://app.discoveryeducation.com/learn/techbook/units/94f58423-3d4a-47f4-8b35-569800b108f3/concepts/17e66da9-4220-4188-bc52-0a6c91176978/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/e5503d97-8b71-4fd8-aa02-d6b99b5382c2>

These citations show how the program provides information for teachers on the effective use of library and media resources to complement the standards. These resources also provide suggestions for teaching students how to use these tools.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page number(s) | Current text | Proposed corrected text | Reason for edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | K | HOA/T | Weather and Shelter > Sunshine and Shade > Explore > How Does Sunlight Affect the Temperature of an Object? > Hands-On Activity: The Sun Heats Up the Earth (see also the Teacher’s Guide)  <https://gtm-media-3.discoveryeducation.com/v3.4/DSC/data/STB_CA_K-2_SunHeatsEarth_HOA_TG_FINAL.pdf> | “In this activity, students measure the temperature of sand over time as it heats up sunlight.” | Text should say “In this activity, students measure the temperature of sand over time as it heats up in the sunlight.” | Missing words |
| 2 | K | RP | Weather and Shelter > Sunshine and Shade > Explore > How Does Sunlight Affect the Temperature of an Object? > Reading Passage: The Warm Sun page 3  <https://app.discoveryeducation.com/learn/player/fb11b52c-b2a0-44e3-a830-467f48471105> | Some places have “special windows” to trap the sun’s heat. | “special panels” or replace photo with one of sky lights | Words do not match photo |
| 3 | 1 | TB | Grade 1 > Shadows, Light, Motion in the Sky > Concept: Sunlight  <https://app.discoveryeducation.com/learn/techbook/units/63A47FA7-A350-48A3-93CC-3CE8027DB5D7/concepts/C66222DA-96A2-47B6-ACE2-FF7C246F8D3A> | “Students will dive deeper into phases of the moon in grade five.” | Remove statement | Statement not needed |
| 4 | 1 | PBA | Grade 1 Unit: Plant Shapes > Performance Based Assessment: Pizza Garden  <https://app.discoveryeducation.com/learn/player/008cfedf-2453-4150-94a2-e8a94eaa690e> | Text says, “Her bag” | Change spacing so the text says “her bag”. | Spacing issue |
| 5 | 3 | STEM PS | Grade 3 > Weather Impacts > Predicting Weather > Elaborate > STEM Project Starter: Graphical Weather Maps “first teacher note”  <https://app.discoveryeducation.com/learn/techbook/units/d4f0896d-0754-405b-9466-55dd873c3ca0/concepts/360d6986-f4ff-463f-96a3-770d8674eea9/tabs/054d49d8-d8f5-4203-b276-19e25b56cc5f/pages/9065678d-f56c-499d-8ae8-8064438a906e> | “A score of one would indicated the source of the information is credible and scientific accurate. A score of 4 would indicated that they could not locate the source of the data and could not provide evidence that the information is accurate.”  “scientific” | Reverse scoring scale: Higher score should match the “4” lower score should match the “4” in the Teacher Note.  “scientifically” | Reverse scoring scale  Grammatical error |
| 6 | 4 | PBA | Earthquakes > Unit Performance Based Assessment: Ready for the Big One?  <https://app.discoveryeducation.com/learn/player/a482d9aa-2801-4453-a3d5-a36225c4b98e> | “…the San Andreas Fault. It goes along the entire length of the state.” | …goes along most of the length of the state.  or delete ”the entire” | Simple factual error |
| 7 | 5 | V | What is Matter Made Of > A Model of Matter > Explore > Explore More Resources > Video: The Tiniest Particles  <https://app.discoveryeducation.com/learn/player/db489e78-8a6b-4ad9-9547-70dc8f17e8b4> | Video describes atoms. | Become a teacher note for differentiation for advanced learners? | A differentiation for advanced learners |
| 8 | 5 | RP | Interacting Earth Systems > Hydrosphere and Biosphere Interactions > Explore > Explore More Resources >Reading Passage: Freshwater Ecosystems p. 1, paragraph 3  <https://app.discoveryeducation.com/learn/player/023287ca-f6b9-4e42-8b26-387b306cb583> | “Light does not reach the bottom of a lake.” | Omit sentence (Some lakes do get light at the bottom.) | Simple factual error |
| 9 | 6 | TB | Systems on Earth > Concept: Earth’s Interacting Systems  <https://app.discoveryeducation.com/learn/techbook/units/2b08e577-9c61-44fb-be3b-d12ca17844a8/concepts/7cb0c9af-f0d9-4f4b-9309-0c471aae8f77> | “Earth is made up of four major systems. The geosphere is the Earth’s crust, both on the continents and beneath the oceans. The hydrosphere includes Earth’s water, regardless of its location. The atmosphere is the layer of gasses that surround the planet. The biosphere includes…” | The word atmosphere should be highlighted in the passage as are the other spheres | Highlighting error |
| 10 | 6 | TB | Systems on Earth > Body Systems > Explore > p2 > How Does the Body React to Stress?  <https://app.discoveryeducation.com/learn/techbook/units/2b08e577-9c61-44fb-be3b-d12ca17844a8/concepts/c708e9b1-7b14-429f-8b95-aaac626958b0/tabs/759da9a7-2edf-4cde-9515-7081ca990764/pages/12efb916-eea5-4ab4-8a66-154517afc177/language/eng/reading_level/10> | Body model does not have placenta labeled. | Label placenta with (in female) | Labeling error |
| 11 | 6 | TB | Causes and Effects of Regional Climates > Creating Climate Regions > Explain > Explaining Creating Climate Regions (see also the Scientific Explanation Teacher’s Guide) <https://gtm-media-3.discoveryeducation.com/v3.4/DSC/data/pdfs/SciExplan_TG_FINAL_AG.pdf> | Link goes to explaining weather patterns | Correct link | Incorrect link |
| 12 | 6 | TB | Our Changing Climate>Causes of Climate Change>Explore> p 2> FirstTeacher Note  <https://app.discoveryeducation.com/learn/techbook/units/881ed9b5-88fb-4334-8b92-2f5a98b58dbc/concepts/8d692aff-57be-409b-8ad8-6435b132f4b7/tabs/759da9a7-2edf-4cde-9515-7081ca990764/pages/4bd0abb4-907d-4af9-ba01-9e964f901db9> | “…temperaturesnd…” | “…temperatures and…” | Spacing issue |
| 13 | 7 | TB | Matter Cycles and Energy Flow > Matter and Energy in Living Systems > Explore > p1 > How Do Plants and Other Organisms Produce Food by Photosynthesis?  <https://app.discoveryeducation.com/learn/techbook/units/615fea87-6e04-4769-9836-27fe50b57aff/concepts/9c98cadb-d631-4673-ad4a-586a7acfaa05/tabs/759da9a7-2edf-4cde-9515-7081ca990764/pages/fe778469-7f34-4d46-a138-5e9b8fba1875/language/eng/reading_level/10> | in the paragraph under teacher note titled, “connections”, there is a space missing between sentence ending with  Text says, “involved.In all” | Text should say, “involved. In all…” | Grammatical error |
| 14 | 7 | RP | Matter Cycles and Energy Flow > Matter and Energy in Living Systems > Explore > Explore More Resources > Reading Passage: Plants and Photosynthesis  <https://app.discoveryeducation.com/learn/player/bcaf178f-05c2-4147-907c-d7a37f94a771> | Fifth page only has a caption about a leaves. | Move caption to appear with appropriate image on page 4. | Caption and image need to be on same page |
| 15 | 7 | PBA | SEP: Developing Models Matter Cycles and Energy Flow > Unit Performance Based Assessment: Everything is Connected (see also the Teacher’s Guide)  <https://gtm-media-3.discoveryeducation.com/v3.4/Techbook%20PDFs/STB_CA_G7_U2_MatterCycleEnergyFlow_PBA_TG_FINAL_rev.pdf> | This citation in the PE is a Life Science 1-6 | Needs to be changed to PS1-6 | Incorrect PE |
| 16 | 7 | HOA | From Matter to Organisms > Energy Flow in Ecosystems > Explore > How Does Energy from the Sun Flow through an Ecosystem? > Hands-On Activity: Energy Flow  Teacher guide, line 3 of directions <https://gtm-media-3.discoveryeducation.com/v3.4/DSC/data/STB_CA_3-5_EnergyFlow_HOA_TG_FINAL.pdf> | Each student should receive 10 marbles of dry pasta to… | Take out “of dry pasta” | Error |
| 17 | 8 | V | Hydrofoiling with Kites  <https://app.discoveryeducation.com/learn/techbook/units/56167ce6-eb14-4548-9e5b-e67ea0692ae7/concepts/e53b3b7a-cbb6-45fe-bf2a-9e37b0ebac3f/tabs/759da9a7-2edf-4cde-9515-7081ca990764/pages/9a8abbc6-2f8f-4ee4-a9ae-ccf8626c9663/language/eng/reading_level/10> | Link goes to rocket fuel teacher page. | Connect link to Hydrofoiling with Kites video | Incorrect link |
| 18 | 8 | TB | Monitoring Biodiversity > Nature of Waves  <https://app.discoveryeducation.com/learn/techbook/units/aa3f2250-19ed-4cac-a653-618021d9c8be/concepts/f581a0c8-daeb-42a6-a072-c15afdb6c5cb/tabs/5a1b6f8b-c6bf-4208-87dd-7b3b66692147/pages/7b175524-ef11-4fe6-a019-2bdc33abd8b4/language/eng/reading_level/10> | ETS1-4 is covered in the lessons and not on the Model Lesson Standards Overview. | ETS 1-4 could be added to the list. | Missing ETS1-4 |

#### Social Content Citations: None

### Great Minds LLC, *Great Minds Science*, Grade 4

#### Program Summary:

Great Minds Science includes: Teacher Editions (Modules 1-4), Student Edition Science Logbook Set (Modules 1-4), Science Teacher Online Implementation Support Materials.

#### Recommendation:

Great Minds Science is recommended for adoption for 4 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 4, Module 2, TE, Lesson 19, pp. 137–138; Grade 4, Module 2, TE, Lesson 20, pp. 139–141. The program includes numerous exemplars of the standards being fully covered in grade 4.
* Criterion #2: Grade 4, Module 1, TE, Lesson 5, pp. 51–55; Grade 4, Module 1, TE, Lesson 13, pp. 102–103. Exemplars throughout the grade 4 program provide instructional resources to engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the SEPs, the CCCs, and the DCIs.
* Criterion #7: Grade 4, Module 4, TE, Lesson 1, p. 14; Module 4, TE, Lesson 10, p. 87. These are examples of how the publisher used grade-level appropriate primary sources to integrate three-dimensional learning.
* Criterion #8: Grade 4, Module 3, TE, Lesson 1, pp. 17–24. Grade 4 materials are replete with instructional resources to introduce real-world phenomena and systems that students can investigate, model, and explain using the targeted DCIs and CCCs.
* Criterion #10: Grade 4, Module 4, TE, Lesson 17, Side Note p. 130, Amelia Lost. The science curriculum is enriched with opportunities for students to access informational texts, literature, simulations and other media related to science and engineering, and it presents diverse examples of notable scientists and engineers.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grade 4, Implementation Guide, Scope and Sequence, <https://cdn2.hubspot.net/hubfs/3454910/CaliforniaGMScienceIG.0.pdf?t=1531925300163>; Module 1, TE, pp. 4–10, pp. 258–275. Sequential organization of the material provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
* Criterion #4: Grade 4, Implementation Guide, Supporting Diverse Learners, Instructional Routines, Speaking and Listening Supports, <https://cdn2.hubspot.net/hubfs/3454910/CaliforniaGMScienceIG.0.pdf?t=1531925300163>; Grade 4, Module 1, TE, Lesson 9, Side Note, p. 78. Teacher resources provide support to engage students in three-dimensional learning and suggest research-based strategies to elicit student thinking and support student discourse.
* Criterion #8: Grade 4, Module 3, TE, pp. 283–300. Topics within modules are selected for in-depth study and are developed through their role in explaining selected phenomena, chosen to support students in building the knowledge and abilities needed to achieve proficiency in a bundle of PEs.
* Criterion #14: Grade 4, Module 4, TE, pp. 245–246. Student tasks (referred to in text as Engineering Challenges, Socratic Seminars, and End-of-Module Assessments), including end-of-chapter or culminating problems and exercises, are three-dimensional in nature and build in complexity throughout the year.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #2: Grade 4, Module 1, TE, Lesson 11, p. 95. Entry-level assessments are provided for each unit to help teachers elicit students’ prior knowledge and preconceptions and gauge their facility for using the SEPs and CCCs. Information is provided to teachers to help them use the results of those assessments to guide instruction and to determine modifications for specific students or groups of students.
* Criterion #5: Grade 4, Module 4, TE, Lesson 13, p. 106; Grade 4, Module 4, TE, Lesson 24, p. 173. Assessments yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards.
* Criterion #7: Grade 4, Module 2, TE, pp. 160–164; Grade 4, Module 3, TE, pp. 228–240. Summative assessments provide valid, reliable and fair measures of students' progress and attainment of three-dimensional learning after a period of instruction and involve multi-component tasks.
* Criterion #11: Grade 4, Module 2, TE, p. 164. Assessment tools include guidance on measuring students’ ability to apply information literacy skills when obtaining and evaluating information about science topics.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade 4, Module 3, TE, Lesson 11, p. 95. The instructional resources throughout the program reflect the goals of access and equity outlined in Chapter 10 of the CA Science Framework.
* Criterion #2: Grade 4, Implementation Guide, English Language Development, Supporting Diverse Learners, <https://cdn2.hubspot.net/hubfs/3454910/CaliforniaGMScienceIG.0.pdf?t=1531925300163>; Grade 4, Module 4, TE, Lesson 2, Side Note, p. 25. Lessons and teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3: Grade 4, Implementation Guide, Supporting Diverse Learners, <https://cdn2.hubspot.net/hubfs/3454910/CaliforniaGMScienceIG.0.pdf?t=1531925300163>; Module 2, TE, Lesson 8, Side Note, p. 89. Instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate.
* Criterion #4: Grade 4, Module 1, TE, Lesson 2, pp. 24, 26, 27. The program the following teacher resources that supply a differentiated path for all students: Implementation Guides, Support for Diverse Learners, Support for English Language Development and Formative Assessment Opportunities. In particular, instructional resources provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #2: Grade 4, Implementation Guide, Product Components, Learning Design, Scope and Sequence, <https://cdn2.hubspot.net/hubfs/3454910/CaliforniaGMScienceIG.0.pdf?t=1531925300163>; Module 4, TE, Lesson 1, p. 14. The teacher resources provide an estimated instructional time for each activity, lesson, chapter, and unit which allows for student engagement in the SEPs and engineering design projects.
* Criterion #6: Grade 4, Module 4, TE, pp. 185–191; Grade 4, Module 4, Science Logbook, Lesson 22, p. 59. Suggested student tasks including classroom activities, end-of chapter tasks, suggested out-of-school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Assessment keys and rubrics are provided.
* Criterion #17: Grade 4, Module 3, TE, Lesson 10, p. 90. Suggested homework extends and reinforces classroom instruction. The homework provides opportunities to support student learning through shared experiences with family. Opportunities include projects, journaling, reflection, or interviews with parents around a concept or activity.
* Criterion #21: Grade 4, Implementation Guide, English Language Development, Supporting Diverse Learners, Instructional Routines, Speaking and Listening Supports, Socratic Seminar Resource. <https://cdn2.hubspot.net/hubfs/3454910/CaliforniaGMScienceIG.0.pdf?t=1531925300163>. The teacher resources provide guidance and support for engaging students in collaborative conversations using grade level appropriate academic vocabulary for scientific discourse.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 4 | TE, Module 4 | Throughout M4, for example: 149 (side note) | The Future | The Future | extra spaces |

#### Social Content Citations: None

### Green Ninja, *Green Ninja Integrated*, Grades 6–8 (integrated)

#### Program Summary:

Green Ninja Integrated includes: Green Ninja Integrated Middle School Science includes: digital subscription to Climate: Scientific Principles and Communication (Grade 6); Resources: Investigative Methods and Conservation (Grade 7); Living Systems: Computational Thinking and Design Solutions (Grade 8).

#### Recommendation:

Green Ninja Integrated is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1: Grade 6, Lesson 5.14 From the Water Cycle to Cells, MS-LS 1-1; Grade 6, Lesson 4.5 Reproductive Strategies Part III, MS-LS 3-2; Grade 8, Lesson 2.6 Fossil Forensics, MS-LS4-1; Grade 8, Lesson 5.14 Hovercrafts: Moving on Air, MS-PS2-2; Grade 7, Lesson 2.11 Understanding Hydrocarbons Part I, MS-PS1-1; Grade 7, Lesson 1.14 Rock Cycle Part III, MS-ESS2-1. Program aligns to the CA NGSS for grades 6–8.
* Criterion #1.2: Grade 8, Lesson 2.14 to Lesson 2.17 Finding Patterns in Evolution. Instructional resources engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the Science and Engineering Practices (SEPs), Crosscutting Concepts (CCCs), and DCIs.
* Criterion #1.4: Grade 6, Lesson 2.13 to Lesson 2.17 Using the Sun. Instructional resources progressively build students’ abilities to meet all grade-level PEs through a three-dimensional instructional sequence.
* Criteria #1.4: Grade 6, Grade Storyline. Instructional resources progressively build students’ abilities to meet all grade-level PEs through a three-dimensional instructional sequence**.**
* Criterion #1.7: Grade 7, Lesson 2.23 to 2.26 Transportation and Air Quality. Use of primary sources, such as scientific research, case studies, and photographs, are integrated into the three-dimensional learning, as grade-level appropriate.
* Criterion #1.15: Grade 7, Lesson 2.23 to 2.26 Transportation and Air Quality. Instructional resources, where appropriate, examine humanity’s place in ecological systems and the necessity for the protection of the environment (EC Section 60041).Resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency and adopted by the SBE (Public Resources Code Section 71301) in context and aligned to the CA NGSS, as exemplified in Appendix 2.
* Criterion #1.15: Grade 6 Overview, Standards Tab––California’s Environmental Principles and Concepts; Grade 7, Lesson 5.13 Staying Above Water; Grade 8, Lesson 6.17 Lexicon of Sustainability Part I. Instructional resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency and adopted by the SBE in context and aligned to the CA NGSS, as exemplified in Appendix 2.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.1: Grade 6, Grade 6 Overview. Sequential organization of the material provides structure concerning what students learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
* Criterion #2.2: Grade 7, Overview––Science Talk. Instructional resources support teacher questioning strategies as a tool to assess students’ knowledge and skills, promote student-to-student discourse, and guide student learning.
* Criterion #2.7: Grade 8, Lesson 4.15 GMOs Part 1. Resources include explanations to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the PEs of the CA NGSS. Teacher resources support understanding of how PEs are developed within units and across units throughout a year.
* Criterion #2.8: Grade 6 U1 Overview––Unit Storyline; 7.2.12 Understanding Hydrocarbons Part II (Phenomenon Context). Topics selected for in-depth study are developed through their role in explaining selected phenomena, chosen to support students in building the knowledge and abilities needed to achieve proficiency in a bundle of PE’s. The storylines and investigative questions of this program are excellent, engaging, real-world and age appropriate.
* Criterion #2.9: Grade 6, Overview––Technology and Teaching. Resources encourage the meaningful use of technologies such as video clips or computer simulations to investigate phenomena that cannot be directly experienced in the classroom; effective measuring tools (computer linked thermometer or range-finder, digital scales, etc.); and spreadsheets and other software to record, display, and analyze data, etc. In these contexts, the materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.
* Criterion #2.12: Grade 6, 3.6 Sea Breeze Part I (Background for Teachers Context); Grade 7, 5.8 It Keeps Rising; Grade 8, Unit 4 Overview––Science Background. Ancillary and support resources are an integral part of the instructional program and are clearly aligned with the CA NGSS.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3.1: Grade 6, Unit 2 Overview––Assessment. Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and the CA Science Framework. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS. Assessments stress performance tasks rather than rote memorization.
* Criterion #3.3: Grade 7, Lesson 1.9 to 1.10 Looking for Evidence. Teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.
* Criterion #3.5: Grade 8, Lesson 4.6 Inheriting Traits. Assessments yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards.
* Criterion #3.8: Grade 8, Lesson 4.9 to 4.10 Natural Selection. Students’ progress toward meeting the three-dimensions of the CA NGSS is assessed through both writing and performance tasks. Student written responses are consistent with the grade-level writing and mathematics requirements in the CA CCSS for ELA/ Literacy and the CA CCSSM.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.1: Grade 8, Unit 3 Overview. The instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #4.1: Grade 7, Unit 5 Overview. The instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #4.2: Grade 6, Lesson 5.3. At every grade level, suggested lessons and teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #4.4: Grade 7, Unit 1 Overview. Teacher resources supply a differentiated path for all students. In particular, instructional resources provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.3: Grade 6, Unit 3.6 Sea Breeze Part 1. The teacher resources provide guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons, if necessary, to ensure three-dimensional learning.
* Criterion #5.6: Grade 6, Unit 1, Lesson 1.2, Energy and Climate Challenge; Lesson 1.2b Pre-assessment, key and teacher tips. All suggested student tasks, including classroom activities, end-of-chapter tasks, suggested out-of-school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Assessment keys and rubrics are provided.
* Criterion #5.19: Grade 6, Unit 4 Resources Grade 8, Resources provide teachers with instructions on how outside resources can be incorporated into a three-dimensional learning, standards-based science program.
* Criterion #5.19: Grade 6, Lesson 5.3 Researching Trash, Extensions (bottom of page). Resources provide teachers with instructions on how outside resources can be incorporated into a three-dimensional learning, standards-based science program.
* Criterion #5.19: Grade 8, Lesson 5.15 Maglev Trains: Magnetic Fields, Extensions. Resources provide teachers with instructions on how outside resources can be incorporated into a three-dimensional learning, standards-based science program.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| **#** | **Grade Level** | **Component** | **Page Number(s)** | **Current Text** | **Proposed Corrected Text** | **Reason for Edit** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | Unit 2, lesson 2.21 | Home Design Prototype Part II. | They should focus on maximizing energy transfer from the Sun to the materials in the house during the winter and minimizing this energy transfer during the summer. | Students should also include heat transfer by convention and conduction in addition to radiation and re-radiation. | Omissions of science vocabulary |
| 2 | 6 | Unit 2, Lesson 2.21 | Passive Solar Home Report Handout | 3. Research Explanation – Energy Transfer: Develop a claim–evidence statement that describes how the air inside the home gets warmed using your passive solar home design. Include a drawing that explains how energy is transferred within your solar home design. | Add sentence in Item 3 to say: Make sure your drawing explains all possible methods of heat transfer. | The passive solar home will be affected by all methods of heat transfer, not just radiation and re-radiation. |
| 3 | 6 | MS-ESS3-5 | 1.12a graph, World Population over the last 12,000 years | The red line on graph | The blue line on the graph | Typo of the color of the line |
| 4 | 6 | MS-ESS3-5 | 1.12b PowerPoint | For additional background information on the prompts, please refer to the Natural vs. Anthropogenic Factors presentation Lesson 1.12b-natural-and-anthropogenic-factors.pptx | For additional background information on the prompts, add in the comments of the presentation | For clarity on finding the additional background information |
| 5 | 8 | Lesson 6.11 | n/a | Phet simulation of season. Clearly depicts the cyclical pattern of the Earth/Sun movement resulting in seasons. | Clearly depicts the cyclical pattern of the Earth/Sun movement resulting in seasons and eclipses (solar and lunar). | To complete the student understanding of the DCI ESS1.B Earth and the Solar System. |
| 6 | 6 | Lesson 6.2 to 6.3, 6.12 | Exploring Sensory Lesson, Modeling Sensory Response Teacher Resources | This sequence of lessons on sensory response now concludes with a reflection of how this understanding can help students create more meaningful stories as part of the unit challenge. | If possible, please add a rubric the teacher for MS-LS 1-8 | Since there is a gap in the unit to work on necessary science skills, an answer rubric would be helpful for the teacher to make sure the students do not miss any important details that apply to this PE |
| 7 | 6 | Lesson 1.2 | Teacher Resources | File is only a PDF | File as editable document | If the document is editable, it makes it easy for the teacher to make accommodations for their students |
| 8 | 6 | Standards List | Grade 6 Overview, Standards, LS1.1 | [Clarification Statement: Emphasis is on developing evidence that living things are made of cells, distinguishing between living and non-living things, and understanding that living things may be made of one cell or many and varied cells.] | [Clarification Statement: Emphasis is on developing evidence that living things (including Bacteria, Archaea, and Eukarya) are made of cells, distinguishing between living and non-living [Clarification Statement: Emphasis is on developing evidence that living things **(including Bacteria, Archaea, and Eukarya)** are made of cells, distinguishing between living and non-living. | Correct an omission in language: content that supports this standard is already in place.  Also recommended to add this standard reference to places in curriculum that reflect student learning about bacteria and viruses. |
| 9 | 8 | Lesson 6.9 | Gravitational Simulation Activity | Compare the forces of gravity on the Sun and Earth - which has greater gravitational force? Why? | Compare the forces of gravity on the Sun, Moon, and Earth. Which has a greater gravitational force and how are the patterns of eclipses affected by these forces? | To complete the student understanding of PE MS-ESS1-1. |
| 10 | 8 | Lesson 6.11 | worksheet 6.11a | The Model… Includes the Sun and the Earth-Earth must have a North Pole, South Pole, and Equator. | The Model…Incudes the Sun, Moon, and the Earth-Earth must have a North Pole, South Pole, and Equator. | To complete the student understanding of PE MS-ESS1-1. |
| 11 | 8 | Lesson 1.2 | The Blue Marble Activity | Explain that students should use other planets, the moon, and the Sun to provide points of reference for the representation | Explain that students should use other planets, the moon, their understanding of the phases of the moon, and the Sun to provide points of reference for the representation. | To complete the student understanding of PE MS-ESS1-1. |
| 12 | 6 | Lesson 6.12 | Modeling Sensory Response L.P. Activity 1 | The models that students develop are a summative assessment to measure student understanding of sensory response. | The models that students develop are a summative assessment to measure student understanding of sensory response that emphasizes both physical and emotional responses to stimuli. | To complete the student understanding of PE MS-LS1-8. |
| 13 | 8 | Lesson 1.2 | Teacher Tips | (none) | Add Make certain students include the moon orbiting the Earth in Pre-Assessment Q1. | Reason for edit: It is important for teachers to understand students know the moon’s orbit is part of the solar system, as it is used later in Unit 6. |
| 14 | 8 | Lesson 6.11 | Tying It All Together. | (none) | Add sentence at end of paragraph. The 5◦ angle of the moon’s orbital plane explains why solar eclipses don’t occur monthly. | The monthly orbit of the moon around the sun could lead students to conclude that we should experience a solar eclipse monthly, during every new moon. |
| 15 | 8 | Lesson 6.9 | Lesson Plan | Ends with Mars has a much smaller mass than Earth. If Mars were the same distance from the Sun as the Earth is, how would the gravitational force between Mars and the Sun compare to the gravitational force between Earth and the Sun? | Add after the previous question: Why isn’t there a solar eclipse every month as the moon passes between the Earth and the Sun? | A full model of the relationship among Earth, Sun, and Moon must explain the pattern of orbital interactions that cause eclipses to occur. |
| 16 | 8 | Lesson 6.11 | Teacher Tips | The model activity is designed to get students to understand that Earth’s tilt during its revolution around the Sun is the reason for the seasons. | Add (at the end of the paragraph) The model activity is also designed to get students to understand that the moon’s orbital plane is not aligned to Earth’s orbit around the sun. | A full model of the Earth’s annual path around the Sun needs to include an understanding of the moon’s orbital behavior, too. |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| **#** | **SC Code** | **Grade Level** | **Component** | **Page Number(s)** | **Current Text** | **Proposed Corrected Text** | **Reason for Citation** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | A3 | 7 | N/A | N/A | Inequitable proportions of representations of majority to minority individual accomplishments | Include more examples of working female scientists. | Equitable representation proportions are desired |
| 2 | A3 | 7 | N/A | N/A | Inequitable proportions of representations of majority to minority individual accomplishments | Include more examples of working minority group scientists. | Equitable representation proportions are desired |
| 3 | A3 | 7 | N/A | N/A | Inequitable proportions of representations of majority to minority individual accomplishments | Include more examples of working LGBT scientists | Equitable representation proportions are desired |
| 4 | J | 6 | Lesson 3.4, Chasing the Storm | N/A | Data on storm flooding. | Include discussion of locally relevant wildfire information. | In California, wildfires can affect storm flooding. |
| 5 | L | 8 | Lesson 5.10, Engineering drag-racers | N/A | 5.10c-drag-racer-forces-phenomenon.pdf | Mask/use generic terms instead of brand names. | Logos in image. |

### Houghton Mifflin Harcourt Publishing Company, *California HMH Science Dimensions*, Grades K–6

#### Program Summary:

California HMH Science Dimensions includes: California Student Edition Interactive Worktext (SE); California Student Online Interactive Digital Curriculum; California Teacher Edition (TE); California Teacher Digital Management Center; California Assessment Guide (AG)

#### Recommendation:

California HMH Science Dimensions is recommended for adoption for K–5 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion 1.1: Grade K, SE/TE pp. 231–233, 241–243, 247, 252–253; Grade 1, SE/TE pp. 74–76, 79; Grade 2, SE/TE pp. 17–23; Grade 3, SE pp. 399–401, 419–423, TE pp. 391A; Grade 4, SE/TE pp. 207–209, 214–217, 422–430, 451–453, 474–477; Grade 5, SE/TE pp. 478–481. We found examples where standards were covered across the Disciplinary Core Ideas (DCIs), Cross Cutting concepts (CCCs), Science and Engineering Practices (SEPs), and Performance Expectations (PEs).
* Criterion 1.2: Grade 5, SE/TE pp. 216–218. Three integrated dimensions are contained through SEPs, CCCs, and DCIs with hands-on activity.
* Criterion 1.4: Grade 2, TE p. 241A. Instructional resources progressively build students’ abilities to meet all grade-level PEs.
* Criterion 1.5: Grade K, SE/TE pp. 33–37; Grade 4, SE/TE pp. 69–71. Teacher resources helped engage students in learning with rubrics and questioning.
* Criterion 1.7: Grade 1, SE/TE pp. 185–186. Take It Further Activity highlights scientific research and is integrated into Three-Dimensional Learning.
* Criterion 1.8: Grade 3, SE/TE p. 349 Evidence Notebook. Instructional resources use real world phenomena allowing students to investigate, model and explain using DCIs and CCCs.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion 2.2: Grade 3, TE, p. 230. Teacher questioning is effectively used to assess student knowledge and to promote student discourse and learning through the CCCs.
* Criterion 2.4: Grade 5, SE/TE, p. 93, Evidence Notebook. The textbook contains resources for teachers guiding them to ask students questions for writing evidence.
* Criterion 2.5: Grade 2, TE, pp. T26–T30. The teacher materials provide a detailed pacing guide for each grade level with a few different options for teachers to utilize to cover 180 days of instruction.
* Criterion 2.9: Grade K–5, California Student Online Interactive Digital Curriculum. Online simulations on science dimensions hmhco.com website, provide meaningful use of technology to investigate phenomena.
* Criterion 2.11: Grade 1, SE/TE, p. 101C. Environmental principles and concepts include references to where supplemental resources may be found. “CA Ed & the Environment Initiative Curriculum.”

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion 3.1: Grade 4, SE/TE, pp. 306–307. Students complete a performance task and are assessed using a rubric aligned with the three dimensions of CA NGSS. In addition, on TE page 309, there is a key that shows which questions pertain to the dimension being assessed.
* Criterion 3.2: Grade 1, AG, pp. 73–75. Unit pretest is provided to help teachers elicit students’ prior knowledge and preconceptions and gauge their facility for using the SEPs and CCCs.
* Criterion 3.5: Grade 2, AG, pp. 44–46. Unit pretest yields information teachers can use in planning and modifying instruction to meet or exceed the needs of the standards.
* Criterion 3.9: Grade 5, AG, pp. 187–206. Resources include student work expectations and analytical rubrics.
* Criterion 3.10: Grade 3, SE/TE, pp. 406–408. The third grade materials on pp. 406–408 use multiple measures to assess student learning, including open-ended and short-answer questions, drawing, hands on activities, and writing claim, evidence and reasoning statements.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion 4.1: Grade K, SE/TE, p. 59; Grade 1, TE, pp. 3, 11, 60; Grade 5, SE/TE, p. 15. The program reflects the access and equity goals of the Framework, including contributions of women in science.
* Criterion 4.2: Grade 3, California English Language Development (ELD), p. x, TE, p. 317. The program includes suggestions for differentiation for ELL learners within the Teacher Editions (e.g., Grade 3, TE, p. 317) and an additional resource book for teachers that include a variety of tools, such as sentence frames (ELD, Grade 3, pp. x–xix).
* Criterion 4.3: Grade 4, TE, p. 69. Instructional Resources incorporate strategies to meet the needs of students with disabilities by modifying lesson activities.
* Criterion 4.4: Grade 2, TE, p. 43B. The California Diversity section supplies a differentiated path for all students: students with disabilities, girls and young women, foster youth, students living in poverty, English learners, ethnically diverse learners, and migrant students.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion 5.2: Grade 3, TE, pp. 159E–159H. Estimated instructional time in each unit and lesson is provided.
* Criterion 5.3: Grade 2, SE/TE, pp. 71. Teacher is provided with questions to assess student knowledge. Guidance is provided to aid struggling students.
* Criterion 5.3: Grade 5, TE, p. 147. Teacher resources include guidance in instruction to deepen understanding of DCIs, for formative assessments, and checking for understanding.
* Criterion 5.4: Grade 1, TE, pp. T22–T23; Grade 3, TE, pp. T24–T25. “Program Scope and Sequence” and “Trace Tool to the NGSS” online tools address knowledge and skills learned in prior grades.
* Criterion 5.9: Grade 4, TE, pp. 237, 240, 250. Instructional objectives for three-dimensional learning are explicitly stated.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 5 | SE/TE | 177 | “Present you findings” | “Present your findings” | Simple grammatical errors |
| 2 | 1 | TE | 163 | SEP Notation heading in margin “AObtaining” | Obtaining | Typo |

#### Social Content Citations: none

### Houghton Mifflin Harcourt Publishing Company, *California HMH Science Dimensions*, Grades 6–8 (integrated)

#### Program Summary:

California HMH Science Dimensions includes: California Student Edition (SE) Interactive Worktext; California Student Online Interactive Digital Curriculum; California Teacher Edition (TE); California Teacher Digital Management Center; California Assessment Guide (AG).

#### Recommendation:

California HMH Science Dimensions is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1, Grade 6, MS-LS1-2 Print/Digital AG Performance-Based Assessment 3, Task 2, pp. 280–288; Grade 6, MS-LS1-4, Print TE Unit 5, pp. 379K–379N, Print/Digital SE and TE, p. 380, Digital SE and TE Unit 5 Unit Project Worksheet (You can find this in the Resources Menu on the homepage of the digital edition.); Grade 7, MS-LS1-7, Print/Digital AG Performance-Based Assessment 4 Task 2, pp. 321–328; Grade 7, MS-LS2-3, Print/Digital AG Performance-Based Assessment 4 Task 3, pp. 329–336; Grade 8, MS-LS3-1, Print/Digital AG Performance-Based Assessment 5 Task 2, pp. 349–361; Grade 8, MS-ESS1-1 Print/Digital AG Performance-Based Assessment 3 Task 1, pp. 291–298, Task 2, pp. 299–304. Program aligns to the CA NGSS for grades 6–8.
* Criterion #1.13: Grade 6, Print/Digital SE/TE, p. 175. The materials provide support for students to develop grade-level appropriate academic language and discipline-specific vocabulary through their use in context in classroom discourse around science phenomena (science talk), and through well-written and grade-level appropriate text resources.
* Criterion #1.15: Grade 6, Print/Digital SE/TE, p. 367. Instructional resources, where appropriate, examine humanity’s place in ecological systems and the necessity for the protection of the environment (EC Section 60041).Resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency and adopted by the SBE (Public Resources Code Section 71301) in context and aligned to the CA NGSS, as exemplified in Appendix 2.
* Criterion #1.20: Grade 8, Print/Digital SE/TE pp. 222–223, 225, 226–227. Instructional resources include opportunities for reflection on the nature and history of science and on their science learning as indicated in the CA Science Framework.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.1: Grade 7, TE pp. T26–T34. Sequential organization of the material provides structure concerning what students learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
* Criterion #2.3: Grade 6, TE, p. 268B. Instructional resources explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.
* Criterion #2.4: Grade 7, TE, p. 274. Teacher resources provide support to engage students in three-dimensional learning and suggest research-based strategies to elicit student thinking and support student discourse
* Criterion #2.5: Grade 8, TE, pp. T30–38. The instructional resources are grade-level specific and provide instructional content for 180 days of instruction for at least one daily class period, including an estimate of the necessary instructional time.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

* Criterion #3.1: Grade 6, AG, pp. 316–329. Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and the CA Science Framework. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS. Assessments stress performance tasks rather than rote memorization.
* Criterion #3.4: Grade 8, TE, p. 503. Brief formative assessment tools and practices at key stages in the unit of instruction are designed to elicit current understandings and preconceptions and to provide evidence of students’ progress toward mastering the three-dimensional learning called for in the CA NGSS and the CA Science Framework. In addition to providing formative assessment tools, instructional materials also provide teachers with strategies of how to address preconceptions during instruction. These strategies are differentiated for different age levels.
* Criterion #3.5: Grade 7, TE, p. 239. Assessments yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards.
* Criterion #3.7: Grade 6, TE, pp. 483–484. Summative assessments are designed to provide valid, reliable and fair measures of students’ progress and attainment of three-dimensional learning after a period of instruction (for example at the end of a chapter, unit, or course) involving multi-component tasks including, but not limited to: hands-on or simulation-based performance tasks, open-ended constructed response problems, and scoring of portfolios of student work collected over the course of instruction. Selected-response items require analysis and reasoning to answer them, rather than simply memorized responses.
* Criterion #3.10: Grade 7, SE, pp. 455-456. Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.1: Grade 6, TE, p. 229. The instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #4.1: Grade 7, SE, p. 161. The instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #4.2: Grade 6, TE, p. 243. See Integrated ELD. At every grade level, suggested lessons and teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #4.2: Grade 8, TE, p. 23. At every grade level, suggested lessons and teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.1: Grade 7, TE, p. T28–T34. Program resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.
* Criterion #5.5: Grade 6, TE, pp. 108a–108b, Integrating the Three-Dimensions of Learning. Teacher resources provide background knowledge about the SEPS, DCIs, and CCCs and discuss the desired level of SEPs in which students will engage, including how the three dimensions are integrated into units and lessons.
* Criterion #5.6: Grade 8, TE, p. 490. All suggested student tasks, including classroom activities, end-of chapter tasks, suggested out-of-school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Assessment keys and rubrics are provided.
* Criterion #5.7: Grade 7, SE/TE, pp. 288–289. Teacher and student resources have correlating page numbers in print resources or corresponding references in electronic resources.
* Criterion #5.21: Grade 6, TE, p. 381, Integrated ELD/Proficiency Levels. The teacher resources provide guidance and support for engaging students in collaborative conversations using grade level appropriate academic vocabulary for scientific discourse.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 7 | TE | T28–T34 | Unit Performance Task **(**Optional**)** | Remove “(optional)” | The evidence for some performance expectations only appears in the performance tasks. |
| 2 | 7 | TE | T28–T34 | Performance-Based Assessment (Assessment Guide) (Optional**)** | Remove “(optional)” | The evidence for some performance expectations only appears in the performance tasks. |
| 3 | 6 | Designated ELD Student Handbook | 53 | …deposition. The process in which material is laid down. | Change of phase from gas to solid. Also add scientific definition of sublimation: Change of phase from solid to gas. | The Spanish word for deposition is a cognate that indicates it’s the opposite of sublimation, making sublimation conspicuous by its absence. |
| 4 | 6 | Designated ELD Student Handbook | 1 | Networvk | Network | Typographical error. |
| 5 | 6 | TE | T5 | Los Angelas | Los Angeles | Text correction. |
| 6 | 6 | TE | 534 | …chaparral ecosystem… | desert chaparral ecosystem or desert ecosystem | Joshua Tree is incorrectly identified as strictly chaparral rather than the more correct desert or desert chaparral. Also the labelling expectation is unclear. |
| 7 | 7 | TE | 157, Exploration 1, Item 4 | Diagram of water molecule shows hydrogen in blue, and shows hydrogen atoms in water molecule designated as oxygen, and oxygen as hydrogen. | The Commission recommends using the publisher submitted comment in response to this edit. | Typographic error in model. There is a conventional color scheme for atoms. |
| 8 | 7 | TE | TR2 | Joshua Tree National Park is in a rain forest. | Joshua Tree National Park is in a rain shadow. | Incorrect information. |
| 9 | 6 | AG | 43 | Question 6. The salinity of each sample is listed in parts per trillion (ppt). | The salinity of each sample is listed in parts per thousand (ppt). | Incorrect information. |
| 10 | 6 | Designated ELD Student Handbook | 15 | Risk-benefit analysis: the comparison of the risks and benefits of a decision or product | The negative impacts of a decision compared to the positive results of the same decision. | The same words cannot be used to define themselves. |
| 11 | 8 | TE | 428 (re: ocelot) | It has a unique patterned coat, sharp eyesight, and sharp teeth. | It has a unique patterned coat, visual acuity, and sharp teeth. | Two uses, with two different meanings of the word, in the same sentence could be confusing to all students, but especially to English learners. |
| 12 | 7 | TE | 246 | Question 5, Answer A (deemed the correct answer): Why do you think the starch molecule shown is a good source of energy for an organism? A. The many bonds in the starch molecule store energy. | The Commission recommends using the publisher submitted comment in response to this edit. | Energy is not stored in bonds, as evidence by the fact that energy is required to break bonds. For example, energy in starch is stored as polymers of glucans. Rehydration breaks bonds allowing them to reform as glucose, which, in turn, release energy. |

#### Social Content Citations: None

### Impact Science Education Inc., Impact Science: Integrated Middle School Program for CA NGSS, Grades 6–8 (integrated)

#### Program Summary:

Impact Science: Integrated Middle School Program for CA NGSS includes: Impact Science Middle School Program for CA NGSS includes: (U) = Unit, (L) = Lesson.

#### Recommendation:

Impact Science: Integrated Middle School Program for CA NGSS is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 6, MS-ESS2-6, U4 Climate, L9 pp. 4–6 and L10 pp. 3–6; MS-ETS 1-1 U2 Thermal Energy L14 pp. 1–13; MS-ETS1-3 U5 Climate Change L13 pp. 6–7; Grade 7, MS-LS2-3, U7 Ecology L13 pp. 2–3, 5; MS-PS1-1, U4 Elements and Compounds L6 pp. 1–6 and L6 Resource pp. 1–4, MS-PS1-6, U5 Physical and Chemical Change L10 pp. 2–3 and L13 pp. 3–4; Grade 8, MS-ESS1-1 U6 Earth’s Place L2 pp. 1–8 and L3 pp. 1–8, MS-ESS1-4 U7 Geologic Time Scale L8 pp. 1–5, MS-ETS1-1 U3 Kinetic Energy and Potential Energy L8 pp. 3 and L12 pp. 6–8. The program provides numerous examples of the standards being fully covered.
* Criterion #7: Grade 6, U7 Climate, L1 p. 1. This is an example for how the instructional resources use of primary sources, such as scientific research, case studies, and photographs, are integrated into the three-dimensional learning, as grade-level appropriate.
* Criterion #9: Grade 7, U2 Earth Systems, L18 pp. 3–7. Instructional resources focus on the application of science to be learned (e.g., medicine, engineering, environmental science) using authentic and meaningful real-world applications and scenarios that are specific to California when appropriate.
* Criterion #15, Grade 8, Unit 9 Human Impact, L10 pp. P1–P7. The program contains examples of institutional resources that, where appropriate, examine humanity’s place in ecological systems and the necessity for the protection of the environment (EC Section 60041). Resources include instructional content based upon the environment principles and concepts developed by the California Environmental Protection Agency and adopted SBE (Public Resource Code Section 71301) in the context and aligned to the CA NGSS, exemplified in Appendix 2.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #4: Grade 7, U5, L9, pp. 2–6. The program contains an exemplar where teacher resources provide support to engage students in three-dimensional learning suggesting a research-based strategy to elicit student thinking and support student discourse.
* Criterion #5: Grades 6–8, Chart of Units; Grade 7, U2, Unit Planning Chart; Grade 6, Unit 2, L11, pp. 1–5. The Chart of Units clearly defines the instructional content for 180 days for each grade level. Grade 7 is an exemplar of a unit clearly showing a 30-day component of the 180 days, and grade 6 provides a good example of the estimate of instructional time designated for each of the 5E components for a given lesson.
* Criterion #8: Grade 6, U2. Each grade level provides at least one unit with a topic that has been selected for in-depth study. Grade 6 provides an exemplar of a well-developed sequence of lessons that supports students in building the knowledge and abilities needed to achieve proficiency.
* Criterion #13: Grade 8, U8, Evolution Unit Overview, pp. 1–2. We found evidence that the course descriptions outlined in the Unit Overviews are aligned to a specific progression of courses across each grade band so that students completing the course sequence can meet all grade band CA NGSS PE’s and is an exemplar showing a planned sequence that builds progressively on prior learning with the logic of the progression clearly explained in the overview.
* Criterion #5: Grade 7, Unit 2, Unit Planning Chart. The program’s chart is an exemplar of a unit clearly showing a 30-day component of the 180 days, and grade 6 provides a good example of the estimate of instructional time designated for each of the 5E components for a given lesson.
* Criterion #8: Grade 6, Unit 2. Unit 2 within the program provides an exemplar of a well-developed sequence of lessons that supports students in building the knowledge and abilities needed to achieve proficiency.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #7: Grade 6, U2, Thermal Energy Summative Assessment. Summative assessments are designed to provide valid, reliable and fair measures of students' progress and attainment of three-dimensional learning after a period of instruction.
* Criterion #8: Grade 8, U9, Human Impact L10. Students’ progress toward meeting the three-dimensions of the CA NGSS is assessed through both writing and performance tasks. Student written responses are consistent with the grade-level writing and mathematics requirements in the CA CCSS for ELA/Literacy and the CA CCSSM.
* Criterion #10: Grade 7, U5, Physical & Chemical Changes, L10–15. Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.
* Criterion #11: Grade 8, U8, L17, Resource––How to Evaluate Website; L17 Project Rubric. There is evidence that assessment tools include guidance on measuring students’ ability to apply information literacy skills when obtaining and evaluating information about science topics.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade 7, U6 Respiration and Photosynthesis, L8 p. 7. Instructional resources reflect the goals of access and equity outlined in Chapter 10 of the CA Science Framework.
* Criterion #2 Grade 8, U4 Electricity and Magnetism, L11 p. 4. Suggested lessons and teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3 Grade 6, Unit 6 Weather, L7 p. 5. Instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate, at every grade level.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #1: Grades 6–8, ISE/INT Chart of Units. The program shows strength with the teacher materials containing a curriculum guide for the academic instructional year allowing teachers to plan for 180 days of instruction.
* Criterion #2: Grade 7, Unit 2, L3 p. 2. The program contains examples with the teacher materials including estimated instructional time for each activity, lesson, and unit.
* Criterion #7: Grade 8, Unit 8, L4: Student Pages and Reading. The program shows strength with the student resources being embedded in the teacher’s guide and with the corresponding file names by lesson number.
* Criterion #10: Grade 6, Unit 3, L1 pp. 1–3. The program contains evidence of the teacher materials and student resources providing experiences that build to the development of learning goals without explicitly stating those goals prior to instruction.
* Criterion #17: Grade 7, Unit 2, L15 p. 6. The program contains evidence of suggested homework tasks, including interviewing people outside of the class which supports student learning through shared experiences with others.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | Unit 6 Overview | 2 | (bacteria, protists, viruses, and fungi can divide…) | Replace “divide” with “can reproduce…” | Simple factual errors |
| 2 | 6 | Unit 6 Lesson 22 Reading | 1 | The other kind of cell division…A cell splits in half, and each half cell can later combine with a half cell from another individual to produce a complete cell that a baby grows from. | The other kind of cell division…This division generates cells that have half the number of chromosomes as compared to a regular body cell. Later, a reproductive cell from the female will merge with the reproductive cell of a male, to produce a cell with a complete set of chromosomes. The baby will grow from the merged cell. | Simple factual errors |
| 3 | 6 | Unit 6 Lesson 17 | 2 | The body breaks down the food or fat from our bodies and releases a steady flow of glucose into the bloodstream for our cells to use for energy. LS1.A: Structure and Function. Tell students this breakdown process happens in cell structures called mitochondria. | The body breaks down the food or fat from our bodies and releases a steady flow of glucose into the bloodstream for our cells to use for energy. LS1.A: Structure and Function. Tell students that glucose breakdown involves cell structures called mitochondria | Simple factual errors |
| 4 | 6 | Unit 6 Lesson 17 | 2 | Get energy Chloroplasts meet the energy needs of plant cells and plant-like cells; students might wonder how animal cells get energy. | Chloroplasts provide energy for plant cells. Students might wonder how animal cells get energy. | Simple factual errors |
| 5 | 6 | Unit 8 Lesson 4 | 4 | For each pair of traits, which one is most common in your class? The trait listed first is the dominant trait. | For each pair of phenotypes, which one is most common in your class? The more common phenotype is often (not always) the dominant phenotype. | Simple factual errors |
| 6 | 6 | Unit 8 Lesson 5 | 5 | Some traits like wings, a long tail, or large size seem obviously beneficial. Students can explain why they think this. | Delete | Imprecise definition |
| 7 | 6 | Unit 8 Lesson 6 | 5 | Then when these peas (Yy) are crossed you will get offspring that are 75% yellow and 25% green peas. | Then when these peas (Yy) are crossed you will get offspring that are about 75% yellow and 25% green peas. | Simple factual error |
| 8 | 6 | Unit 5 Lesson 7 | 2 | Fossil fuels are defined as the fossilized remains of plants and animals | Fossil fuels are the organic matter from the remains of plants and animals | Imprecise definition |
| 9 | 6 | Unit 5 Lesson 7 | 2 | As a note: CO2 is considered a harmful greenhouse gas because it contributes to the greenhouse effect and contributes to climate change. It is sometimes referred to as Carbon pollution. This is accurate as it is produced by humans and is harmful (even though it is a natural gas). | As a note: Although CO2 is naturally produced by all organisms and is essential for maintaining a hospitable temperature on Earth, at above certain levels, CO2 is considered a harmful greenhouse gas, or ‘carbon pollution’ which contributes to climate change. | Imprecise definition |
| 10 | 6 | Unit 3 Lesson 3 | 1 | Observing ice tells us that water molecules form a tight bond when they freeze, and this bond is hard to break. The fact that drops of water stick together tells us that water molecules are magnetic. | Observing ice tells us that water molecules form a tight bond when they freeze, and this bond is harder to break. The fact that drops of water stick together tells us that water molecules are attracted to one another. | Simple factual error |
| 11 | 6 | Unit 8 Traits and Survival Summative Assessment, Item 2 | 1 | Two male deer often fight using their antlers in order to get the chance to mate with a female. Explain why female deer mate with the winner of the fight. **Answer**: Answers may vary. Sample: Female deer want to mate with the winner of the fight because that male is often larger, stronger, and more aggressive than the other male. These are dominant traits that are advantageous for the deer to have in order to pass on their traits to the next generation. The female deer wants her offspring to have these dominant traits. | **Answer**: Answers may vary. Sample: Female deer has a better chance to mate with the winner, and therefore pass on the traits of the winner to their offspring. | Simple factual error |
| 12 | 7 | Unit 6 Overview | 1 | The cracker will keep the flame burning for some time, indicating that it contains some type of fuel: sugar | The cracker will keep the flame burning for some time, indicating that it contains some type of fuel: starch. | Simple factual error |
| 13 | 7 | Unit 6 Lesson 13 | 5 | Photosynthesis involves plants taking in water and CO2 while they create sugar and O2 Cellular respiration does the exact opposite: animals take in sugar and O2 to make energy and convert these into water and CO2. | Photosynthesis involves plants taking in water and CO2 while they create sugar and O2. Cellular respiration does the exact opposite: cells take in sugar and O2 to make energy and convert these into water and CO2 | Simple factual error |
| 14 | 7 | Unit 6 Lesson 7 Reading | 1 | These algae are a useful energy source because they, unlike plants, “bloom” in many different habitats: making them an extremely reliable source to attract energy | These algae are a useful energy source because they grow in many different habitats: making them an extremely reliable source to attract energy | Simple factual error |
| 15 | 7 | Unit 6 Lesson 7 | 1 | Opener:…Of course people would also need to eat sugars which would give the body energy for their workout. This is cellular respiration. | ,…Of course people would also need to eat sugars which would breakdown in order to give the body energy for their workout. This process is cellular respiration. | Imprecise definition |
| 16 | 7 | Unit 6 Lesson 7 | 4 | (cellulose) cannot be used as energy because the glucose molecules are wound too tightly together. | (cellulose) cannot be used as energy because our body does not have the means (enzymes) to break down cellulose into glucose units. | Simple factual error |
| 17 | 7 | Unit 6 Lesson 7 | 3 | If a food is from a plant, and it is a seed (nut or bean or pea), then it is likely to be mostly protein. | If a food is from a plant, and it is a seed (nut or bean or pea), then it is often rich in (made of) protein. | Imprecise definition |
| 18 | 7 | Unit 7 Lesson 5 | 2 | One organism lives on another but the other organism isn’t bothered or affected, such as barnacles on a whale. This is mutualism that is one-sided | One organism lives on another but the other organism isn’t bothered or affected, such as barnacles on a whale. This is commensalism that is one-sided | Imprecise definition |
| 19 | 7 | Unit 6 Lesson 7 | 2 | Fats are another type of molecule which has several functions (energy storage) | Fats are another type of molecule which has several functions (e.g. building membranes, energy storage) | Imprecise definition |
| 20 | 8 | Unit 8 Lesson 15 | 1 | The chromosomes are a bundle of all the DNA: these bundles called chromosomes are found in the nuclei of all cells. | The chromosomes are made of the entire DNA of an organism. These bundles of DNA, called chromosomes, are found in the nuclei of all cells (except for prokaryotes) | Imprecise definition |
| 21 | 8 | Unit 8 Lesson 15 | 1 | Students will understand the role of mutations in creating variation (that can be inherited) in populations, however they will understand and model that this process is random and very slow. | Students will understand the role of mutations in creating variation (that can be inherited) in populations. Students will understand and model that this process is random and very slow. | Imprecise definition |
| 22 | 8 | Unit 8 Summative Assessment, Item 2, Part A | 1 | Which of the following statements describes how the initial white-eyed fly received its white eyes? A. The fly’s eyes were damaged in the lab and turned white. B. The gene for white eyes was inherited from the parent. C. The eye color gene in the fly’s DNA mutated. D. The fly was born blind due to the environment. **Answer: C** | Answer B is also correct | Simple factual error |
| 23 | 6 | Unit 1 Lesson 8 | 4 | The data supports/disproves my question | The data supports/disproves my prediction (or claim, hypothesis) | Grammatical errors or misspellings |
| 24 | 6 | Unit 1 Lesson 8 | 3 | The metric system makes math and comparison a little easier to remember. | The metric system makes calculations and conversions much easier to do. | Grammatical errors or misspellings |
| 25 | 6 | Unit 6 Lesson 24 | 3 | When a chromosome is changed, the instructions that that chromosome carries may also be changed, impacting the function of the cell. | When a chromosome is changed, the instructions that the chromosome carries may also be changed, impacting the function of the cell. | Grammatical errors or misspellings |
| 26 | 6 | Unit 7 Lesson 16 | 2, Body Systems | SLD If students are having trouble with the Opener, they my need more information. | SLD If students are having trouble with the Opener, they might need more information. | Grammatical errors or misspellings |
| 27 | 6 | Unit 8 Lesson 2 | 2 | Short nature videos about weird and interesting species showing traits that animals have that help with survival. | Show short nature videos about weird and interesting species showing traits that animals have that help with survival. | Grammar – No verb in sentence |
| 28 | 6 | Unit 3 Lesson 5 | 6 | Which temperature of water evaporated the fastest? | Under which temperature conditions was water evaporation the fastest? | Grammatical errors or misspellings |
| 29 | 6 | Unit 3 Lesson 7 | 4 | steam from beaker is evaporation, water that collects on the cookie sheet is condensation, and the droplets combining into drops that fall on the tray below are precipitation. | steam indicates evaporation, water that collects… indicates condensation and droplets combining into drops represent precipitation. | Grammatical errors or misspellings |
| 30 | 7 | Unit 6 | 1, Overview | In the previous unit, students learned about why species might become endangered, and how we could address the problem. | In the previous year, students learned about why species might become endangered, and how we could address the problem. | There is no previous unit in grade 7 about endangered species. |
| 31 | 7 | Unit 6 Planning Chart Lesson 3 | Activity | Food (glucose) is used in order for energy to be released through the process of cellular respiration. | Students will investigate burning saltine crackers as a model for energy released during respiration. | Grammatical errors or misspellings |
| 32 | 7 | Unit 7 Lesson 9 | 5 | These populations had been too high, but after wolves were more likely to return to their more stable levels. | The herbivore populations had been too high, but after wolves were introduced, the herbivores were more likely to return to their more stable levels. | Grammatical errors or misspellings |
| 33 | 7 | Unit 7 Lesson 9 | 5 | If a predator catches a rodent that has eaten poison, the predator my die. This will result in an overall increase in the number of rodents. | If a predator catches a rodent that has eaten poison, the predator might die. This will result in an overall increase in the number of rodents. | Grammatical errors or misspellings |
| 34 | 7 | Unit 8 Lesson 2 | 5 | Why was these changes needed? | Why were these changes needed? | Grammatical errors or misspellings |
| 35 | 7 | Unit 7 Lesson 18 Reading | 1 | Walking between the City Slicker’s West Oakland Farm Park is like exploring a food forest. | Walking along the City Slicker’s West Oakland Farm Park is like exploring a food forest. | Grammatical errors or misspellings |
| 36 | 6 | Unit 7 Lesson 14 | 6 | Eyes need to be disposed of, tables cleaned, and hands washed. | Eyes need to be disposed of according to the local enforcement agencies (LEA) regulations, tables cleaned, and hands washed | Grammatical errors or misspellings |
| 37 | 6 | Unit 7 Lesson 16 Reading | 1 | As you can see in the photo of the neuron, they have lots of branches reaching out to communicate with each other. | Figure shows a whole body but not neurons. | Mislabeled pictures or objects |
| 38 | 7 | Unit 7 Lesson 13 | 2 | Food Web of a tropical ecosystem – No arrows into detrivores (taken from Wikimedia) | Draw arrows from plant to detrivores. | Mislabeled pictures or objects |
| 39 | 7 | Unit 4 Lesson 1 | 4 | There is a FIGURE with three circles, matter, containing elements, containing atoms. | The Commission recommends using the publisher submitted comment in response to this edit. | Mislabeled pictures or objects |
| 40 | 6 | Unit 8 Traits and Survival | 1, Summative Assessment, Item 3 | Large birds such as hawks and eagles often eat rabbits. **The images below** represent the population sizes of light-brown and dark-brown rabbits in a given area over the course of five years. During this time a drought was occurring, and the area received little to no rainfall. | The Commission recommends using the publisher submitted comment in response to this edit. | Mislabeled pictures or objects |
| 41 | 8 | Unit: 8 Lesson 3 | 1 | How this trait (beak shape) changes over time. | How the proportion of birds with certain variations of the beak shape trait changes overtime (between generations) | Language precision to avoid reinforcing misconception |
| 42 | 8 | Unit: 8 Lesson: 3 | 3 | Our simulation today will be about how different beaks are better at eating different kinds of foods. | Our simulation today will be about how different beaks are better at eating different kinds of foods. The birds inherited beaks suited for food they specialize in eating. | Language precision to avoid reinforcing misconception |
| 43 | 8 | Unit: 8 Lesson: 4 | 2 | These clams are all different colors/shades | These clams of the same species are all different colors/shades | Language precision to avoid reinforcing misconception |
| 44 | 8 | Unit: 8 Lesson: 4 | 2 | We will review the terms dominant alleles, recessive alleles, genotypes, and phenotypes. | We will review the terms students learned in 6th grade, dominant alleles, recessive alleles, genotypes, and phenotypes. | Students have not learned yet |
| 45 | 8 | Unit: 8 Lesson: 4 | 1 | This is because they are one of nature’s best examples of Darwin’s theory of evolution by natural selection. | Deletion. | Language precision to avoid reinforcing misconception |
| 46 | 8 | Unit: 8 Lesson: 5 | 1 | They will also see how the alleles and genotypes for this trait change in response to the success of this physical trait. | They will also see how the proportion of alleles in the population change between generations in response to the successful survival & reproduction of those with certain “successful” traits. | Language precision to avoid reinforcing misconception |
| 47 | 8 | Unit: 8 Lesson: 5 | 5 | The technical definition of evolution is a change in alleles in a population over time. | The technical definition of evolution is a change in allele frequency in a population over time. | Incorrect definition |
| 48 | 8 | Unit: 8 Lesson: 5 | 5 | …because of the predator. | ...because the expression of the allele allows for success (survival and reproduction) of individuals with that variant in that environment at that time. This example shows a reduction in the other variant due to predation and thus lack of survival and reproduction. | Language precision to avoid reinforcing misconception |
| 49 | 8 | Unit: 8 Lesson: 10 reading | 1 | Horses changed over time: based on the fossil evidence, they got larger as you can see in the diagram. The early Eocene horse was adapted to a forest-like habitat that was dominant when these fossils were found. However, the environment changed slowly; the vegetation changed from a forest to a grassland over several million years. Small horses can easily hide in the forest; but as the forest changed and slowly turned into grasses, horses evolved to do better in the new environment. Over time, horses changed their diet from being browsers (eating whole branches, leaves, stems, etc.) to eating just grass. | Horses changed over time: based on the fossil evidence, they got larger across generations as you can see in the diagram. The early Eocene horse population was adapted to a forest-like habitat that was dominant when these fossils were found. However, the environment changed slowly; the vegetation shifted from a forest to a grassland over several million years. Small horses can easily hide in the forest; but as the forest changed and slowly turned into grasses, horses evolved to survive their changing environment. | Language precision to avoid reinforcing misconception |
| 50 | 8 | Unit: 8 Lesson: 10 reading | 1 | They evolved to have features and behaviors that were beneficial in the new grasslands environment. | The fossil record shows this change by documenting changes to their molars which indicate their diet shifted from being browsers (eating whole branches, leaves, stems, etc.) to eating just grass. The fossil record also shows the reduction inside toes and the middle toe evolving into a single large hoof which is beneficial for survival in the new grasslands environment. | See above |
| 51 | 8 | Unit 8 Lesson 15 Reading | 1 | Eventually, what began as an unintentional process of natural selection turned into an intentional process of selective breeding. | Eventually, what began as an unintentional process of natural selection turned into an intentional process of selective breeding *(artificial selection).* | Imprecise definition |
| 52 | 8 | Unit 8 Lesson 12 | 2 | EL Also refer to common meaning- to adapt to changes in one’s life or environment within a single lifespan. In the context of “evolutionary biology” this doesn’t happen; the adaptations are developed over a long period of time because they are advantageous for survival. | EL Also refer to common meaning- to adapt to changes in one’s life or environment within a single lifespan. In the context of “evolutionary biology” this doesn’t happen; the adaptations arise in a population over a long period of time because they are advantageous for survival. | Language precision to avoid reinforcing a misconception |
| 53 | 8 | Unit 8 Lesson 12 | 6 | Explain that traits that are beneficial are called adaptations. This means that the trait has evolved through natural selection and provides a benefit for the organisms in either survival or mating/ reproduction. | Explain that traits that are beneficial in a population are called adaptations. This means that the trait has evolved in the population through natural selection and provides a benefit for the organisms in either survival or mating/ reproduction. | Language precision to avoid reinforcing a misconception |
| 54 | 8 | Unit 8 Lesson 13 | 1 | These dinosaurs were very diverse and had several good adaptations when they lived on the earth, yet they went extinct. | Populations of dinosaurs had strong genetic variation and were adapted to the environments they live in, yet they went extinct. | Language precision to avoid reinforcing misconceptions. |
| 55 | 8 | Unit 8 Lesson 13 | 3 | There is no correct answer; students should use the evidence to make a determination. | Students should use the evidence to make a determination. | Language precision |
| 56 | 8 | Unit 8 Lesson 13 | 3 | Teacher note: Often a radical change in the environment or a catastrophe has been involved in many extinctions. | Teacher note: Often a rapid change in the environment or a catastrophe has been involved in many extinctions as there is not enough generation time for populations to adapt. | Language precision to avoid reinforcing misconceptions. |
| 57 | 8 | Unit 8 Lesson 13 | 3 | Species that have gone extinct often have good adaptations and are unlucky or in the wrong place at the wrong time. | Species that have gone extinct often have good adaptations for the current environmental conditions, but when the environment changes too rapidly the population is unable to adapt ––they are in the wrong place at the wrong time. | Language precision to avoid reinforcing misconceptions. |
| 58 | 8 | Unit 8 Lesson 13 | 3 | But in other cases, organisms accumulate adaptations that end up not serving them well (for whatever reason). | But in other cases, populations accumulate adaptations that end up not serving them well (for whatever reason). | Language precision to avoid reinforcing misconceptions. |
| 59 | 8 | Unit 8 Lesson 13 | 3 | What are different possible hypotheses for answering the above question? What is evidence for each of these hypotheses? | What are different possible explanations for answering the above question? What is evidence for each of these explanations? | Incorrect use of hypothesis |
| 60 | 8 | Unit 8 Lesson 13 | 4 | Ask: Why did the early horse groups go extinct? Climate change and the forests changed into grasslands; as such, the early horses could not survive in this new habitat. | Ask: Why did the early horse groups go extinct? Climate change and the forests changed into grasslands; as such, the early horses did not have trait variants favorable to surviving the shifting environment. Only offspring with trait variants favorable to the changing conditions survived and reproduced, and the population evolved over time as these variations accumulated. | Language precision to avoid reinforcing misconceptions. |
| 61 | 8 | Unit 8 Lesson 13 | 4 | Answers will vary. There is not one correct answer here, but several hypotheses. One idea is that they are very well adapted and have not needed to change. Another idea is that their environment has been very stable, so it has not encouraged any evolutionary change. | Answers will vary. There is not one correct answer here, but several explanations. One idea is that they are very well adapted and thus no change is evident. Another idea is that their environment has been very stable, so there is no selection acting on the population. | Language precision to avoid reinforcing misconceptions. |
| 62 | 8 | Unit 8 Lesson 15 | 1 | They do not happen very often and usually they have a negative or neutral (no) effect on the organism. Mutations can sometimes change the protein (the structure of the protein directly affects how it functions), and thus can cause a new trait in organisms. | They do not happen very often and usually they have no effect on the organism (are neutral). Sometimes, mutations are beneficial or harmful. Mutations can sometimes change the protein (the structure of the protein directly affects how it functions), and thus can cause a new trait in organisms. | Incorrect statement |
| 63 | 8 | Unit 8 Lesson 15 | 2 | Which will evolve faster: mice or elephants? Mice will evolve faster because they have shorter lifespans and more offspring at one time. There is more chance for variation. | Which will evolve faster: mice or elephants? Mice will evolve faster because they have faster generation time and more offspring at one time. Variation accumulates faster. | Incorrect statement |
| 64 | 8 | Unit 8 Lesson 15 | 2 | So if there is a mutation, there is a trait that is not present or altered by this mutation. | Remove sentence | Remove sentence |
| 65 | 8 | Unit 8 Lesson 15 | 2 | They will guess whether these new traits (caused by the mutations) are beneficial, harmful, or neutral (will have no effect) on either survival or mating or reproduction. | They will guess whether these new traits (caused by the mutations) are beneficial, harmful, or neutral (will have no effect) on either survival or reproductive success. | Clarification |
| 66 | 8 | Unit 8 Lesson 15 | 7 | In most cases, the protein doesn’t function when there is a mutation. | In most cases, the protein doesn’t function normally when there is a mutation. | Clarification |
| 67 | 8 | Unit 8 Lesson 16 | 1, 2 | Artificial selection is a type of natural selection with the main difference being that humans are doing the selecting intentionally. | Artificial selection is a type of selection where humans are doing the selecting intentionally. | Clarification |
| 68 | 8 | Unit 8 Lesson 17 | 1 | This is counter to natural selection because the changes are made intentionally by humans and these organisms may or may not be able to pass on these traits successfully to offspring. | This is artificial selection because the changes are made intentionally by humans. Because of how this type of artificial selection is done, these organisms may or may not be able to pass on these traits successfully to offspring. | Clarification |
| 69 | 8 | Unit 8 Lesson 17 | 4 | Genetic engineering involves moving a gene from one organism into a second organism so that it can have the protein that the gene codes for | Genetic engineering can involve moving a gene from one organism into a second organism so that it can have the protein that the gene codes for | Clarification |
| 70 | 8 | Unit 8 Lesson 11 | 3 | It indicates that this new trait evolved here. | Delete sentence | Incorrect |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L.1. | 8 | SRB | 50 | Picture of car crashing into wall | Change drawing to a more generic car. It is too obvious that the car in the picture is a “Smart” Car | Brand Names/Corporate Logo |
| 2 | L.1. | 6 | Unit 7 Lesson 4 | n/a | Image of runners with Nike tops and AG Insurance bibs | Remove or blur brand names | Brand names/ corporate logos |
| 3 | L.1. | 7 | Unit 4 Lesson 12 | n/a | Image of DuPont | Remove or blur brand name | Brand names/ corporate logos |
| 4 | L.1. | 7 | Unit 4 Lesson 12 | n/a | Gore-tex and Rubik | Remove brand names from text | Brand names/ corporate logos |

### Impact Science Education Inc., *Impact Science: Middle School Program for CA NGSS*, Grades 6–8 (discipline specific)

#### Program Summary:

Impact Science: Middle School Program for CA NGSS includes: Impact Science Middle School Program for CA NGSS includes: (U) = Unit, (L) = Lesson.

#### Recommendation:

Impact Science: Middle School Program for CA NGSS is recommended for adoption for 6–8d because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1: Grade 6, Charts of Units, p. 1; Grade 7, Charts of Units, p. 2; Grade 8, Charts of Units, p. 3. We found numerous exemplars of the standards being fully covered in grades six, seven and eight.
* Criterion #1.9: Grade 6, Unit 5 Earth Systems Lesson 18 Earthquake design challenge, pp. 3–7 and 11–13; Grade 7, Unit 2 Cells Lesson 23 Cancer, pp. 3–5. Instructional resources focus on application of science to be learned using authentic real-world application and scenarios that are specific to California when appropriate.
* Criterion #1.13: Grade 8, Unit 9 Waves, Lesson 5, pp. 8. There is evidence that materials provide support to develop grade level appropriate academic language through discourse around phenomena with students being provided word banks to support their explanations of phenomena.
* Criterion #1.17: Grade 8, Unit 9 Waves, Lesson 2. Reading instructional resources discuss trends and research in science to inform students about career pathways such as engineering and computer development.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.1: Grade 6, Chart of Units, p. 1. We found evidence of sequential organization of materials that provides structure concerning what students should learn each year.
* Criterion #2.3: Grade 7, Unit 5 Overview, pp. 1–2. The instructional resources explicitly states the knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills focusing on the basic understanding of habitats.
* Criterion #2.5: Grade 8, Unit 2, Thermal Energy, pp. 1–5, see number of minutes in blue bars. The instructional resources provide instructional content for 180 days of instruction for at least one daily class period, including an estimate of the necessary instructional time.
* Criterion #2.13: Grade 7, Unit 2 Cells, Unit Overview, pp. 1–2. The topic selected, magnification device, provides in-depth study and developed through their role in explaining the selected phenomena, supports students in building the knowledge and abilities needed to achieve proficiency in a bundle of PE’s.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3.1: Grades 6–8, Unit Assessment Folders, which includes Pre-assessments, Interim assessments, summative assessments and project rubric. Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and CA Science Framework. All of the above named assessment tools measure what students know and are able to do, as defined by the PEs within the CA NGSS.
* Criterion #3.3: Grade 6, Unit 2, Weather, Lesson 7, pp. 2–4; Grade 7, Unit 3, Body Systems, Lesson 3, pp. 3–4; Grade 8, Unit 2, Thermal Energy, Lesson 3, p. 4. Grades 6–8 Ask Prompts are exemplars of how teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activities.
* Criterion #3.4: Grade 6, Unit 7, Earth’s Place in the Universe, Lesson 5 Evaluate, p. 7; Grade 7, Unit 3, Body Systems, Lesson 6 Explore, pp. 2–3; Grade 7, Unit 5, Respiration and Photosynthesis, Lesson 8 Engage pp. 2–3; Grade 8, Unit 7, Kinetic and Potential Energy, Lesson 3 Evaluate, p. 6. We found many examples of how brief and formative assessment tools and practices at key states in the unit of instruction with the 5E lesson format which are designed to elicit current understandings.
* Criterion# 3.4: Grade 6, Unit 4, Traits and Survival, Lesson 1, p. 4; Grade 8 Unit 2, Thermal Energy, Lesson 3, p. 1. There are multiple examples of teacher materials that provide teachers with strategies of how to provide evidence of students’ progress toward mastering the three-dimensional learning called for in the CA NGSS and the CA Science Framework. The teacher materials also provide teachers with strategies of how to address preconceptions during instruction, and the strategies are differentiated for different grade levels.
* Criterion# 3.6: Grade 6, Unit 2, Weather, Lesson 7, p. 5 SLD section Extend and Evaluate. Exit cards is an excellent example of how teacher resources supply a differentiated path for diverse students to build toward the PEs of the CA NGSS. The formative assessments Exit Tickets grades 6–8 are designed to support teachers in collecting and analyzing data about student conceptual understanding.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.1: Grade 6, Unit 2, Weather, Lesson 6, pp. 3–5; Grade 7, Unit 3, Body Systems, Lesson 6, pp. 2–4; Grade 8, Unit 6, Motion and Forces, Lesson 27, pp .4–5. Grades six, seven and eight provide some examples of how the instructional resources reflect the goals of access and equity outlined in Chapter 10 of the CA Science Framework.
* Criterion #4.2: Grade 6, Unit 5, Earths System, Lesson 15, pp. 2–3; Grade 7, Unit 7, Evolution, Lesson 17, pp. 2–4. Grades six and seven are exemplars of how suggested lessons and teacher resources include research-based strategies to address the needs of EL consistent with the CA ELD Standards.
* Criterion #4.3: Grade 7, Unit 2, Cells, Lesson 9, Part 1 pp. 2–4; Grade 8, Unit 2, Thermal Energy, Lesson 2, pp. 4–5. Grades seven and eight show examples of how suggested lessons and teacher resources include instructional strategies to address the needs of students with disabilities.
* Criterion #4.4: Grade 8, Unit 4, Elements and Compounds, Lesson 14, pp. 1–6; Grade 6, Unit 7, Earth’s Place in the Universe, Lesson 2, p. 7. The teacher resources supply a differentiated path for all students. They include guidance to support students with special needs, including standard English learners; English learners, long-term English learners; students living in poverty; foster youth; girls and young women; advanced learners, students with disabilities; and students below grade level in science skills, or mathematics skill.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.1: Grade 6, Chart of Units. This program resource is an example of a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.
* Criterion #5.3: Grade 6, Unit 3, Climate, Lesson 6, pp. 1–7; Grade 7, Unit 5, Respiration and Photosynthesis, Lesson 8, Engage, pp. 2–3. Teacher resources provide guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons, if necessary, to ensure three-dimensional learning.
* Criterion #5.5: Grade 8, Unit 2, Thermal Energy, Standard Correlation Chart. This chart is an example showing background knowledge about the SEPs, DCIs, and CCCs and discusses the desired level of SEPs in which students will engage.
* Criterion #5.13: Grade 7, Unit 5, Respiration and Photosynthesis Unit Overview––The Anchor Phenomenon, pg. 1; Grade 8, Unit 3, Properties of Matter, Lesson 5, Engage, p. 2. These materials include terms from the CA NGSS and CA Science Framework. The 5E lesson format is an example of this and is used appropriately and accurately in the instructions.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 7 | Unit 7 Lesson 17 | 1, first paragraph | and the communication | and then communicate | Missing the “n” |
| 2 | 8 | Unit 9 Lesson 9 | 3 | “mediums” (highlighted yellow) | The Commission recommends using the publisher submitted comment in response to this edit. | Incorrect plural form for “medium” |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | A.2. | 8 | Unit 6 Forces and Motion | 5 | 21 males and 2 females scientists and engineers are available for students to do research | Replace some of the males with females in those careers. Or add females in those careers. | More equity between males and female scientists engineers |

### Knowing Science LLC, Knowing Science Curriculum-Physical, Life, Earth & Space, Grades K–5

#### Program Summary:

Knowing Science Curriculum-Physical, Life, Earth & Space includes: Knowing Science K-5 Curriculum includes: Physical Science (PS), Life Science (LS), Earth & Space Science (ESS) Teacher Manuals (TE).

#### Recommendation:

Knowing Science Curriculum-Physical, Life, Earth & Space is not recommended for adoption for K–5 because the instructional materials do not include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and do not meet all the Criteria in Category 1 or have strengths in Category 4.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program does not include content as specified in the CA NGSS and does not include a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criteria Category 1, criterion 1: Standards Not Met:
  + Grade K, PE K-ESS3-2, ESS TE, pp. 43–45. The kindergarten materials did not cover the Performance Expectation (PE) that students ask questions to obtain information. This also includes the Science and Engineering Practice (SEPs) of Asking Questions and Defining Problems, as well as ETS1.A: Defining and Delimiting an Engineering Problem.
  + Grade 2, PE 2-PS1-2, PS TE, pp. 128–131, pp. 137–142. The PE was met, however, the Crosscutting Concepts (CCCs) referring to science and the natural world were not. There is no reference to human-made products and their relationship to the natural world or materials in relationship to the PE.
  + Grade 4, PE 4-PS3-3, PS TE, pp. 21–26, pp. 33–34, pp. 41–43, pp. 45–47. While the Knowing Science curriculum provides opportunities for students to predict outcomes on patterns such as cause and effect relationships, the Grade 4 materials do not require students to ask questions, which is a main component of the PE.
* Criterion 1.10: Grade 4, ESS TE, p. 14, PS TE, p. 51; Grade 5, ESS TE, pp. 217–218. While the science curriculum does provide opportunities for students to access informational text (Grade 5 ESS TE, pp. 217–218), simulations (Grade 4 ESS TE, p. 14), and other media (Grade 4 PS TE, p. 51), there is no evidence of diverse examples of notable scientists and engineers.
* Criterion 1.11: Grade K–5, all material. As noted by the publisher citations, the Knowing Science curriculum does not make any explicit reference to any demographic groups.
* Criterion 1.12: Grade 1, PS TE, p. 24, p. 152; Grade 4, LS TE, p. 55. Student assignments and expectations are linked to California Common Core State Standards for English Language Arts and Math; however, no links are provided to CA English Language Development standards.
* Criterion 1.14: Grade 2, LS TE, p. 29. While the Knowing Science curriculum provides a vocabulary bank at the beginning of each section, guidance and support for non-standard English speakers is not included within the curriculum.
* Criterion 1.16: Grade 4, LS TE, pp. 41–106. While curriculum has students designing crayfish prosthetics, there is no link to human organ and tissue donation.
* Criterion 1.17: Grade 4, LS TE, pp. 69–71. While the Knowing Science curriculum focuses upon the creation of a crayfish prosthetic, discussion trends and career pathways are not included within the curriculum.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials does support instruction and learning of the CA NGSS.

**Citations:**

* Criterion 2.1: Grade 2, PS TE, p. 13, ESS TE, p. 9, LS TE, p. 6. Examples of sequential organization and structure for teachers are found in the Learning Progressions section.
* Criterion 2.2: Grade 3, PS TE, pp. 20–23. The teacher resources supply questions to pose to students that are well designed and will help them assess student knowledge and skills, student discourse, and guide student learning.
* Criterion 2.3: Grade 5, ESS TE, p. 9. Instructional resources explicitly state unit “Learning Progressions” at the beginning of each unit that build on new knowledge and skills.
* Criterion 2.4: Grade K, ESS TE xvii, pp. 13–19. Knowing Science uses the research-based 5E lesson model to engage students in three-dimensional learning and to elicit student thinking and discourse.
* Criterion 2.6: Grade 4, PS TE, p. 7, pp. 9–10, pp. 12–16. Content is well organized and provides students an opportunity to achieve the CA NGSS and CA Science Framework.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion 3.3: Grade 3, PS TE, pp. 20–22. Teacher resources embed formative assessment opportunities into learning activities to help meet all dimensions of the PE.
* Criterion 3.5: Grade 4, PS TE, pp. 23–24, p. 27. Assessments within the Knowing Science curriculum assess student learning, yield information teachers can use in planning and modify instruction to help meet or exceed the standards.
* Criterion 3.8: Grade 1, LS TE, p. 58, p. 65, pp. 98–99. Students’ progress toward meeting the three dimensions of CA NGSS are assessed through writing and performance tasks.
* Criterion 3.10: Grade 2, ESS TE, p. 12, p. 35, p. 37, p. 55, LS TE p. 149, p 155, PS TE, p. 93, pp. 148–150. Assessment tools include multiple measures of student performance.
* Criterion 3.11: Grade 5, ESS TE, p. 113. The Performance Rubric includes assessment on students obtaining information from past ages and applying information literacy skills on science topics.

#### Criteria Category 4: Access and Equity

Program materials do not ensure universal and equitable access to high-quality curriculum and instruction for all students and do not provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion 4.1: Grade 1, LS TE, pp. 34–39. The materials fail to provide examples of how the instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework. Most notably, there is no support for English Language Development learners.
* Criterion 4.2: Grade 2, PS TE, pp. 63–73; Grade 5, LS TE, pp. 9–19. At every grade level there are no suggested lessons, teacher resources or research-based strategies to address the needs of English learners.
* Criterion 4.3: Grade 3, PS TE, p. 13; Grade 4 PS TE, p. 21. The materials did not provide adequate instructional resources to address the needs of students with disabilities.
* Criterion 4.4: Grade 3, PS TE, p. 13; Grade 4, ESS TE, p. 107. There is no evidence of guidance to support students with special needs, such as students living in poverty, foster youth, and students below grade level.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion 5.2: Grade 4, ESS TE, p. 33, p. 71, PS TE, p. 11, p. 52, LS TE, p. 9, pp. 43–45. The materials include estimated instructional time for each activity, lesson, chapter, and unit.
* Criterion 5.3: Grade 2, PS TE, pp. 18–25. Knowing Science provides guidance in daily lessons and units for checking for understanding to ensure three-dimensional learning.
* Criterion 5.6: Grade 5, ESS TE, pp. 103–113. All suggested student tasks, classroom activities, above and beyond resources, as well as out of school opportunities are supported with assessment tasks, rubrics and varied forms of assessment, along with guidance for teacher implementation.
* Criterion 5.12: Grade 1, PS TE, p. 24, p. 49, p. 71. Teacher resources provide links between student assignments and grade level appropriate expectations in the CCSS for ELA and Math.
* Criterion 5.19: Grade 3, ESS TE, p. 123. Resources provide teachers with instructions on how outside resources (e.g., local Red Cross guest speaker, websites for information and videos, content DVDs, and suggested literature) can be incorporated into a three-dimensional learning, standards-based science program.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | K–5 | All materials | Cover | Knowing Science covers have the wrong colors labeled for the three dimensions. | SEP should be blue, DCI should be orange, and CCC should be green. | Design error |
| 2 | 1 | PS TE | 70 | “Extending Lesson” | “Above and Beyond” | Consistency throughout program |
| 3 | 3, 4, 5 | All TEs | n/a | Missing icons | Add “CCC” icons in margins. | Consistency throughout program, icons present in K–2 |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L1 | 3 | ESS TE | 29 | Image of thermometers includes brand name “Acurite”. | Remove brand name. | Brand names and corporate logos |
| 2 | L1 | 4 | ESS TE | 77–94 | Use of brand name “Slinky” | Remove brand name | Brand names and corporate logos |
| 3 | L1 | 4 | ESS TE | 109–113 | Image and use of logo and brand name “Snap Circuits” | Remove logo image and brand name. | Brand names and corporate logos |
| 4 | L1 | 2 | PS TE | 99 | Image of branded object “Sunkist” soda bottle | Remove brand name. | Brand names and corporate logos |
| 5 | L1 | 2 | PS TE | 99 | Image of branded object “Pepsi” soda bottle | Remove brand name. | Brand names and corporate logos |
| 6 | L1 | K | PS TE | 24 | Image of branded item “RoseArt” crayon | Remove brand name. | Brand names and corporate logos |
| 7 | L1 | K | LS TE | 151 | Image of branded item “Billy Bee” honey | Remove brand name. | Brand names and corporate logos |
| 8 | L1 | 1 | LS TE | 79, 87 | Image of branded item “Velcro” | Remove brand name. | Brand names and corporate logos |
| 9 | E1 | 5 | ESS TE | 179 | Image depicts person of larger mass as obese. | Make person taller or use objects. | Negative stereotype of larger people |

### Lab Aids, *Issues and Science*, Grades 6–7 (integrated)

#### Program Summary:

Issues and Science includes: Issues and Science for California includes: Student book (SB); Teacher Edition (TE), includes Student Sheets (SS) and Visual Aids (VA); and Teacher Resource (TR).

#### Recommendation:

Issues and Science is recommended for adoption for 6–7i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1: Grade 6, SB, pp. C39–C42; Grade 7, SB, p. A40, pp. A44–A47, pp. A73–A74, p. A77, pp. A80–A81, and pp. A84–A85. The instructional materials align to the California Next Generation Science Standards.
* Criterion #1.9: Grade 6, Unit C: Climate and Weather: SB, pp. 15–18, TE pp. 40–47. The program contains exemplars in the program focusing on the applications of science to be learned using authentic and meaningful real-world applications.
* Criterion #1.2: Grade 7, Unit D: Chemical Reactions: SB, pp. D3–9, TE pp. D3–27. The program contains examples of opportunities for students to use text, engage in discourse, and employ experiential learning to develop mastery of the three integrated dimensions of the California Next Generation Science Standards.
* Criterion #1.2: Grade 7, Unit E: Bioengineering Design: SB, pp. E25–30, TE, pp. E59–78. The program contains examples of opportunities for students to use text, engage in discourse, and employ experiential learning to develop mastery of the three integrated dimensions of the California Next Generation Science Standards.
* Criterion #1.5: Grade 7, Ecology Activity 17: TE, pp. 233–241. The program’s activity is an exemplar for teacher resources that support three-dimensional learning and cross-curricular integration.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.10: Grade 7, Geological Processes: SB, pp. B59–62, TE pp. B143–156. The program contains exemplary evidence with the resources that suggests a variety of appropriate engineering design tasks using computational tools and software.
* Criterion #2.7: Grade 7, TE, pp. 192–193. The program provides resources guiding teachers to support students in making sense of phenomena with the writing frames and examples of evidence clarifying the CCCs for this activity.
* Criterion #2.2: Grade 6, TR, pp. 13–14, TR, pp. 43–46, TE, p. D6, and TE pp. D27–28. The program contains examples of instructional resources supporting student questioning strategies as a tool to assess students’ knowledge and skills, promote student-to-student discourse, and guide student learning.
* Criterion #2.9: Grade 6, Unit E: From Cells to Organisms: Activity 2: Video on Bubonic Plague and Activity 8: Modeling Cell Structure and Function: Simulation: What Cells Do. The program’s activities contain exemplars where technology is used to investigate phenomena that would otherwise not be directly experienced within the classroom.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3.10: Grade 7, Chemistry of Materials Activity 13, TE, p. C165, SB p. C67. The program’s Impact of Plastics on Society activity is an exemplar of the variety of modes used to measure student performance including walking debate and oral presentation.
* Criterion #3.2: Grade 7, TR, pp. 188–189, TE, p. A8. Question #2 within the program is an example of entry-level assessments for each unit provided to help teachers elicit students’ prior knowledge and preconceptions.
* Criterion #3.3: Grade 6, Body Systems: Activity 14: Evaluating Clinical Trials, TE, pp. D181–190. The program’s activity is an exemplar of how teacher materials afford both learning and formative assessment opportunities with teacher guidance.
* Criterion #3.7: Grade 6, TR, pp. 225–236, TE, pp. B177–191, SB, pp. B81–85. The program contains exemplars of summative assessments designed to provide valid, reliable, and fair measures of students’ progress and attainment of three-dimensional learning after a period of instruction.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.2: Grade 6, TR, pp. 37–38; Grade 7, TR, pp. 37–38. The teacher resources include research-based strategies to address the needs of English learners consistent with the California English Language Development Standards.
* Criterion #4.3: Grade 6, TR, pp. 27–110; Grade 7, Unit E: Biomedical Engineering: Activity 4, TE, p. 44. The program contains instructional strategies to address the needs of students with disabilities in lessons and when forming assessments.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.2: Grade 7, Unit A: Ecology, TR, pp. 168–170. The program contains an exemplar of estimated instructional time for each activity, lesson, chapter, and unit and is consistently represented throughout grade 7.
* Criterion #5.3: Grade 7, Modeling Earthquakes: Activity 9, TE, pp. B135–139. The program’s activity shows an exemplary approach to guidance for checking for understanding and adjusting lessons for the three-dimensional learning of developing a model.
* Criterion #5.8: Grade 7, TR, pp. 270–280. The program contains an exemplar of the teacher resources including a planning guide describing the relationship between the components of the program and how to use all of the components.
* Criterion #5.10: Grade 6, SB, p. A4, p. A10, p. A13, p. A18, p. A22, p. A28, and p. A35. The program contains an exemplar of student resources utilizing guiding questions to build the development of learning goals without explicitly stating those learning goals.
* Criterion #5.12: Grade 6, Unit Specific Resources, TR, pp. 164–166, pp. 204–205, pp. 240–241, pp. 278–280, pp. 316–319, and pp. 348–349. The instructional resources include a list of materials required for each lesson.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | SB | A57 | Research the water quality in your community. Investigate… | Research the water quality in your community (see Appendix F). Investigate… | Mislabeled. |
| 2 | 6 | SB, Energy Unit, Activity 2 | B9 | What variable are you testing? | What variable are you testing (see Appendix E)? | Mislabeled. |
| 3 | 6 | TE | B34 | An independent variable is the controlled variable in an experiment or the variable that is not changed by other variables. | An independent variable is the manipulated variable in an experiment or the variable that is not changed by other variables. | Imprecise definition. |
| 4 | 7 | SB | A28 | **Biodiversity** is the variety of life at every level from genes to species to ecosystems. | **Biodiversity**, one measure of the overall health of an ecosystem,is the variety of life at every level from genes to species to ecosystems. | Imprecise definition. |
| 5 | 6, 7 | SB | G44, F41 | Independent variable: the controlled variable in an experiment. | Independent variable: the variable that is intentionally changed (manipulated) in an experiment. | Simple factual error. |
| 6 | 6, 7 | SB | G42, F40 | Dependent variable: the observed phenomenon that is being measured. | Dependent variable: the variable that changes in response to the changes in the independent variable that is often measured or counted in an experiment. | Simple factual error. |
| 7 | 6, 7 | Web page | https://Sepuplhs.org /pathways.html | All | Improve readability of learning pathways. Both screen and print versions’ font is too small to read for some readers. When magnification is increased, the reader cannot see the connections between the graphics. | Readability. |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L.1. | 6 | SB PUP | A17 | The “Fox” logo is on the student’s shirt. | Remove or blur “Fox” logo. | Use of brand names/logos. |

### Learning Bits, *SMART NGSS by Science Bits*, Grades 6–8 (discipline specific)

#### Program Summary:

SMART NGSS by Science Bits includes: Smart NGSS by Science Bits includes: digital license to Earth & Space Science; Life Science; Physical Science.

#### Recommendation:

SMART NGSS by Science Bits is recommended for adoption for 6–8d because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1: Grade 6, My Library, Content, Middle School Earth and Space Sciences, Access, The Sun-Earth-Moon System, Explore p. 1; Grade 7, My Library, Content Middle School Life Sciences, Access Cells, Click snowflake icon, concept map; Grade 8, My Library, Content Middle School Physical Sciences, Access Forces, Click compass icon, Standards. In every lesson there are Disciplinary Core Ideas from the other domains.
* Criterion #1.2: Grade 7, My Library, Middle School Life Sciences, Access, Biodiversity of an Ecosystem. Each content piece was the 5E learning sequence, and includes videos, text, and discourse to engage students in the three dimensions of the Next Generation Science Standards.
* Criterion #1.7: Grade 6, My Library, Content, Middle School Earth and Space Sciences, Access, History of the Earth, Explain, p. 1. Use of primary sources, data, scientific research, case studies, and photographs are integrated throughout the program.
* Criterion #1.13: Grade 8, My Library, Content, Physical Science, Access, Energy, Explain, pp. 1–19. The materials provide support for students to develop appropriate grade-level academic language and discipline-specific vocabulary through the use of the vocabulary in context.
* Criterion #1.15: Grade 7, My Library, Middle School Life Sciences, Access, Ecosystems. We found evidence that supports the Environmental Principles and Concepts in the Explain section, Elaborate section (pp. 1–3), and the embedded activity.
* Criterion #1.18: Grade 8, My Library, Content, Physical Science, Access, The Structure of Matter, Elaborate, pp. 1–4. Instructional Resources support students in addressing the applications of science in the development of technologies.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.3: Grade 8, My Library, Middle School Physical Sciences, Access, Changes in Matter, Click on the Compass icon, Before We Begin. The Teacher’s Guide of all units outline prior knowledge and skills in the “Before We Begin” section.
* Criterion #2.7: Grade 6, My Library, Middle School Earth and Space Sciences, Access, The Earth in the Universe, Click the Compass icon, Standards. The Teacher’s Guide of all units includes a “Standards” section explaining the Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts addressed by the unit.
* Criterion #2.10: Grade 8, My Library, Middle School Physical Sciences, Access, Energy, Explore, p. 7. Evidence includes many resources that encourage the meaningful use of technology.
* Criterion #2.13: Grade 7, My Library, Middle School Life Sciences, Access, Cells, Click Compass icon, Learning Objectives. The Teacher’s Guide of all units describes required prior knowledge and learning objectives.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3.1: Grade 6, My Library, Content, Middle School Earth and Space Sciences, Access, Earth’s Internal Processes, Evaluate, pp. 1–20. Assessment tools are present in all content areas that measure what students know and are able to do as defined by the Performance Expectations in the California Next Generation Science Standards. Assessments included are pre-assessments, formative assessments, and summative assessments.
* Criterion #3.2: Grade 8, My Library, Content, Middle School Physical Sciences, Access, Waves, Engage, pp. 1–5. Teachers are able to elicit student’s prior knowledge and preconceptions to gauge their facility for using the Science and Engineering Practices and the Crosscutting Concepts.
* Criterion #3.8: Grade 8, My Library, Content, Middle School Physical Sciences, Access, Forces, Explain, p. 11, Click the Pencil icon, “The Fakir and the Bed of Nails”. Activities combine the assessment of both writing and performance tasks.
* Criterion #3.10: Grade 7, My Library, Content, Middle School Life Sciences, Access, Ecosystems. There are numerous exemplars found in all stages of the 5E including Engineering Design, labs, performance-based tasks, and oral presentations.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.1: Grade 6, 7, 8, in all units the instructional resources reflect the goals of access and equity outlined in Chapter 10 of California Science Framework. Evidence includes lessons in Spanish and English, 5 E model of instruction, close captioning, braille (HTML5).
* Criterion #4.2: Grade 6, 7, 8, Homepage, English or Spanish. At every grade level language can be changed to Spanish with all videos in Spanish with the option of Spanish subtitles.
* Criterion #4.3: Grade 7, My Library, Middle School Life Sciences, Access, Cells. There are numerous materials that support the needs of students with disabilities including the ability to change complexity levels of assignments, click to speech option, and closed caption.
* Criterion #4.4: Grade 6, 7, 8, Home, Introductory Resources for Teachers, How to Use Science Bits in the Classroom – Best Practices, Annex 1 (pp. 9–17). The Annex/Appendix provides evidence of instructional strategies for supporting students with special needs. Additionally, each unit has Click to Speech language options, and subtitles for videos.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.3: Grade 6, 7, 8, My Library, Middle School Earth and Space Sciences, Access, Minerals and Rocks, Select the Compass Icon, Misconceptions. All sections in a lesson include guidelines and suggestions that are specific to the activity.
* Criterion #5.6: Grade 6, 7, 8, My Library, Middle School Life Science, Access, Nutrition, Explore, p. 1, Select the Compass Icon, Guidelines. Tasks, classroom activities, and exercises are provided with guidance.
* Criterion #5.9: Grade 7, My Library, Middle School Life Sciences, Access, Cells, Select the Compass Icons. Instructional objectives for three-dimensional learning are provided. These include learning objectives, misconceptions, and learning sequence.
* Criterion #5.10: Grade 8, My Library, Middle School Physical Sciences, Access, Forces. We found evidence of learning goals on the cover page using the “bullseye” icon. Additionally, the 5E learning sequence provides opportunities for students to develop their understanding.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component (Digital pathway) | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | My Library, The Sun-Moon-Earth System, Access, Explore | p. 12 | n/a | The text does not identify which is A and which is B. | Clarity |
| 2 | 8 | My Library, MS Physical Science, Access, Thermal Energy, Heat, and Temperature, Explain | p. 2 | …all matter possesses energ | …all matter possesses energy | Typo |
| 3 | 8 | My Library, Middle School Physical Sciences, Access, Energy, Explain | p. 9 | In this this way the balloon… | In this way the balloon… | Typo |

#### Social Content Citations: None

### McGraw-Hill School Education, California Inspire Science, Grades K–6

#### Program Summary:

California Inspire Science includes: SE: Student Edition; TE: Teacher’s Edition; SRA: Read Aloud; OL: Online

#### Recommendation:

California Inspire Science is recommended for adoption for K–6 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade K, SE/TE Unit 2, pp. 72–73 and pp. 83–84; Grade 1, SE/TE Unit 1, p. 42, pp. 87–88 and SE/TE Unit 2, p. 27, pp. 69–70; Grade 2, SE/TE Unit 1, pp. 16–17, pp. 26–27, pp. 51–52, pp. 59–64; Grade 3, SE/TE Unit 3, pp. 26–28; Grade 4, SE/TE Unit 3, pp. 44–59; Grade 5, SE/TE Unit 1, pp. 24–27. The program includes numerous exemplars of the standards being fully covered in grades K–5.
* Criterion #2: Grade 1, TE Unit 3, pp .8–15, specific example of integration of instruction: SEP p. 15, CCC p. 11, and DCI p. 8; Grade 3, TE Unit 2, pp. 22–36, specific example of integration of instruction: SEP p. 33, CCC p. 33, and DCI p. 22. Exemplars are prevalent throughout the K–5 program that provide instructional resources to engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the SEPs, the CCCs, and the DCIs.
* Criterion #11: Grade K, SE/TE Unit 4, p. 43; Grade 1, Online Module: Animal Parents and Their Offspring, Module Library, STEM Connection: Temple Grandin, <https://my1.mheducation.com/coursemaps/course.php/folders/1719957/overview?clid=5003200023476>; Grade 5, SE/TE Unit 3, p. 49. The K–5 program provides many exemplars of resources that include examples of people and groups who used their context, learning, and intelligence to make important contributions to society through science and technology from different demographic groups: Native Americans; African Americans; Mexican Americans and other Latino groups; Asian Americans; Pacific Islanders; European Americans; lesbian, gay, bisexual, and transgender Americans; persons with disabilities; women; and members of other ethnic and cultural groups. Resources emphasize the importance of science education to all members of our society in a way that is culturally and socially authentic.
* Criterion #12: Grade 2, SE/TE Unit 1, pp. 2I–2J; Grade 4, SE/TE Unit 1, p. 17. The program consistently provides student assignments that make linkages and are consistent with the grade-level appropriate expectations in the California Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects (CA CCSS for ELA/Literacy), the California English Language Development Standards: Kindergarten through Grade 12 (CA ELD Standards), and California Common Core State Standards: Mathematics (CA CCSSM) and are consistent with the guidance in the CA Science Framework.
* Criterion #14: Grade 2, Online, Program Resources: Course Materials, Course Planning Resources, Supporting All Learners, Universal Access; Grade 5, TE Unit 2, pp. 10–11 and Unit 3, pp. 2I–2J; Grade 5, Online, Module: Earth’s Patterns and Movement, Module Planning Resources, Language Building Resources: Earth’s Patterns and Movement**.** Teacher resources throughout the K–5 program consistently provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grade 5, Program Overview: Welcome to Inspire Science, Get Started, Program Guide, pp. 8–9, <https://connect2.mheducation.com/coursemaps/course.php/folders/1719694/overview?clid=5003200023469>. Sequential organization of the material provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
* Criterion #3: Grade K, Unit 1, p. 2C. The K–5 program consistently provides instructional resources that explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.
* Criterion #6: Grade 3, SE/TE Unit 2, pp. 44E–44F, 48A–48B. The content across grade levels K–5 is well organized and presented in a manner consistent with providing all students an opportunity to achieve the essential knowledge and skills described in the CA NGSS and the CA Science Framework.
* Criterion #11: Grade 2, OL: <https://connect2.mheducation.com/coursemaps/course.php/folders/1719915/overview?clid=5003200023474>. Teacher resources across grade levels K-5 include many references to supplemental open educational resources.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1: Grade 2, SE/TE Unit 4, pp. 50–52, and TE Unit 4, pp. 2A–2B. Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and the CA Science Framework. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS. Assessments stress performance tasks rather than rote memorization.
* Criterion #2: Grade K, SE/TE Unit 1, p. 41. Entry-level assessments across grade levels K–5 for each unit are provided to help teachers elicit students’ prior knowledge and preconceptions and information is provided to help teachers use the results of those assessments to guide instruction and determine modifications for specific groups of students.
* Criterion #4: Grade 5, SE/TE Unit 4, p. 1. Claim, evidence, and reasoning formative assessments are embedded in all units, grades 1–5. These assessments are designed to elicit current understandings and preconceptions and to provide evidence of students’ progress toward mastering the three-dimensional learning called for in the CA NGSS and the CA Science Framework. Additionally, the instructional materials provide teachers with strategies of how to address preconceptions during instruction.
* Criterion #7: Grade 3, SE/TE Unit 1, pp. 85–90. Summative assessments throughout the program provide valid, reliable and fair measures of students' progress and attainment of three-dimensional learning after a period of instruction and involve multi-component tasks including, but not limited to: hands-on or simulation-based performance tasks, open-ended constructed response problems, and scoring of portfolios of student work collected over the course of instruction. Selected-response items, when used, require analysis and reasoning to answer them, rather than simply memorized responses.
* Criterion #10: Grade 4, Engineering Design and Lab Practical Tasks, Unit 1, pp. 64–66; Grade 4, Performance-based Tasks, Unit 4, pp. 48–50; Grade 4, Open-ended Responses, Unit 3, p. 41; Grade 4, Short Answer Response, Unit 2, p. 41; Grade 4, Essay Response, Unit 2, p. 38; Grade 4, Lab Reports, Unit 1, p. 66; Grade 4, Research Projects, Unit 3, pp. 118–119; Grade 4, Computational Simulations, Online Module: Energy and Motion, Lesson 3: Energy Transfer in Collisions, Explain, Inquiry Activity: Newton’s Cradle, p. 2, Simulation: Newton’s Cradle, <https://connect2.mheducation.com/coursemaps/course.php/folders/1719734/overview?clid=5003200023470>; Grade 4, Oral Presentations, Unit 4, p. 50. Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade K, TE Unit 1, pp. 2I–2J; Grade K, TE Unit 2, p. 11; Grade K, TE Unit 3, p. 23. The instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grade 1, TE Unit 3, pp. 2I–2J and Unit 4, p. 30. At each grade level K–5, lesson and overarching unit teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3: Grade 4, TE Unit 2, pp. 2I–2J and Grade 4, TE Unit 3, p. 9; Grade 4, TE Unit 4, p. 80. Instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate, at each grade level.
* Criterion #4: Grade 2: Online Program Resources: Course Materials, Course Planning Resources, Supporting All Learners, Differentiated Paths, <https://connect2.mheducation.com/coursemaps/course.php/folders/1719900/overview?clid=5003200023474>. The teacher resources for K–5 include numerous examples of differentiated pathways within the teacher resources, including guidance and support for standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #2: Grade K, TE Unit 1, pp. 2E–2F, 42C–42D; Grade K, TE Unit 2, pp. 52G–52H. The teacher resources provide an estimated instructional time for each activity, lesson, chapter, and unit which allows for student engagement in the SEPs and engineering design projects.
* Criterion #7: Grade 4, TE/SE Unit 1, pp. 8–9. K–5 teacher and student resources have correlating page numbers in print resources or corresponding references in electronic resources.
* Criterion #9: Grade 1, TE Unit 3, pp. 22A–22B, p. 55; Grade 1, Online Module: Structures and Functions, Module Planning resources, Letter to Home, <https://connect2.mheducation.com/coursemaps/course.php/folders/1719935/overview?clid=5003200023476>. Instructional objectives for three-dimensional learning are explicitly stated and clearly identifiable in the teacher resources. Teacher resources include guidance on explaining these objectives to parents.
* Criterion #17: Grade 2, Online, Module: Plant Structures and Functions, Module Planning Resources, Instructional Resources, Letter to Home, <https://connect2.mheducation.com/coursemaps/course.php/folders/1719933/overview?clid=5003200023474>. Suggested homework extends and reinforces classroom instruction. Homework provides opportunities to support student learning through shared experiences with family. Opportunities include projects, journaling, reflection, or interviews with parents around a concept or activity.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | TE | Unit 4, p. 58A, paragraph 2 | “The diversity of live” | “The diversity of life” | typo |
| 2 | K | TE | Unit 2, p. 83 | “classroom” Student Edition text picture | “classroom” | typo |
| 3 | 3 | SE/TE | Unit 1, p. 8, paragraph 1 | “In the video, you observed the kids move down a bumpy slide.” | “In the video, you observed a carnival ride that moves in a circle.” | Video for Lesson 1 Inquiry Activity references “bumpy slide”, but video not viewed until Lesson 2. |

#### Social Content Citations: None

### McGraw-Hill School Education, California Inspire Science, Grades 6–8 (discipline Specific)

#### Program Summary:

California Inspire Science includes: California Inspire Science includes: SE: Student Edition; TE: Teacher’s Edition; OL: Online for Earth and Space (grade 6), Life (grade 7), and Physical Science (grade 8).

#### Recommendation:

California Inspire Science is recommended for adoption for 6–8d because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 6, Unit 3, SE/TE, pp. 82–88; Grade 7, Unit 2, SE/TE, pp. 154–159; Grade 8, Unit 1, SE/TE, pp. 112–116. There are numerous exemplars of the standards being fully covered in grades 6, 7, and 8.
* Criterion #9: Grade 6, Unit 2, SE/TE, pp. 61 and 103. There are numerous and consistent references to California throughout the curriculum. Real-world applications are often focused on California specific scenarios.
* Criterion #10: Grade 6, OL, Earth and Space, Module: Dynamic Earth, Lesson 2: Development of a Theory, Lesson Library, Videos, Simulations, and Interactives, Video: Seafloor Spreading; Grade 7, OL, Module: Biodiversity in Ecosystems, Lesson 1: Benefits of Biodiversity, Lesson Library, Videos, Simulations, and Interactives, Video: Counting Species in California; Grade 8, Unit 3, SE/TE, p. 189. The curriculum is enriched with opportunities for students to access informational texts and primary sources, simulations, and videos and presents examples of notable scientists and engineers in grades 6, 7, and 8.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #5: Grades 6–8, OL, Program Resources: Course Materials, Course Planning Resources, Correlations, Pacing, and Materials Lists, Pacing: California Inspire Science. The instructional resources are grade-level specific and provide instructional content for 180 days of instruction for at least one daily class period, including an estimate of the necessary instructional time for grades 6, 7, and 8.
* Criterion #6: Grade 8, Unit 3, TE, pp. 2E–2F and 6B. The content is well organized in all units at all grade levels and is presented in a manner consistent with providing all students an opportunity to achieve the essential knowledge and skills described in the CA NGSS and the CA Science Framework.
* Criterion #8: Grade 7, Life, Unit 4, SE/TE, pp. 65–72, STEM Module Project Population Probabilities. The STEM projects at the end of each module allow for in-depth study to extend and reinforce learning in the unit.
* Criterion #14: Grades 6–8: All technology support is available through a phone call or online. Hover over the profile button at the top of the screen for links to help; Grade 6, OL, Earth and Space, Module: The Water Cycle, Lesson 2: Water on Earth’s Surface, Lesson Library, Videos, Simulations, and Interactives, PhET Simulation: Glaciers; Grade 7, OL, Life, Module: Matter and Energy in Ecosystems, Lesson 2: Flow of Energy, Lesson Library, Videos, Simulations, and Interactives, Animation: Food Webs; Grade 8, OL, Physical Science, Module: Forces and Motion, Lesson 1: Position and Motion, Lesson Library, Videos, Simulations, and Interactives, Video: Get Moving! The electronic learning resources support instruction that is connected explicitly to the CA NGSS, have a well-designed user interface, provide technical support, and include suggestions for appropriate and differentiated use in all grade levels in the program.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1**:** Grade 7, SE/TE, Unit 1, pp. 151, 165, 185–192, 193. The assessments at each grade level throughout California Inspire Science reflect the three-dimensional nature of CA NGSS and the Science Framework. We have provided citations for Grade 7, Life Science.
* Criterion #2: Grade 6, Earth and Space, Unit 4, SE/TE, p. 57, Earth’s Motion Paige Keeley Science Probe. The Paige Keeley Science Probes provide and entry level assessment for each unit that helps teachers elicit student knowledge and preconceptions and gauge students’ understanding of the three dimensions of NGSS.
* Criterion #3: Grade 6, Unit 2, TE, pp. 44J–46, 155–160 STEM module As the Water Turns. Grade 6, Unit 2, TE, p. 97. The STEM Module supports teachers in engaging students in formative assessment. Paige Keeley Science Probes are used throughout and revisited during the unit to support teachers in determining student preconceptions, as well as continuing to monitor students’ understanding during the unit.
* Criteria #7: Grade 7, SE/TE, Unit 1, pp. 59–64. The summative assessments provided by Inspire Science provide valid, reliable, and fair measures of students’ progress and attainment of three-dimensional learning after a period of instruction.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criteria #1: Grade 8, OL, Physical Science, Program Resources: Course Materials, Course Planning Resources, Supporting All Learners, Universal Access. The Universal Access Guides, which are available for all grades, provide strategies for teachers that align to the goals of chapter 10 in the CA Science Framework.
* Criterion #2: Grade 7, Life Unit 3, TE, p. 2I; Grade 8, Unit 1, TE, p. 104I. The ELD supports suggested for these units include research-based strategies that are consistent with the CA ELD Standards.
* Criterion #3: Grade 6, Earth and Space, Unit 3, TE, p. 120, Teacher Toolbox; Grade 8, Forces, Unit 3, TE, p. 14, Differentiated Instruction. The Teacher Toolbox provided by McGraw-Hill supports teachers in addressing the needs of students with disabilities in lessons. The Differentiated Lessons with AL and BL (Approaching Level and Beyond Level) extensions and supports meet criterion 3 to support teachers addressing the needs of students.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criteria #3: Grade 6, Unit 3, SE/TE, pp. 57, 121, 152; Grade 7, Life, Unit 2, pp. 5, 8–9; Grade 8, Unit 3, TE, p. 37. The use of the Paige Keeley prompts and the teacher support provide opportunities for checking for understanding and adjusting lessons. The consistency with the Claim Evidence Reasoning pages that are revisited during the unit provides teachers with informal assessment opportunities within the unit.
* Criteria #6: Grade 8, SE/TE**,** Unit 1, pp. 95–102. There is guidance for teachers that supports how to implement tasks and assessments.
* Criteria #7: Grade 6, SE/TE, Unit 2, p. 88; Grade 7, SE/TE, Unit 4, p. 85; Grade 8, SE/TE, Unit 4, p. 18. The Teacher and Student page numbers have a 1:1 correspondence. Electronic resources have the same title reference. This makes finding resources simple and effective and allows time to be spent engaging in the curriculum.
* Criteria #9: Grade 6, OL: Earth and Space, Module: The Water Cycle, Module Planning Resources, Instructional Resources, Letter to Home: The Water Cycle; Grade 8, OL: Physical Science, Module: Electromagnetic Forces, Module Planning Resources, Instructional Resources, Letter to Home: Electromagnetic Forces. There are numerous examples of how instructional objectives for three-dimensional learning are explicitly stated and clearly identifiable in the teacher resources in each grade level of the program. Teacher resources include guidance on explaining these objectives to parents in “Letters to Home” Resources online.
* Criteria #17: Grade 6, OL, Earth and Space, Module: Weather and Climate, Module Planning Resources, Instructional Resources, Letter to Home: Weather and Climate; Grade 7, OL, Life, Module: Matter and Energy in Ecosystems, Module Planning Resources, Instructional Resources, Letter to Home: Matter and Energy in Ecosystems. The California Inspire Science provides homework options, at each grade level, which include suggestions and guidance to the teacher to support and extend the learning in the classroom. Letters to Home are available for each module. They provide additional student learning opportunities and projects with encouraged family involvement.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 7 | Collaboration Kit | Unit 2: Module 1 | California Inspire Science Collaboration Kit Unit 1: Life Structure & Function Grade 6 Module 1: Cells and Life | California Inspire Science Collaboration Kit Unit 2: Life: Structure & Function Grade 7 Module 1: Cells and Life | Life Science is Grade 7, not Grade 6 Life: Structure and Function is Unit 2, not Unit 1 |
| 2 | 7 | Collaboration Kit | Unit 2: Module 2 | California Inspire Science Collaboration Kit Unit 1: Life Structure & Function Grade 6 Module 2: Body Systems | California Inspire Science Collaboration Kit Unit 2: Life Structure & Function Grade 7 Module 2: Body Systems | Life Science is Grade 7, not Grade 6 Life: Structure and Function is Unit 2, not Unit 1 |
| 3 | 6*–*8 | TE, all Teachers Editions | All G pages | Materials included in the Collaboration Kit are listed in blue. | Add blue to appropriate text. | None of the materials are listed in blue. |
| 4 | 7 | TE, Unit 2 | p. 18 | This microbiologist is testing samples in Sacramento, California to determine whether they the individual they came from is infected with the swine flu. | This microbiologist is testing samples in Sacramento, California, to determine whether the individual they came from is infected with the swine flu. | Typos |
| 5 | 6 | OL: Program Resources: Course Materials: Correlations: California NGSS, Earth and Space | n/a | Scientific Knowledge Assumes an Order and Consistency in Natural ystems. | Scientific Knowledge Assumes an Order and Consistency in Natural Systems | Typo |
| 6 | 6 | OL: Program Resources: Course Materials: Correlations: California NGSS, Earth and Space | n/a | Cause and Effec | Cause and Effect | Typo |
| 7 | 6 | TE, Unit 3, under Before You Begin… | p. 144 | “Arc of Destruction.” | “Arc of Deforestation.” | Incorrect title – presumes negative opinion |
| 8 | 6 | TE, Unit 3, In table | p. 13 | % Lost | % Left (possibly) or Remaining | The table states - Total Original Forest, Total Remaining and % Lost - but the answer key and the instructions don’t yield lost, they yield remaining forest % |
| 9 | 7 | SE/TE Unit 1 | p. 154 | ambhihians | amphibians | typos (happens multiple times on the page) |
| 10 | 7 | SE/TE Unit 2 | p. 20 | studnet | students | typo |
| 11 | 7 | SE/TE Unit 2 | p. 144 | Stephen Hawkins is a famous...he has gone… The disease has caused… which has affected… He has... | Stephen Hawkins was a famous… he went on to… The disease caused… which affected… he worked | Verb tense based on his death |
| 12 | 7 | TE Unit 3 | p. 13 | 13 (page number on the page) | 13 | Bold the one for consistency |
| 13 | 8 | SE/TE | Unit 1, p. 211 | “Once the negative charges are in the farthest…” | “Once the negative charges are in the farther...” | Typo |
| 14 | 8 | SE/TE | Unit 1, p. 227 | “Voltage is the electrical potential energy difference between two places in a circuit.” | “Voltage is the electrical potential energy difference per charge between two places in a circuit.” | Simple factual error |
| 15 | 8 | SE/TE | Unit 1, p. 227 | A light bulb connected to a 9 V battery produces about six times (9 divided by 1.5) more light and thermal energy than the same bulb connected to a 1.5 V battery. | A light bulb connected to a 9 V battery produces about 36 times more light and thermal energy than the same bulb connected to a 1.5 V battery. | Factual error. Increasing the voltage by a factor of six also increases the current by a factor of six, resulting in a 36-fold increase in light and thermal energy produced. Or, electrical power produced = IV = V squared/R. |
| 16 | 8 | SE/TE | Unit 1, p. 241 | “Magnetic fields around current carrying wires are strongest closest to the wire.” | “Magnetic fields around current carrying wires are stronger closer to the wire.” | Typo |
| 17 | 8 | SE/TE | Unit 2, p. 19 | “The amplitude of a wave is proportional to the energy that produces the wave.” | “The square of the amplitude of a wave is proportional to the energy that produces the wave.” | Simple factual error. Stated correctly on the following page. |
| 18 | 8 | SE/TE | Unit 3, p. 15 | “His contributions to science are recognized by naming the unit for energy the Joule (J).” | “His contributions to science are recognized by naming the unit for energy the joule (J).” | Typo |
| 19 | 8 | SE/TE | Unit 3, p. 140 | “…less air particles…” | “…fewer air particles” | Grammatical error |
| 20 | 8 | SE/TE | Unit 4,  p. 62 | Photo of a pizza representing an endothermic reaction? | Replace with a picture of a cold pack. | Clarity |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L.1. | 6 | OL: Program Resources: Course Materials: Science and Engineering Handbook | p. 41 | Tire with Mercedes logo on flat tire | Remove Mercedes logo | Brand names and corporate logos |
| 2 | L.1. | 8 | OL: Light: Lesson 4: Elaborate: Interactive Presentation “A Day in the Life of an Industrial Psychologist” | Slide 1 (TE Unit 2, p. 139) | Red sports car | Remove the Ferrari logo | Brand names and corporate logos |

### McGraw-Hill School Education, California Inspire Science, Grades 6–8 (integrated)

#### Program Summary:

California Inspire Science includes: California Inspire Science includes: SE: Student Edition; TE: Teacher’s Edition; OL: Online.

#### Recommendation:

California Inspire Science is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 6, Unit 1, Performance Expectations at a Glance, pp. x–xx; Grade 7, Unit 1, Performance Expectations at a Glance, pp. x–xxii; Grade 8, Unit 1, Performance Expectations at a Glance, pp. x–xx. The program instructional resources align to the CA NGSS at each grade level.
* Criterion #3: Grade 6, Unit 3, Teacher and Student Editions, pp. 10–11; Grade 7, Unit 2, Teacher and Student Editions, pp. 98–99. The program instructional resources reflect Science and Engineering Practices in multiple contexts and the Cross Cutting Concepts.
* Criterion #5: Grade 6, Unit 1, Teacher and Student Editions, p. 63; Grade 8, Unit 2, Teacher and Student Editions, pp. 95–102. The program teacher resources support instructional opportunities and assessments that engage students in three-dimensional learning.
* Criterion #10: Grade 7, Unit 4, Module: Matter: and Energy in Ecosystems, Lesson 2: Flow of Energy, Lesson Library, Videos, Simulations, and Interactives, Animation: Food Webs; Grade 8, Unit 1, Teacher and Student Editions, p. 142. The program science curriculum is enriched with opportunities for students to access informational texts, literature, simulations and other media related to science and engineering and it presents diverse examples of notable scientists and engineers.
* Criterion #14: Grade 6, Program Resources, Course Materials, Course Planning Resources, Supporting All Learners, Universal Access; Grade 7, Unit 1, Teacher Edition, pp. 116–117. The program teacher resources provide guidance to support all students at all grade levels to develop their science-related language and reading abilities.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #5: Grade 6, TE Unit 2, pp. 2E–2F, 6B, Unit 3, pp. 2E–2F, 6B; Grade 7, TE Unit 3, p. 2E–2F, 6B; Grade 7, TE Unit 80E–80F, 84B. Grades 6 and 7 are exemplars that show that the instructional resources are grade-level specific and provide instructional content for 180 days of instruction for at least one daily class period, including an estimate of the necessary instructional time.
* Criterion #7: Grade 6, TE Unit 2, pp. 78, 80–82, 88; Grade 7, TE Unit 1, pp. 17, 28, 105; Grade 8, TE Unit 1, pp. 36, 46–48, 53, 91. Grades 6, 7, and 8 are exemplars that show resources includes explanations to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the Pes of the CA NGSS. Teacher resources support understanding of how Pes are developed with in units and across units throughout a year.
* Criterion #9: Meaningful use of technology/video/simulations: Grade 6 Module: Cells & Life, PhET simulation: Membrane Channels; Grade 7, Module: Natural Hazards, video: Tornado Touchdown; Grade 8, Module: Information Technologies, animation: Fiber Optics; Use of measuring tools, spreadsheets and other software: Grade 6, Unit 3, p. 76–78 SE/TE; Grade 7, Unit 1, p. 60–61 SE/TE; Grade 8, Unit 2, p. 250–251 SE/TE; Guidance about the use of Library Media Center: <https://my1.mheducation.com/coursemaps/course.php/folders/1726037/overview?clid=5003200023617>. Grades 6, 7, and 8 are exemplars that show resources that encourage the meaningful use of technologies such as video clips or computer simulations to investigate phenomena that cannot be directly experienced in the classroom; effective measuring tools and spreadsheets and other software to record, display, and analyze data. The materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.
* Criterion #14: Grade 6, Unit 2, pp. 78, 80–82, 83–88; Unit 3, pp. 86, 88–90, 91–98. Grade 6 is an exemplar for suggesting student tasks, including end-of-chapter or culminating problems and exercises, and are three dimensional in nature and build in complexity throughout the year and across years.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #2: Grade 6, Unit 1, Teacher and Student Editions, p. 5, Science Probes; Grade 8, Unit 1, Teacher and Student Editions, p. 88, Teacher Toolbox. Instructional resources engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the Science and Engineering Practices (SEPs), Crosscutting Concepts (CCCs), and DCIs.
* Criterion #4: Grade 7, Unit 1, Teacher and Student Editions, pp. 8–9, Claim/Evidence/Reasoning; Grade 8, Unit 4, Teacher and Student Editions, p. 66, Three-Dimensional Thinking, Teacher Toolbox. Brief formative assessment tools provide teachers with strategies of how to address preconceptions during instruction. These strategies are to be differentiated for different age levels.
* Criterion #5: Grade 7, Unit 4, Teacher and Student Editions, p. 59, STEM Module Project, Planning After Lesson 1. Assessments yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards. Grade 6, Unit 3, Teacher and Student Editions, p. 18, Three-Dimensional Thinking.
* Criterion #8: Grade 7, Unit 2, Teacher and Student Editions, p. 35, Three- Dimensional Thinking; Grade 8, Unit 2, Teacher and Student Editions, pp. 78–79, Claim, Evidence, Reasoning. Students’ progress toward meeting the CA NGSS is assessed through both writing and performance tasks consistent with the grade-level writing and mathematics requirements in the CA CCSS for ELA/Literacy and the CA CCSSM.
* Criterion #10: Grade 6, Unit 2, Teacher and Student Editions, p. 88, STEM Module Project, Create Your Presentation; Grade 7, Unit 3, Teacher and Student Editions, p. 78, STEM Module Project, Be a News Anchor!; Grade 8, Unit 3, Teacher and Student Editions, p. 31, It’s Your Turn––Reading Connection. Assessment tools include multiple measures, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade 8, Unit 2 Energy and Motion, TE p. 2I; Grade 6, Review Program, Course Materials, Universal Access Handbook <https://my1.mheducation.com/coursemaps/course.php/folders/1727708/overview?clid=5003200023655>. Instructional resources reflect the goals of access and equity outlined in Chapter 10 of the CA Science Framework.
* Criterion #2: Grade 8, Unit 2 Energy and Motion, TE, p. 69; Grade 6, Unit 3 Energy in the Atmosphere, TE, p. 100I. Instructional materials and teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3: Grade 8, Unit 4, The Sun-Earth-Moon System TE, p. 52I; Grade 7, Unit 2: Changing Earth SE, p. 33. Instructional resources incorporate strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate, at every grade level.
* Criterion #4: Grade 8, Program Resources: Course Materials>Supporting All Learners>Universal Access <https://my1.mheducation.com/coursemaps/course.php/folders/1727638/overview?clid=5003200023653>; Grade 7, Unit 1 Understanding Matter TE, p. 2J. The teacher resources supply a differentiated path for all students. They include guidance to support students with special needs, including standard English learners; English learners; long-term English learners; students living in poverty; foster youth; girls and young women; advanced learners, students with disabilities; and students below grade level in science skills, three dimensional learning, literacy skills, or mathematics skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #2: Grade 6, TE Unit 1, pp. 2E–2F, 2G–2H, 6B; Unit 3, pp. 2E–2F, 2G–2H, 6B, 100E–100F, 100G–100H, 104B; Grade 7, TE Unit 2, pp. 2E–2F, 2G–2H, 42B. Grades 6 and 7 are exemplars of how the teacher resources provide an estimated instructional time for each activity, lesson, chapter, and unit which allows for student engagement in the SEPs and engineering design projects. Grade 7 is an example of how suggested student tasks, including classroom activities, end of chapter tasks, suggested out of school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Possible responses, assessment keys, and rubrics are provided.
* Criterion #6: Grade 7, Unit 2, pp. 146–147 TE (student tasks), 215 TE (Real World Connection), 222 TE (Chapter Review), 225–230 TE (Assessment); Online: Module: Dynamic Ecosystems>STEM Module Project> Additional Resource>Module Project Rubric> The Fox and the Hare <https://my1.mheducation.com/coursemaps/course.php/folders/1726341/overview?clid=5003200023621>. Grades 6 and 7 are exemplars of how teacher and student resources have correlating page numbers in print resources or corresponding references in electronic resources.
* Criterion #7: Grade 6, SE/TE Unit 1, p. 108; Unit 3, pp. 44, 186; Grade 7, SE/TE Unit 2, p. 28; Unit 3, p. 122; Unit 4, p. 34; Unit 1, p. 54–55 TE, p. 94 TE, p. 112 TE; Unit 2, p. 104–105 TE, p. 140 TE, p. 156 TE; Online: Module>Geologic Time>Module Planning Resources>Language Resources>Language Building Vocabulary <https://my1.mheducation.com/coursemaps/course.php/folders/1726039/overview?clid=5003200023617>. Grade 8 is an exemplar of teacher resources that provide guidance and support for engaging students in collaborative conversations using academic vocabulary.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number (s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Program Guide | Three Dimensional Learning | 8 | "in tan to make sense" | "in tandem to make sense" | Grammatical errors or misspellings |
| 2 | Program Guide | Progressive Learning | 9 | mid paragraph run on sentence? | n/a | Grammatical errors or misspellings |
| 3 | Program Guide | Integrated Engineering | 13 | "Student can also practice" | Students can also practice | Grammatical errors or misspellings |
| 4 | Program Guide | STEM Career Connections | 13 | multiple "Your Turn section of the feature." | delete one | Grammatical errors or misspellings |
| 5 | Program Guide | Formative Assessment | 22 | extra space after "formative assessments" | delete space | Grammatical errors or misspellings |
| 6 | Program Guide | LEARN SMART | 23 | Institution | instruction | Grammatical errors or misspellings |
| 7 | Program Guide | Vocabulary Check | 23 | Understand | understanding | Grammatical errors or misspellings |
| 8 | Program Guide | Digital Platform Support | 24 | repetitive "Step by step …" phrase | needs editing | Grammatical errors or misspellings |
| 9 | Program Guide | STEM Classroom Videos | 25 | "a real classrooms" | "a real classroom" | Grammatical errors or misspellings |
| 10 | Program Guide | Differentiated Instruction | 34 | grammar not consistent with other sections | revise | Grammatical errors or misspellings |
| 11 | Program Guide | ENCOUNTER THE PHENOMENON | 35 | throughout module | throughout the module | Grammatical errors or misspellings |
| 12 | Program Guide | STEM Module Project Launch | 36 | "STEM Module Project. Launch that introduces…" | needs a connection? | Grammatical errors or misspellings |
| 13 | Program Guide | Phase 2 box | 37 | sentence structure needs checking | sentence structure needs checking | Grammatical errors or misspellings |
| 14 | Program Guide | Explanatory Box | 39 | "may be clouding students’ thought process" may be judgmental | "may reveal students’ thought processes." | Consider other wording |
| 15 | Program Guide | Revised ClaimBox | 43 | period between "argument.to" | incomplete sentence needs editing? | Grammatical errors or misspellings |
| 16 | Program Guide | Inspiring Program Support | 48 | "California Environmental Principals | Principles | Grammatical errors or misspellings |
| 17 | Program Guide | STEM Module Project Planning | 49 | Finale | final | Grammatical errors or misspellings |
| 18 | Program Guide | STEM Module Project Planning | 50 | Learned | learning | Grammatical errors or misspellings |
| 19 | Program Guide | STEM Module Project Planning | 50 | they're | they are | Grammatical errors or misspellings |
| 20 | Program Guide | Students will Design their Model | 52 | Improves | improvements | Grammatical errors or misspellings |
| 21 | Program Guide | Complete the STEM Module Project | 53 | CCC | CCCs (consistency?) | Grammatical errors or misspellings |
| 22 | Program Guide | Digital Experience page | 55 | "This section will provide and overview." | "This section will provide an overview | Grammatical errors or misspellings |
| 23 | Program Guide | Launch Your Course | 56 | sentence structure needs checking | sentence structure needs checking | Grammatical errors or misspellings |
| 24 | 6 | TE: Inquiry Activity Planners for each unit | Throughout Units 1-4 in sixth grade, seventh grade, eighth grade | Inquiry Activity Planner charts for Modules “Materials included in the Collaboration Kits are listed in blue.” | Highlight materials in the chart that appear in the collaboration kits in blue in the materials’ columns. | Mislabeled materials in tables |
| 25 | 6 | Unit 1 TE and SE | Copyright | Glass fish paragraph Nervouse | nervous | Grammatical errors or misspellings |
| 26 | 6 | Unit 1 SE | iii | PhET Sims | PhET "Sims" or "SIMs" | Grammatical errors or misspellings |
| 27 | 6 | Unit 1 TE | iii | Top of page "Authentice" | Authentic | Grammatical errors or misspellings |
| 28 | 6 | Unit 1 TE | iii | Formative Assessments start each lesson Commonly help | commonly held | Grammatical errors or misspellings |
| 29 | 6 | Unit 1 TE | v | PhET Sims | PhET "Sims" or "SIMs" | Grammatical errors or misspellings |
| 30 | 6 | Unit 1 TE | 2D | end of paragraph PEformance | Performance | Grammatical errors or misspellings |
| 31 | 6 | Unit 1 TE | 2E | top of page students students | delete one | Grammatical errors or misspellings |
| 32 | 6 | Unit 1 TE | 2G-2H/54G-H | Materials…listed in blue. None of the items in the kit were listed as such | needs update | Grammatical errors or misspellings |
| 33 | 6 | Unit 1 TE | 6B | “Objective: Students will explore the characteristics of living things, learn about cthe ell theory, contrast unicellular and multicellular organisms, and understand different types of cells.” | Objective: Students will explore the characteristics of living things, learn about cell theory, contrast unicellular and multicellular organisms, and understand different types of cells. | Grammatical errors or misspellings |
| 34 | 6 | Unit 1 TE | 18 | About California paragraph missing some words? | needs update | Grammatical errors or misspellings |
| 35 | 6 | Unit 1 TE | 19 | Paragraph under heading "while other are made up…" | "while others are made up…" | Grammatical errors or misspellings |
| 36 | 6 | Unit 1 TE | 20 | Before You Begin, pages 18-20 | pages 20-22 | Grammatical errors or misspellings |
| 37 | 6 | Unit 1 TE | 20 | top ASK paragraph stundets | students | Grammatical errors or misspellings |
| 38 | 6 | Unit 1 TE | 27 | Online Assessment Center tesson | lesson | Grammatical errors or misspellings |
| 39 | 6 | Unit 1 TE | 27 | “You can assign the premade lesson check, which is based on the Disciplinary Core Ideas for the lesson, or you can customize your own tesson check using the customization tool.” | You can assign the premade lesson check, which is based on the Disciplinary Core Ideas for the lesson, or you can customize your own lesson check using the customization tool. | Grammatical errors or misspellings |
| 40 | 6 | Unit 1 TE | 29 | Arnold, 1983) | (Arnold, 1983) | Grammatical errors or misspellings |
| 41 | 6 | Unit 1 TE | 2C | n/a | Provide information in progression map about where prior knowledge/ experience of cell function originates for K-5 curricula? | Provide more information |
| 42 | 6 | Unit 1 TE | 42 | CCC Structure and Function "microscope of visualize" | microscope to visualize | Grammatical errors or misspellings |
| 43 | 6 | Unit 1 TE and SE | 42 | Lab Procedure 4 dislike | "disc like" or "disk like" | Grammatical errors or misspellings |
| 44 | 6 | Unit 1 TE | 47 | Three Dimensional Thinking, #3 answer: is that correct? | A is the correct answer: pbslearningmedia.org | Simple factual error |
| 45 | 6 | Unit 1 TE | 54 | “Go online to see STEM Connections, a diverse selection of diverse people and groups that have made important contributions to society through science and technology.” | Go online to see STEM Connections, a selection of diverse people and groups that have made important contributions to society through science and technology. | Grammatical errors or misspellings |
| 46 | 6 | Unit 1 TE | 55 | First paragraph "such circulation" | "such as circulation" | Grammatical errors or misspellings |
| 47 | 6 | Unit 1 TE | 69 | “Students should take care when handling glue. Using too much will increase the time sustantially.” | Students should take care when handling glue. Using too much will increase the time substantially. | Grammatical errors or misspellings |
| 48 | 6 | Unit 1 TE | 75 | Is Muscle Alive? Story Akhim/Bao in student text; Alan/Bertha in teacher's text | needs update | Grammatical errors or misspellings |
| 49 | 6 | Unit 1 TE and SE | 89 | Cardiac Muscle paragraph, "they pump blood through and your heart…" | "they pump blood through your heart…" | Grammatical errors or misspellings |
| 50 | 6 | Unit 1 TE | 93 | After You Read "biotic" | "bionic" | Grammatical errors or misspellings |
| 51 | 6 | Unit 1 TE | 93 | “For instance, in 2015, DARPA, the United States Defense Advanced Research Projects Agency revolutionized bionic prosthetics by creating a bionic hand that is not only controlled by the brain, but enables user to “feel” and sense if the hand is touching something, or being touched.” | For instance, in 2015, DARPA, the United States Defense Advanced Research Projects Agency, revolutionized bionic prosthetics by creating a bionic hand that is not only controlled by the brain, but enables the user to “feel” and sense if the hand is touching something, or being touched. | Grammatical errors or misspellings |
| 52 | 6 | Unit 1 TE and SE | 97 | "molecules of protein" 2x | delete one | Grammatical errors or misspellings |
| 53 | 6 | Unit 1 TE and SE | 97 (TE picture of SE), 97 (SE) | Word list in column 2: “molecules of protein” | Eliminate (already in column 1) | Grammatical errors or misspellings |
| 54 | 6 | Unit 1 TE | 99 | “Revisit the question as you cover its relevant.” | Revisit the question as you cover its relevant content. | Grammatical errors or misspellings |
| 55 | 6 | Unit 1 TE | 100 | is carbon dioxide a waste product of photosynthesis? | is carbon dioxide a waste product of photosynthesis? | Grammatical errors or misspellings |
| 56 | 6 | Unit 1 TE | 102 | “Gently swirl the test tube at an over the flame until the marshmallow completely burns and the water boils.” | Gently swirl the test tube at an angle over the flame until the marshmallow completely burns and the water boils. | Grammatical errors or misspellings |
| 57 | 6 | Unit 1 TE | 103 | Procedure, second bullet: As a extension | As an extension | Grammatical errors or misspellings |
| 58 | 6 | Unit 1 TE | 117 | Suggested Materials (2or more) | (2 or more) - needs a space | Grammatical errors or misspellings |
| 59 | 6 | Unit 1 TE | 117 | ASK paragraph extra period at end of paragraph | needs update | Grammatical errors or misspellings |
| 60 | 6 | Unit 1 TE | 123 | First paragraph "cartilages rings" | "cartilaginous rings" (please check) | Grammatical errors or misspellings |
| 61 | 6 | Unit 1 TE and SE | 152 | math error? 1372/343 = 4 s; 1029/343 = 3 s | needs update | Simple factual error |
| 62 | 6 | Unit 1 TE | 166 | Planning after lesson: Sample Answers to question 1 and 2 are misaligned. | Switch sample answers so that sample answer #2 is underneath question 1 and sample answer #1 is underneath question 2 | Mislabeled pictures or objects |
| 63 | 6 | Unit 2 TE | Iii | Top of page "Authentice" | Authentic | Grammatical errors or misspellings |
| 64 | 6 | Unit 2 TE | Iii | Formative Assessments start each lesson commonly-help | commonly held | Grammatical errors or misspellings |
| 65 | 6 | Unit 2 TE | 2G-2H | Materials…listed in blue: none of the items in the kit were listed as such | needs update | Grammatical errors or misspellings |
| 66 | 6 | Unit 2 TE | 55 | Guide the Activity: "different birds nests" | possessive or adjective? | Grammatical errors or misspellings |
| 67 | 6 | Unit 2 TE | 56 | Extension: "the improved design the see…" | the improved design to see…" | Grammatical errors or misspellings |
| 68 | 6 | Unit 2 TE | 65 | Second paragraph: naïve | n/a | May be judgmental |
| 69 | 6 | Unit 2 TE and SE | 72 | Caption on picture “hens, chicks, stolon | Use vocabulary that is in the lesson. There is no reference to asexual reproduction in the lesson. Use a picture that shows pollination. | Change of picture or object |
| 70 | 6 | Unit 2 TE | 75 | Expanding level paragraph, third and fourth rows | second and third rows | Grammatical errors or misspellings |
| 71 | 6 | Unit 2 TE and SE | 78 | Under gravitropism–stems grow away from gravity | stems grow away from the pull of gravity (gravity is a force not a thing) | Simple factual error |
| 72 | 6 | Unit 2 TE and SE | 82 | Plan and create section, such the | such as the | Grammatical errors or misspellings |
| 73 | 6 | Unit 2 TE | 83 | Second to last bullet item, "will incorporated" | "will be incorporated" | Grammatical errors or misspellings |
| 74 | 6 | Unit 3 TE | iii | Top of page "Authentice" | Authentic | Grammatical errors or misspellings |
| 75 | 6 | Unit 3 TE | iii | Formative Assessments start each lesson commonly-help | commonly held | Grammatical errors or misspellings |
| 76 | 6 | Unit 3 TE | 2G–2H | Materials… listed in blue: none of the items in the kit were listed as such | needs update | Grammatical errors or misspellings |
| 77 | 6 | Unit 3 TE | 2J | Cookin' with the Sun paragraph | Should the questions be italicized? | Grammatical errors or misspellings |
| 78 | 6 | Unit 3 TE | 6A, 30A, 54A | MS-PS3-5 Construct, use and present arguments to support the claim that either when the kinetic energy of an object changes, energy is transferred to or from the object. | MS-PS3-5 Construct, use and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object. | Misquoted content standards |
| 79 | 6 | Unit 3 TE | 7 | Before You Begin: Why should you put the metal blocks into the refrigerator? | Teacher Notes, p.16 | Grammatical errors or misspellings |
| 80 | 6 | Unit 3 TE and SE | 13 | Short answer section: "What can you conclude about adding energy to the liquid on the left…. | Confusing? The picture on the right has the added energy. | Simple factual error |
| 81 | 6 | Unit 3 TE | 20 | Top paragraph "like particles in a liquid or solid" | "like particles in a liquid or gas" | Grammatical errors or misspellings |
| 82 | 6 | Unit 3 TE | 25 | SEP box: accounts | account | Grammatical errors or misspellings |
| 83 | 6 | Unit 3 TE and SE | 29 | Student Page: However, they disagreed about which differencFes determine whether the matter is a solid, liquid, or gas | However, they disagreed about which differences determine whether the matter is a solid, liquid, or gas. | Grammatical errors or misspellings |
| 84 | 6 | Unit 3 TE | 29 | Second paragraph: last sentence "gases do not have a definite shape or volume." | Gases do have volume. | Simple factual error |
| 85 | 6 | Unit 3 TE | 29 | Third paragraph Students who select William also misattributing the macroscopic properties to the particles. | Students who select William also are misattributing the macroscopic properties to the particles. | Grammatical errors or misspellings |
| 86 | 6 | Unit 3 TE and SE | 44 | The circle showing liquid particles is above the line in the diagram | Diagram is confusing. Put the particles below the line | Change of picture or object |
| 87 | 6 | Unit 3 TE | 54 | EL Support box p.52 | p.54 | Grammatical errors or misspellings |
| 88 | 6 | Unit 3 TE | 59 | Analyze and Conclude: "the water in the 250 ml beaker increased" | decreased | Simple factual error |
| 89 | 6 | Unit 3 TE | 59 | Data table: Water in 500mL beaker | Water in 250mL beaker | Grammatical errors or misspellings |
| 90 | 6 | Unit 3 TE and SE | 70 | Keep Planning box: "en" | "an" | Grammatical errors or misspellings |
| 91 | 6 | Unit 3 TE | 72B | Science Probe: It It | Is the | Grammatical errors or misspellings |
| 92 | 6 | Unit 3 TE | 72B | Science Probe: It the cup hot? | Science Probe: Is the cup hot? | Grammatical errors or misspellings |
| 93 | 6 | Unit 3 TE and SE | 77 | Item 10, above the graph: time on the horizontal axis | mass on the horizontal axis | Simple factual error |
| 94 | 6 | Unit 3 TE | 81 | Student answer key. Text under the table in red: A glass dish would require more energy to heat up because it has a higher specific heat. The metal pan would cool down the fastest because it has a low specific heat. | Omit text answer does not match question asked of students | Mislabeled pictures or objects |
| 95 | 6 | Unit 3 TE and SE | 88 | Mass box: As mass increases, …thermal energy is needed to rise the temperature of the material. | As mass increases, …thermal energy is needed to raise the temperature of the material. | Grammatical errors or misspellings |
| 96 | 6 | Unit 3 TE | 89 | Question 4: no response or answer given for the teacher | needs update | Information omitted |
| 97 | 6 | Unit 3 TE | 100G | Materials…listed in blue: none of the items in the kit were listed as such | needs update | Grammatical errors or misspellings |
| 98 | 6 | Unit 3 TE | 100I | Beyond Level box aslo | also | Grammatical errors or misspellings |
| 99 | 6 | Unit 3 TE/SE | 101 | n/a | ESS 2-4 | Maintain continuity at the beginning of the each phenomena with the PE(s) that are covered in the module. The water cycle has its own module at least show the PE for it in the upper corner like you did on the others. |
| 100 | 6 | Unit 3 TE and SE | 116 | Three Dimensional Thinking box: liquid water to water vapor | water vapor to liquid water (condensation?) | Simple factual error |
| 101 | 6 | Unit 3 TE | 121 | Last paragraph: Students who have this conception will choose wither Mom’s or Dad’s response. | Students who have this conception will choose either Mom’s or Dad’s response. | Grammatical errors or misspellings |
| 102 | 6 | Unit 3 TE | 122B | Environmental box: precipiation | precipitation | Grammatical errors or misspellings |
| 103 | 6 | Unit 3 TE | 142G | Materials… listed in blue: none of the items in the kit were listed as such | needs update | Grammatical errors or misspellings |
| 104 | 6 | Unit 3 TE | 150 | Paragraph under the DCI box: Tell student… | Tell students | Grammatical errors or misspellings |
| 105 | 6 | Unit 3 TE | 154 | Materials section tempreature | temperature | Grammatical errors or misspellings |
| 106 | 6 | Unit 3 TE | 155 | Analyze and Conclude proposed response: are the statements contradictory? | needs update | Simple factual error |
| 107 | 6 | Unit 3 TE | 174 | DCI ESS2.D section: Students use a model investigate | Students use a model to investigate | Grammatical errors or misspellings |
| 108 | 6 | Unit 3 TE | 177 | Physical Science Connection: conduction | convection | Grammatical errors or misspellings |
| 109 | 6 | Unit 3 TE | 188 | First bullet item p. 47 | p. 189 | Grammatical errors or misspellings |
| 110 | 6 | Unit 3 TE | 211 | Cold Front box: Pushed | pushes | Grammatical errors or misspellings |
| 111 | 6 | Unit 3 TE | 244 | second Ask box: doe | does | Grammatical errors or misspellings |
| 112 | 6 | Unit 3 TE | 249A | Last paragraph; four lines: migration mightnot be Diverting water | missing word? | Grammatical errors or misspellings |
| 113 | 6 | Unit 3 TE | 253 | Second to last paragraph: enery | energy | Grammatical errors or misspellings |
| 114 | 6 | Unit 4 TE | Iii | Formative Assessments start each lesson: commonly-help | commonly held | Grammatical errors or misspelling |
| 115 | 6 | Unit 4 TE | Iii | Top of page "Authentice" | Authentic | Grammatical errors or misspelling |
| 116 | 6 | Unit 4 TE | 2G-2H | Materials… listed in blue: none of the items in the kit were listed as such | needs update | Grammatical errors or misspelling |
| 117 | 6 | Unit 4 TE | 3 | First paragraph: part | parts | Grammatical errors or misspelling |
| 118 | 6 | Unit 4 TE | 10 | About California: Salinus | Salinas | Grammatical errors or misspelling |
| 119 | 6 | Unit 4 TE | 13 | paragraph under the DCI box the the | the | Grammatical errors or misspelling |
| 120 | 6 | Unit 4 TE | 13 | data table math calculations: amount remaining is not lost | Subtract and calculate % lost or change "lost" to "remaining" | Simple factual error |
| 121 | 6 | Unit 4 TE and SE | 19 | Whole page: Wetland or Wetlands used interchangeably? | Whole page: Wetland or Wetlands used interchangeably? | Grammatical errors or misspelling |
| 122 | 6 | Unit 4 TE | 20 | second Ask box: Ask: What are some serives that living organisms provide to humans in urban environments? | Ask: What are some services that living organisms provide to humans in urban environments? | Grammatical errors or misspellings |
| 123 | 6 | Unit 4 TE | 27 | Item 10 response: "dependent variable on the horizontal axis" | "independent variable on the horizontal axis" | Mislabeled pictures or objects |
| 124 | 6 | Unit 4 TE | 29A | Background information; first line: sentence structure? | needs update | Grammatical errors or misspelling |
| 125 | 6 | Unit 4 TE | 29A | In El Segundo, not are jobs and housing unbalances, but they are widely separated within the city. | In El Segundo, jobs and housing are widely separated within the city. | Grammatical errors or misspellings |
| 126 | 6 | Unit 4 TE | 35 | Response box: inclued | included | Grammatical errors or misspelling |
| 127 | 6 | Unit 4 TE | 39B | Changes in laws that require retrofits to allow fish to pass resulted in the formation of plan to remove four dams on the Klamath River by 2020. | Changes in laws that require retrofits to allow fish to pass resulted in the formation of a plan to remove four dams on the Klamath River by 2020. | Grammatical errors or misspellings |
| 128 | 6 | Unit 4 TE | 44 | About California: Califormina's | California's | Grammatical errors or misspelling |
| 129 | 6 | Unit 4 TE | 46 | Differentiated Instruction box: indentifying | identifying | Grammatical errors or misspelling |
| 130 | 6 | Unit 4 TE | 51 | As students read about of the gyre, tell them that gyres are circular systems of surface ocean currents. Explain that the North Pacific Gyre is just one the circular systems in the oceans. | As students read about the gyre, tell them that gyres are circular systems of surface ocean currents. Explain that the North Pacific Gyre is just one of these circular systems in the oceans. | Grammatical errors or misspellings |
| 131 | 6 | Unit 4 TE | 51 | Remind students record their observations from the labs and investigations in this section as evidence in the Claim/Evidence/Reasoning graphic organizer on the Explain the Phenomenon pages at the beginning of the lesson. | Remind students to record their observations from the labs and investigation in this section as evidence in the Claim/Evidence/Reasoning graphic organizer on the Explain the Phenomenon pages at the beginning of the lesson. | Grammatical errors or misspellings |
| 132 | 6 | Unit 4 TE | 87 | Item 3 response: Earths | Earth | Grammatical errors or misspellings |
| 133 | 7 | Online | n/a | Under Performance Expectations at a Glance- Correlations, second column. Missing the s in states of matter | States of matter | Grammatical errors or misspellings |
| 134 | 7 | Unit 1 TE | 33 | Students will apply scientific reasoning as they construct explanations to show why their evidence supports their claim about why clouds appear and disappear. | Students will apply scientific reasoning as they construct explanations to show why their evidence supports their claim about the effect changing temperature has on substances. | Simple factual error |
| 135 | 7 | Unit 1 TE | 40 | Thermal energy always transfers from a region of lower temperature to a region of lower temperature. | Thermal energy always transfers from a region of higher temperature to a region of lower temperature. | Simple factual error |
| 136 | 7 | Unit 1 TE | 55 | Students’ explanations will alert you to the need to make sure instruction builds a bridge between the students’ initial ideas pressure to the correct scientific understanding of how area and force are related to pressure. | Students’ explanations will alert you to the need to make sure instruction builds a bridge between the students’ initial ideas about pressure to the correct scientific understanding of how area and force are related to pressure. | Grammatical errors or misspellings |
| 137 | 7 | Unit 1 TE | 67 | States as pressure goes up liquid changes to gas | Should be gas goes to liquid | Simple factual error |
| 138 | 7 | Unit 1 TE and SE | 101 | B. the relationship between pressure and pressure | B. the relationship between pressure and temperature | Simple factual error |
| 139 | 7 | Unit 1 TE | 111 | Answer in red: It they are given pyrite some characteristics of note are: | If they are given pyrite some characteristics of note are: | Grammatical errors or misspellings |
| 140 | 7 | Unit 1 TE and SE | 127 | 9. Return to your predations before the lab. | 9. Return to your predictions before the lab. | Grammatical errors or misspellings |
| 141 | 7 | Unit 1 TE | 136 | 4. Answer in red: You could then compare the density of the crystal to the emerald of diamond to see if they are the same. If they are not the same the crystal is not an emerald. | You could then compare the density of the crystal to the emerald to see if they are the same. If they are not the same, the crystal is not an emerald | Grammatical errors or misspellings |
| 142 | 7 | Unit 1 TE and SE | 172 | Incorrect arrows on diagram. Arrow from ants to butterflies | Arrows from dead fruit and flowers to butterflies (butterflies don’t get energy from ants or give energy to dead fruit) | Mislabeled pictures or objects |
| 143 | 7 | Unit 2 TE | 65 | How did they arrive at the answer? | Check math calculation | Simple factual error |
| 144 | 7 | Unit 2 TE | 116 | Students may think that rocks are too strong to bent or deform | Students may think that rocks are too strong to bend or deform | Grammatical errors or misspellings |
| 145 | 7 | Unit 2 TE | 198 | Listed circumference | Question asks for area | Simple factual error |
| 146 | 7 | Unit 3 TE | 102A | Under “Highlighted CA Environmental Principles and Concepts,” Principle 2: by there relationships | by their relationships | Grammatical errors or misspellings |
| 147 | 7 | Unit 3 Online | STEM Connec-tions | “Saving the Ozone” article. Article repeatedly refers to Dr. Sherwood. | He should be addressed as Dr. Rowland. Sherwood is his first name. His full name is Dr. Sherwood Rowland. | Simple factual error |
| 148 | 7 | Unit 4 TE and SE | 20 | 6O2 on the right side of cellular respiration formula | 6CO2 | Grammatical errors or misspellings |
| 149 | 7 | Unit 4 TE and SE | 152 | Under first bullet, bread baskets | Are a natural carbon sink (being a “bread basket” is not a natural part of the ecosystem | Simple factual error |
| 150 | 7 | Unit 4 TE and SE | 152 | Second bullet under grasslands: Names introduced plants | Name native plants like rye grass, buffalo grass, wild oats, foxtail (describe the native biome) | Simple factual error |
| 151 | 7 | Unit 4 TE and SE | 154 | Second bullet under Taiga: Due to colder temperatures reptiles and amphibians cannot survive. | Due to colder temperatures fewer reptiles and amphibians can survive. | Simple factual error |
| 152 | 7 | Unit 4 TE and SE | 154 | Third bullet under Tundra: Reptiles and amphibians are absent | Reptiles and amphibians are rare (there are 5 types of amphibians and one reptile in the Arctic) | Simple factual error |
| 153 | 7 | Unit 4 TE and SE | 154 | Under first bullet: just is | is just | Grammatical errors or misspellings |
| 154 | 8 | Unit 1 TE and SE | 39 | Under question #1, Would you expect find | Would you expect to find | Grammatical errors or misspellings |
| 155 | 8 | Unit 1 TE | 109A | The study cited “Regenerative Organic Agriculture and Climate Change: A Down-to-Earth Solution to Global Warming,” was conducted by the Rodale Institute documents. | The study cited “Regenerative Organic Agriculture and Climate Change: A Down-to-Earth Solution to Global Warming,” was conducted by the Rodale Institute. | Grammatical errors or misspellings |
| 156 | 8 | Unit 1 TE | 157 | SEP- Students analyze an interpret data to determine… | Students analyze and interpret data to determine… | Grammatical errors or misspellings |
| 157 | 8 | Unit 2 TE | 111 | When you double the speed with constant mass, the kinetic energy quadruples (22 = 2). | When you double the speed with constant mass, the kinetic energy quadruples. | Simple factual error |
| 158 | 8 | Unit 2 TE | 131 | What is the difference between an rubber band at rest that is stretched to its maximum and an rubber band at rest that is completely slack? | What is the difference between a rubber band at rest that is stretched to its maximum and a rubber band at rest that is completely slack? | Grammatical errors or misspellings |
| 159 | 8 | Unit 2 SE | 146 | What types of energy does an object have it is both moving and off the ground? | What types of energy does an object have as it is both moving and off the ground? | Grammatical errors or misspellings |
| 160 | 8 | Unit 4 TE and SE | 41A | Describing abalone: It is generally eaten raw. | It is generally eaten cooked. (In CA, abalone is rarely eaten raw. It is usually cooked like a steak- much like squid.) | Simple factual error |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | A.1 | 8 | SE | 215 | Picture of girl taking clothes out of a dryer with pink socks | Change picture to be of a man/ different color socks | Stereotypical action for a woman to be doing laundry and having pink socks |

### National Geographic Learning, a division of Cengage Learning, Inc., *National Geographic Exploring Science*, Grades K–6 (integrated)

#### Program Summary:

National Geographic Exploring Science includes: Earth Science Big Book (EBB); Life Science Big Book (LBB); Physical Science Big Book (PBB); Let’s Do Science Big Book (DBB); Teacher’s Edition (TE); Student Edition (SE). Additional components include the Assessment Handbook, Science Notebook Companion, and the Exploring Science Through Literacy Readers. The program is available in print and digital formats.

#### Recommendation:

National Geographic Exploring Science is recommended for adoption for K–6i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1: Grade K, TE pp. T32–T44; Grade 1, TE pp. 97a–97c; Grade 2, TE pp. 45e–45f; Grade 3, TE pp. T32–T40; Grade 4, TE pp. 109a–109c; Grade 5, TE pp. T32–T48; Grade 6, TE pp. 39a–39d. We found numerous exemplars of the standards being fully covered in kindergarten and grade three.
* Criterion #1.5: Grade K, TE Life Science pp. 27a–27d. The material demonstrates support for instructional opportunities and assessments that engage students in three dimensional learning.
* Criterion #1.11: Grade 3, TE pp. 40–41; Grade 5, TE pp. 126–128; Grade 5, SE pp. 30–31 and pp. 124–125. The materials show many different demographic groups which are represented throughout its resources with examples of people who used their context, learning, and intelligence to make important contributions to society.
* Criterion #1.12: Grade 4, TE p. 55c. The material shows grade level linkages with California Common Core.
* Criterion #1.14: Grade 1, TE pp. 171a–d. The material shows differentiated instruction for students with disabilities, English Language Learners and building academic vocabulary for all students.
* Criterion #1.15: Grade 2, TE p. 37c. The material demonstrates the inclusion of environmental principles and concepts within the instructional resources.
* Criterion #1.18: Grade 2, TE p. 7b; Grade 6, SE pp. 86–87 and pp. 158–161. The material demonstrates the application of science in the development of engineering and technology.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.2: Grade 4, TE p. 23a and Grade 3, TE p. 15b. The materials contain teacher questions around a phenomenon to help students make sense.
* Criterion #2.4: Grade 5, TE p. 91b, Teach the Dimensions. The material provides support to engage students in three-dimensional learning.
* Criterion #2.6: Grade 2, TE pp. T32–T44 and Grade 3, TE pp. T32–T47. The materials show the organization of content and provide all students an opportunity to achieve skills and knowledge.
* Criterion #2.14: Grade 1, TE pp. 137a–137b. The material provides self-assessment for students as a culminating end of unit activity.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3.1: Grade K, Assessment Handbook, pp. 36–58. The material shows that assessments stress performance tasks rather than rote memorization.
* Criterion #3.3: Grade 6, TE p. 13b, p. 23, p. 121b. The material has formative assessment questions that support three-dimensional learning.
* Criterion #3.4: Grade 2, Assessment Handbook, pp. 3–6. The material provides a brief formative assessment to elicit current understandings and preconceptions to provide evidence of student progress toward mastering three-dimensional learning of the CA NGSS and CA Science Framework.
* Criterion #3.7: Grade 4, Assessment Handbook, pp. 58–60. The material provides rubrics with a scaled score of 0–3 to score student work.
* Criterion #3.9: Grade 5, Assessment Handbook, pp. 52–86. The material provides resources that include student work expectations and analytical rubrics for scoring.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provides teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.1: Grade 3, TE p. 93c. The material provides specific instructional connections for differentiated instruction tailored specifically for challenges or opportunities that might arise for specific populations.
* Criterion #4.2: Grade 5, TE p. 105a and Grade 1, TE pp. T10–T15. The material includes research based strategies to address the needs of English Language Learners consistent with the CA ELD standards.
* Criterion #4.3: Grade 4, TE p. 17a. The material incorporates instructional strategies to address the needs of students with disabilities.
* Criterion #4.4: Grade 6, TE p. 29b, p. 155b, p. 95b. The material provides strategies for working with a diverse group of students.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.1: Grade 6, TE pp. 9a–9b and pp. 89a–89c. The material provides pacing guides for instructional units.
* Criterion #5.2: Grade 3, TE pp. 167a–167c. The material provides estimated instructional time with resources for implementation of SEPs and engineering design projects.
* Criterion #5.11: Grade 4, TE pp. 113a–113b and Grade 2, TE p. 45b. The materials connect to and support the goals of the CA CCSS for Math and English Language Arts.
* Criterion #5.15: Grade K, TE Life Science, p. 11a and Grade 3, TE p. 143a. The materials show examples of the program providing background information on diverse people.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | K | Assessment Handbook | 30 | Which is a push?   1. Opening a window 2. Closing a window | Provide an image to clarify if window opens side to side, out, up, crank, button etc. | Imprecise definition |

#### Social Content Citations: None

### Pearson Education Inc., *California Elevate Science*, Grades K–6

#### Program Summary:

California Elevate Science includes: Student Edition (SE), Teacher Edition (TE), Additional Resources (AR), California Engineering Design Notebook, (CA EDN).

#### Recommendation:

California Elevate Science is recommended for adoption for K–6 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade K, SE/TE pp. 50–55, California Spotlight: Instructional Segment 2: How Can People Throw Away Less Food?; Grade 1, SE/TE p. 140, uConnect Lab: What do you need to see objects?; Grade 2, SE/TE p. 199, uInvestigate Lab: How can you model how animals spread seeds?; Grade 3, SE/TE pp. 250–253, Lesson 2, Seasonal Weather Changes; Grade 4, SE/TE pp. 340-341, Quest Check-In Lab: How can you send a message with light?; Grade 5, SE/TE p. 52, STEM uConnect Lab: What happens to mass when objects are mixed?

These are exemplars of SEPs, CCCs, and DCIs being integrated to meet the PEs as expressed in the CA NGSS for kindergarten through grade five.

* Criterion #4: Grade 1, SE pp. 94–129, TE pp. 94A–129, Topic 3: Sound. This exemplar is evidence of instructional resources that progressively build students’ abilities to meet the performance expectations.
* Criterion #9: Grade 5, SE/TE pp. 198–203, California Spotlight: Instructional Segment 3: How Can Scientists Solve Water Storage Problems? This exemplar illustrates the use of authentic and meaningful real-world applications and scenarios.
* Criterion #13: Grade 1, SE/TE p. 56, Life Cycle of a Plant. This curriculum provides support for students to develop discipline-specific vocabulary through their use in context in classroom discourse around science phenomena.
* Criterion #20: Grade K, TE p. 61, p. 83; Grade 3, SE p. 216, p. 252, p. 296; Grades K–5, TE Connect to Nature of Science sections and SE Reflect sections. These provide opportunities for reflection on the nature and history of science.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grade K, SE pp. vi–x; Grade 1, SE pp. vi–x; Grade 2, SE pp. vi–xi; Grade 3, SE pp. vi–xi; Grade 4, SE pp. vi–xiii; Grade 5, SE pp. xi–xiv. The examples provide evidence in all grades where the sequential organization of the material provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
* Criterion #3: Grade K, Additional Resources> Assessment> Topic 1> Diagnostic Test, TE 140E–140F, 140 (Storyline); Grade 2, Additional Resources> Assessment> Topic 4> Diagnostic Test, TE 130 (Storyline); Grade 4, Additional Resources> Assessment> Topic 1> Diagnostic Test, TE pp. 6E–6F (Topic 1 Next Generation Learning Progressions, 6 (Storyline); Grade 5, Additional Resources> Assessment> Topic 1> Diagnostic Test, TE pp. 48E–48F (Topic 2 NGSS Learning Progression). The examples show instructional resources that explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.
* Criterion #4: Grade K, TE pp. 2–3 (Promote Collaborative Conversations), p. 109 (Differentiated Instruction), p. 124 (Jumpstart Discovery); Grade 1, TE p. 58, p. T117, Additional Resources> Assessment> Performance Based Assessment 4, Additional Resources> Digital Activities and Videos> PD Modeling Video Sky and Earth, 102 (Scaffolded Questions), p. 177 (Promote Student Discourse), p. 102 (Preconceptions); Grade 3, TE pp. 298–299 (Focus on Mastery for #2, #3), p. T17, Additional Resources> Assessment> Performance Based Assessment 3, Additional Resources> Digital Activities and Videos: PD Modeling Video Living Things and Their Environments. The examples provide evidence that teacher resources provide support to engage students in three-dimensional learning and suggests research-based strategies to elicit student thinking and support student discourse.
* Criterion #9: Grade 1, Additional Resources> Digital Activities and Videos> Topic 1 Lesson Video Animal Parts, Topic 1 Lesson Video Where Plants and Animals Live, Additional Resources> Probeware Labs> Elementary Science with Vernier, Grade 1 Sample Probeware Labs; Grade 3, Additional Resources> Virtual Labs: Topic 1 Chart a Safe Course, Topic 2 Make It Move, Topic What Will It Look Like?, Additional Resources> Probeware Labs: Elementary Science With Vernier Probeware Labs, TE 52 (Professional Learning), TE p. 138 (Using Phenomena); Grade 4, Additional Resources> Virtual Labs: Topic 1 Propeller Speed and Thrust, Topic 4 Withstanding Earth’s Natural Hazards, Topic 6 Layers of Time, Additional Resources> Probeware Labs: Elementary Science with Vernier, Grade 4 Sample Probeware Labs. There is evidence in Grades K–5 resources that encourage the meaningful use of technologies such as video clips or computer simulations to investigate phenomena that cannot be directly experienced in the classroom. In these contexts, the materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.
* Criterion #10: Grade K, Additional Resources> Digital Activities and Videos: Topic 1 uEngineer It! Interactivity Build an Animal Shelter, Topic 3 Quest Findings Interactivity Keep it Cool; Grade 2, SE pp. 26–27, p. 109, p. 134, TE p. 115 (Address Applications of Science), pp. 226–227, p. 235; Grade 4, TE p. 302, p. 144, p. 369, Additional Resources> Virtual Labs: Topic 7 Call the Galactic; Grade 5, Additional Resources> Quests> Topic 2 Quest: Find the Right Mix and Step On It!, TE p. 60, p. 102. The examples provide evidence of resources that suggest appropriate engineering design tasks in varied contexts as a path to understanding and applying the science ideas being learned.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provide guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1: Grade 1, SE pp. 126–127, Additional Resources> Assessment> Performance Based Assessment 1 What can people learn from plants and animals to solve problems?, Performance Based Assessment 2 How do sounds made from different materials compare?; Grade 4, SE pp. 52–53, Additional Resources> Performance Based Assessment 1 Does height affect final speed of a falling object?, Performance Based Assessment 2 Does the steepness of a hill affect erosion?; Grade 5, SE pp. 98–99, Additional Resources> Assessment: Performance Based Assessment 2 Where does the matter that builds plants come from?, Performance Based Assessment 3 Can processes that provide freshwater affect the environment?

The resources provide evidence of assessments in the instructional resources that reflect the three-dimensional nature of the CA NGSS and CA Science Framework. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS. Assessments stress performance tasks rather than rote memorization.

* Criterion #3: Grade K, TE p. 16, p. 66, p. 118 (Scaffolded Questions), Additional Resources> Assessment: Topic 3 Lesson 1 Quiz The Sun, Topic 5 Lesson 1 Quiz Change in Movement; Grade 1, TE p. 14, p. 56, p. 102, Additional Resources> Assessment: Topic 5 Lesson 3 Quiz Daylight Changes and Seasons; Grade 3 TE p. 255, p. 199, p. 114 (Scaffolded Questions), Additional Resources> Assessment: Topic 3 Lesson 1 Quiz Life Cycles; Grade 4, TE p. 277, p. 255, p. 387 (Scaffolded), Additional Resources> Assessment: Topic 4 Lesson 1 Tectonic Hazards.

The resources provide evidence that includes teacher materials that provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.

* Criterion #6: Grade K, Additional Resources> Assessment: Diagnostic Test 1, 2, and 3, TE p. 16, p. 66, p. 118 (Scaffolded Questions); Grade 3, TE p. 137, p. 185 (Activity Card Extension) Topic 6 What can barometric pressure tell you?, Topic 4 How well will the rabbit survive?, Additional Resources> Assessment: Diagnostic Test 5; Grade 4 TE p. 163, p. 267, p. 407 (Activity Card) Topic 3 How can you identify minerals?

The examples provide evidence of teacher resources that supply a differentiated path for diverse students to build toward the PEs of the CA NGSS. In particular, formative assessment tasks are designed to support teachers in collecting and analyzing data about student conceptual understanding.

* Criterion #10: Grade K, SE pp. 26–27, pp. 154–155, pp. 210–211 (engineering design), SE p. 94, p. 132, p. 222 (open-ended), TE p. 69 (Quest Check-In), SE p. 91 (oral presentations); Grade 3, SE pp. 26–27, pp. 60–61, pp. 114–115, Additional Resources> Performance Based Assessment 3 How can an animal survive?, Additional Resources> Assessment: End of Year Assessment. The examples provide evidence that contains assessment tools that include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short-answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade K, Additional Resources> UDL Rubric; SE pp. 12–13, p. 84, p. 164, TE p. 20, p. 50, p. 185. The instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grade 1, TE p. 12, p. 158, p. 189; Grade 5, TE p. 12, p. 223, p. 272. The resources address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3: Grade 2, TE p. 12 (Jumpstart Discovery!); p. 244 (Show What You Learned); p. 2, p. 45, p. 135, p. 203 (Differentiated Instruction). These instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate.
* Criterion #4: Grade 3, TE pp. T20–T27, p. 166, p. 284; Grade 4, TE pp. T20–T27, p. 18, p. 138. These resources supply a differentiated path for all students. They include guidance to support students with special needs, including: standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities, and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematical skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #1: Grade 1, TE pp. T38–T39 (Scope and Sequence), pp. T40–T41 (Pacing Guide), pp. 12A–12B, pp. 18A–18B, pp. 26A–26B, pp. 32A–32B (Lesson Planner). These program resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.
* Criterion #4: Grade 2, TE pp. 6E–6F, pp. 48E–48F, pp. 90E–90F (Learning Progressions), Additional Resources> Assessment> Diagnostic Test 1, Diagnostic Test 2, Diagnostic Test 3. The program resources address three-dimensional learning by identifying the knowledge and skills learned in prior grades and prior grade level units. In addition, they address how to connect and build on these learnings to help students develop increasingly sophisticated ideas.
* Criterion #8: Grade 2, TE pp. T8–T13, pp. T14–T37. Teacher resources include a planning guide describing the relationship between the components of the program and how to use all of the components to meet all of the CA NGSS.
* Criterion #15: Grade 4, TE p. 57 (Focus on California), p. 83 (Notable Californians), p. 113 (Focus on California), p. 295 (Focus on California), p. 186 (Notable Californians). These teacher resources provide background information about important events, diverse people, places, ideas, and scientific principles appearing in, but not limited to, the CA NGSS and the CA Science Framework.
* Criterion #21: Grade 5, TE pp. T18–T19, p. 90, p. 266 (Interpersonal and Collaborative Skills). The teacher resources provide guidance and support for engaging students in collaborative conversations using grade level appropriate academic vocabulary using scientific discourse.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page number(s) | Current text | Proposed corrected text | Reason for edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 1 | TE | 112 | Under “Understanding the Science Practice” it reads:  “different sounds ,carry it out…” | Should read:  “different sounds, carry it out…” | Comma should be after “sounds” and then a space. |
| 2 | 1 | SE, TE | 132 | Photograph of cabins near trees in San Bernardino National Forest is confusing. | Replace with a photograph with a more accurate depiction of a shadow. | Clarity |
| 3 | 2 | SE, TE | 187 | Under Guiding Inquiry:  “Plant D: No sunlight and water” | “Plant D: No sunlight and no water.” | Accuracy |
| 4 | 2 | SE, TE | 225 | Number 3 under “Analyze and Interpret Data” sample answer reads:  “Plants with waxy leaves live in drier places because they need to save water. Plants without waxy leaves absorb water and may live in wet places.” | “Plants in drier places have waxy leaves to reduce loss of water through leaves. Plants without waxy leaves may live in wet places.” | Accuracy |
| 5 | 3 | TE | T44 | “Asking Questions and Defining Problems” | Constructing Explanations and Designing Solutions | Incorrect practice labeled |
| 6 | 4 | SE | 66-67 | Diagram is missing text | TE contains the text but the SE is missing text on these pages | Misprint |
| 7 | 3 | SE | 54 | Under “Understanding the Science Practice” it reads: “affect” | Should read: effect | Misspelling |
| 8 | 5 | SE, TE | 18 | “Many refrigerator doors are made from steel, which is magnetic.” | “Many refrigerator doors are made from magnetic steel.” | Accuracy |
| 9 | 5 | SE, TE | 34 | Illustration displayed under states of matter for solid is currently drawn in a cube structure. | Illustration should be an irregular mass (i.e. deformed clump, tightly packed) | Accuracy |
| 10 | 5 | SE, TE | 168 | “The final link in the food chain is usually an animal that is rarely in danger of being eaten.” | “The final link in the food chain can be an animal that is rarely in danger of being eaten.” | Misconception that the word “usually” creates; Accuracy |
| 11 | 5 | TE | 126 (Check Point) | Traspiration | Transpiration | Misspelling |
| 12 | 5 | TE | 126 | Transpirtion | Transpiration | Misspelling |
| 13 | 5 | TE | 126 (Check Point) | enouogh | enough | Misspelling |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page number(s) | Current text | Proposed corrected text | Reason for citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | D.2 | K–5 | SE | n/a | Almost all adults depicted are relatively young. | Replace some of the illustrations with older people. | Proportion of Portrayals |
| 2 | B.2 | 3 | SE | n/a | Almost all children depicted, with the exception of one child, are white. | Include a mixture of children from different ethnic backgrounds. | Proportion of Portrayals |
| 3 | A.1 | 1 | SE | 68 | Two boys are depicted playing video games. | Include a girl to avoid further stereotyping that only boys play video games. | Adverse Reflection |
| 4 | B.2 | 1 | SE | 100, 128 | In both scenarios depicted, the same white teacher appears. | Add some variance in depicting teachers from diverse backgrounds. | Proportion of Portrayals |
| 5 | E-2 | K–5 | SE | n/a | The majority of children depicted seemed to have no disabilities. | Include images of children with disabilities | Proportion of portrayals |

### Pearson Education Inc., *California Elevate Science*, Grades 6–8 (integrated)

#### Program Summary:

California Elevate Science includes: California Elevate Science, Integrated includes: Student Edition (SE), Teacher Edition (TE), California Instructional Segment 1-4 (IS1-4), Additional Resources (AR), California Engineering Design Notebook (CA EDN), AR: Teacher Support: Performance Based Assessment 1 (PBA1).

#### Recommendation:

California Elevate Science is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provide a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 6, SE p. 402, pp. 420–423, AR Labs: uInvestigate “Making Ocean Current Formation”; Grade 7, SE p. 517, AR: Quests “To Cross or not to Cross,” “Reflect on your Animal Crossing” interactivity, SE pp. 548–551, AR: Teacher Resources “Practice Using Evidence: Ecosystems Interactions”; Grade 8, SE pp. 268–277, p. 302, p. 339. We found numerous exemplars of the standards being fully covered in grades 6–8.
* Criterion #5: Grade 6, TE 64, p. 112, p. 314. There is evidence at all grade levels of the inclusion of teacher resources to support instructional opportunities and assessments that engage students in three-dimensional learning.
* Criterion #17: Grade 7, SE p. 225, AR: Science Research and Application, “Medical Research and Body Systems,” AR: Science Research and Application “Neuron Cell Transplant,” SE p. 21. There is evidence at all grade levels where the trends in science and medical research were discussed.
* Criterion #18: Grade 8, SE p. 276, AR: Science Research and Application “Organ Transplants and Air Pollution,” SE p. 149, p. 276. We found evidence at multiple grade levels where the instructional resources support students to address the applications of science in the development of technologies and in fields such as agriculture, medicine, engineering and environmental protection.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grade 6, TE p. 69, p. 152. We found evidence in all grades where instructional resources support teacher questioning strategies as a tool to assess students’ knowledge and skills, to promote student-to-student discourse, and guide student learning.
* Criterion #5: Grade 7, TE pp. T40–T41, pp. 12A–12B. Grade seven is an exemplar of how instructional resources are grade-level specific and provide instructional content for 180 days of instruction for at least one daily class period, including an estimate of necessary instructional time.
* Criterion #7: Grade 8, TE pp. T14–T17, pp. T34–T35, SEP p. 98, p. 102, p. 110. We found evidence of resources in all grade levels that include explanations for teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the PEs of the CA NGSS.
* Criterion #10: Grade 6, CA EDN pp. 8–11, pp. 16–19. Evidence of resources in all grade levels suggest appropriate engineering design tasks in varied contexts as a path to understanding and applying the science ideas learned. Resources suggest appropriate computational tools, and software to support the design process and allow students to model or simulate their designed processes.
* Criterion #14: Grade 7, SE pp. 389–399, p. 408, p. 419, p. 430, p. 441, p. 445. We found evidence in all grade levels that suggested student tasks (including end-of-chapter or culminating problems) are three-dimensional in nature and build in complexity throughout the year and across years.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3: Grade 6, TE p. 72; Grade 7, TE p. 412; Grade 8, TE p. 312. Teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities across all grade levels at the same time. Teacher materials also provide guidance on how to embed formative assessment activities in the broader learning activity.
* Criterion #4: Grade 6, TE p. 13; Grade 7, TE p. 57; Grade 8, TE p. 32. Across all grade levels, brief assessment tools and practices at key stages in the unit of instruction are designed to elicit current understandings and preconceptions, and to provide evidence of students’ progress toward mastering the three-dimensional learning called for in the CA NGSS and the CA Science Framework.
* Criterion #5: Grade 6, TE p. 328; PBA 1 Teacher Support “How do animals gather and use information from their environment”; Grade 7, TE p. 412; PBA 1 Teacher Support “How can increasing thermal energy affect water”; Grade 8, TE p. 28; PBA 1 Teacher Support “How do force and motion affect how an object lands on a surface?” Across all grades levels, assessments yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards.
* Criterion #6: Grades 6–8, AR: Realize Course Support: Review and Score Assignments. We found evidence that teacher resources supply a differentiated path for diverse students to build toward the PEs of the CA NGSS. Formative assessment tasks support teachers in collecting and analyzing data about student conceptual understanding.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grades 6–8, TE pp. T24–27. Instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grade 7, TE p. 197. Across all grade levels, teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3: Grade 8, TE p. 15. Across all grade levels that instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources.
* Criterion #4: Grade 6-8, TE pp. T68–76. Teacher resources supply a differentiated path for all students––special needs, English learners (standard and long term), students living in poverty, foster youth, girls and young women, advanced learners, and students with disabilities, below grade level in science, three-dimensional learning, literacy, and mathematical skills.
* Criterion #4: Grades 6–8, AR: Biography Teacher Resources. Teacher resources supply a differentiated path for all students––special needs, English learners (standard and long term), students living in poverty, foster youth, girls and young women, advanced learners, and students with disabilities, below grade level in science, three-dimensional learning, literacy, and mathematical skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #1: Grades 6–8, TE pp. T40–41; Grade 7, TE pp. 94A–94B. We found evidence that program resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.
* Criterion #3: Grade 7, TE p. 169, TE p. 224. Across all grade levels, teacher resources provide estimated instructional time for activities, lessons, chapters, and units allowing student engagement in the SEPs and engineering design projects.
* Criterion #6: Grade 6, TE p. 124; Grade 7, TE p. 189; Grade 8, TE p. 57. The suggested student tasks, including classroom activities, end-of chapter tasks, suggested out-of-school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Assessment keys and rubrics are provided.
* Criterion #15: Grade 6, TE p. 86; Grade 7, TE p. 373; Grade 8, TE p. 514. The teacher resources provide background information about important events, diverse people, places, ideas, and scientific principles appearing in, but not limited to the CA NGSS and CA Science Framework.
* Criterion #19: Grade 6, TE p. 200; Grade 7, TE p. 424; Grade 8, TE p. 178. The teacher edition provides evidence of instruction on how outside resources can be incorporated into a three-dimensional learning, standards-based science program.
* Criterion #20: Grades 6–8, AR: Teacher Resources: Effective Use of Library and Media Resources; Grade 6, TE p. 9; Grade 8, TE p. 377. The teacher edition provides guidance and support for engaging students in collaborative conversations using grade level appropriate academic vocabulary for scientific discourse.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | Student Edition | 527 | “Is the product is safe for the long . . . “ | “Is the product safe for the long | Grammar and spelling |
| 2 | 8 | Digital Activity | Eyes in the Sky  Additional resources/Digital Activities and Videos/Interactivies/Topic 4: Eyes in the Sky | “Which type of space technology do you think scientists us to research this phenomena?” | “Which type of space technology do you think scientists use to research this phenomena?” | Grammar and spelling |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L.1 | 8 | Lab Materials | 25 | “Coil Spring, Slinky, Metal” | “Coil Spring, Toy, Metal” | Brand Name Used |

### Pearson Education Inc., *California Elevate Science*, Grades 6–8 (discipline specific)

#### Program Summary:

California Elevate Science includes: Student Edition (SE), Teacher Edition (TE), California Instructional Segment 1-4 (IS1-4), Additional Resources (AR), California Engineering Design Notebook (CA EDN).

#### Recommendation:

California Elevate Science is recommended for adoption for 6–8d because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 6, Earth, TE p. 6 (Q2) and pp. 62–63; Grade 7, Life, TE p. 211 (Model It); Grade 8, Physical, SE pp. 220–223 (uDemonstrate Lab: Planetary Detective). We found numerous examples of the performance expectations being fully covered in Grades 6–8.
* Criterion #4: Grade 6, Earth, SE, Example 1 (MS-ESS2-4) PE Introduced: pp. 121, 139–144, PE Built Upon: pp. 331–337, PE Mastered: pp. 208–211 (uDemonstrate Lab Water from Trees”). Grade 6 is a good example for how instructional resources progressively build students’ ability to meet all grade level performance expectations through a three-dimensional instructional sequence.
* Criterion #7: Grade 7, Life, TE pp. 156–157; pp. 158–159. The use of primary sources such as case studies are integrated into the three-dimensional learning.
* Criterion #9: Grade 8, Physical, TE pp. 270–277. Instructional resources focus on the application of science using authentic real-world applications that are specific to California.
* Criterion #14: Grade 6, Earth, TE p. 179; Grade 7, Life, TE p. 251; Grade 8, Physical, TE p. 84 (Teach with Visuals). There is evidence at all grade levels of inclusion of teacher guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and coordinate multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2: Grade 7, Life, TE pp. 234C–234D. This is an exemplar of the instructional resources explicitly stating which knowledge and skills learned in prior grades are applied to new knowledge and skills.
* Criterion #6: Grade 6, Earth, TE pp. 168A–168D. The content is well organized and presented in a manner that provides all students an opportunity to achieve the essential knowledge and skills described in the CA NGSS.
* Criterion #8: Grade 6, Earth, SE Quest: How can I help reduce my school’s carbon footprint? pp. 254–255 (Quest Kickoff), 264 (Quest Check-In), 275 (Quest-Check-In), p. 289 (Quest-Findings); Grade 7, Life, SE Quest: Should an Animal Crossing Be Constructed in My Community? pp. 106–107 (Quest Kickoff), p. 117 (Quest Check-In), p. 124 (Quest Check-In), p. 151 (Quest Findings); Grade 8, Physical, SE Quest: How can you keep hot water from cooling down? pp. 362–363 (Quest Kickoff), p. 378 (Quest Check-In), p. 387 (Quest Check-In), p. 391 (Quest Findings). We found evidence in all grade levels where topics selected for in-depth study were developed through their role in explaining selected phenomena, chosen to support students in building the knowledge and abilities needed to achieve proficiency in a bundle of PEs.
* Criterion #10: Grade 7, Life, CA EDN pp. 20–23. Resources suggest appropriate engineering design tasks in varied contexts as a path to understanding and applying the source ideas being learned.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1: Grade 6, Earth AR: Assessment: PBA 2; Grade 7, Life: AR: Assessment: PBA 1; Grade 8, Physical AR: Assessment: PBA 1. These are examples of assessments in the instructional resources that reflect the three-dimensional nature of the CA NGSS and CA Science Framework. They measure what students know and are able to do in performance tasks rather than rote memorization.
* Criterion #6: Grade 6, Earth, SE pp. 152–155 (uDemonstrate Lab); Grade 7, Life, SE pp. 60–63 (uDemonstrate Lab); Grade 8, Physical, AR: Labs: uDemonstrate (Do it Yourself) “3, 2, 1. . . Liftoff!” In grades 6–8, teacher resources supply a differentiated path for diverse students to build toward the performance expectations of the NGSS.
* Criterion #8: Grade 6, Earth, AR: Assessment: PPA 4: “How does sediment type affect the water table of an aquifer?” Grade 7, Life, SE pp. 494–497 (#1, 4); Grade 8, Physical, SE p. 513. In grades 6–8, there is sufficient evidence to confirm that students’ progress toward meeting the three dimensions of the CA NGSS is assessed through both writing and performance tasks.
* Criterion #9: Grade 6, Earth, AR: Assessment: PBA 1 Teacher Support; Grade 7, Life, AR: Assessment: Topic 4 uDemonstrate Rubric; Grade 8, Physical, AR: Quests: Topic 3 Quest Rubric. These are grade level exemplars of resources that include student work expectations and analytical rubrics for scoring performance tasks. They include an explanation of the use of Rubrics by teachers and students to evaluate the progress of students’ models, projects, writing, and progression toward understanding.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grades 6–8, Earth, Life, Physical, AR: Teacher Resources MGS UDL Rubric; Grade 6, Earth, TE p. 39; Grade 7, Life, TE pp. 98–99; Grade 8, Physical, TE pp. 392–395. There is sufficient evidence to confirm that the instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grade 6, Earth, TE p. 139 (ELD. PI. 6. C.9); Grade 7, Life, TE p. 87 (ELD.P1.7.C.9); Grade 8, Physical, TE p. 503 (ELD.P1.7.C.9). In grades 6–8, suggested lessons and teacher resources include research based strategies to address the needs of English Learners consistent with the CA ELD Standards.
* Criterion #3: Grade 6, Earth, TE p. 515 (Literacy Connection); Grade 7, Life, TE p. 348 (Write About It); Grade 8, Physical, SE p. 148 Guiding Questions. These are examples of instructional resources that incorporate strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #1: Grade 6, TE pp. T38–T39 (Scope and Sequence), TE pp. T40–T41 (Pacing Guide); Grade 6, Earth, TE pp. 118A–118B (Lesson Planner). All grade levels provide examples of how teacher resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days instruction.
* Criterion #3: Grade 6, Earth, TE p. 63 (Scaffolded Questions and Differentiated Instruction); Grade 7, Life, TE p. 184 (Formative Assessment); Grade 8, Physical, TE p. 42 (Assess on the spot). All grade levels provide exemplars of how the teacher resources provide guidance in daily lessons and units of instruction with appropriate opportunities for checking for understand and adjusting lessons, if necessary to ensure three-dimensional learning.
* Criterion #19: Grade 6, Earth, TE p. 134, p. 552. These are two examples of consistent resources across all grade levels that provide teachers with instructions on how outside resources can be incorporated into three-dimensional learning.
* Criterion #21: Grade 6, Earth, TE pp. T18–19; Grade 7, Life, TE p. 443; Grade 8, Physical, TE p. 35. There is sufficient evidence to confirm that the teacher resources provide guidance and support for engaging students in collaborative conversations using grade-level-appropriate academic vocabulary for scientific discourse.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | SE/TE | 62 | (thin exopshere made up of atoms blasted off surface by solar wind) | (thin exosphere made up of atoms blasted off surface by solar wind) | Misspelling |
| 2 | 8 | Additional Resources | n/a | Topic 3 Interactivity: Describe the Properties of Waves opens the interactivity for Analog and Digital Signals. | Correct the hyperlink. | Wrong hyperlink |
| 3 | 8 | AR: Assessment | PBA3 | “motion and kinectic energy” | “motion and kinetic energy” | Misspelling |
| 4 | Earth | SE/TE | 139 | Paragraph 2, line 4: “force gravity” | “force of gravity” | Missing word |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | A-2 | 6 | SE/TE | 158, 214, 306, 354, 404, 421, 436, 552 | Pictures on these pages all depict men. (158: accompanying video is ok.) | Change some of the pictures to women. | Not an equal portrayal of men and women in the text. |
| 2 | B-2 | 6 | SE/TE | 214, 254, 421, 436, 514, 552 | Pictures on these pages all depict people of Caucasian descent. | Change some of the pictures to people with more ethnically diverse backgrounds. | Not an equal portrayal of ethnic diversity in the text. |
| 3 | A-3 | 6 | Quest Kickoff Videos | Topic 1, Topic 5, Topic 7, Topic 8, Topic 9, Topic 12 | Videos depict only men in professional roles and they are narrating or are interviewed in the videos. | Change some of the videos to portray women in the same professional roles to narrate or be interviewed in the videos. | Not an equal portrayal of men and women in a professional context. |
| 4 | L-1 | 6–8 | Lab Materials Reference | 3, 14 | Alka Seltzer is part of the classroom kit list. | Change Alka Seltzer to antacid. | Use of brand name. |

### TCI, Bring Science Alive! California Integrated Program 6–8, Grades 6–8 (integrated)

#### Program Summary:

TCI includes: Bring Science Alive! California Program 6-8 includes: Lesson Guide (CLG), Interactive Student Notebook (ISN), Interactive Tutorial (IT), Performance Expectations (PEs), Reading Challenge (RC), Segment (Seg), Lesson (L), Student (S), Teacher (T), Table of Contents (TOC), English Language Learners (ELs)

#### Recommendation:

Bring Science Alive! California Integrated Program 6–8 is recommended for adoption for 6–8i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1:

G6.Seg3.RC.ISN <https://subscriptions.teachtci.com/shared/sections/19181?nav_info=&program_id=290>

G7.TOC <https://subscriptions.teachtci.com/teacher/programs/291?student_view=false>

G8.TOC <https://subscriptions.teachtci.com/teacher/programs/292?student_view=false>

These citations meet the criterion of full year-long alignment for every grade level of the CA framework.

* Criterion #3:

G8.T.Seg1.L7.CLG (Slides 7–26) <https://subscriptions.teachtci.com/shared/programs/292/lessons/1991/slide_shows/25586/present?student_view=false>

The instructional resources reflect the full content of the CA Science Framework allowing teachers to engage students in using each of SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.

* Criterion #8:

G7.T.Seg4.Performance Assessment: Planning Bridges to Withstand Natural Hazards.CLG (Slides 1–6) <https://subscriptions.teachtci.com/shared/programs/291/lessons/2222/slide_shows/24889/present?student_view=false>

Instructional resources introduce real-world phenomena and systems that students can investigate, model, and explain using targeted DCIs and CCCs

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #9:

G7.S.Seg3.L23.Investigation 1 (IT) <https://subscriptions.teachtci.com/shared/sections/14541?locale=en&program_id=291>

G8.S.Seg2.L13. Investigation 2 (ISN) <https://subscriptions.teachtci.com/shared/sections/16035?program_id=292&student_view=true>

All citations above exemplify meaningful use of the program’s instructional resources such as video clips, simulations, and measurement tools.

* Criterion #10:

G7.T.Seg3.Engineering Challenge: Test and Improve a Solar Distiller.CLG (All Slides) <https://subscriptions.teachtci.com/shared/sections/14690?program_id=292>

G8.T.Seg1.Engineering Challenge: Designing Safe Go-Carts.CLG (All Slides) <https://subscriptions.teachtci.com/shared/sections/17930?nav_info=&program_id=292>

The curriculum resources provide engineering design tasks as a path to understanding science and engineering ideas.

* Criterion #14:

G6.T.Seg1.Performance Assessment: Surviving Extreme Temperatures.CLG (All Slides) <https://subscriptions.teachtci.com/shared/programs/290/lessons/2519/slide_shows/24519/present?student_view=false>

G8.T.Seg1 Performance Assessment: Swing to Las Olas Hermosas Restaurant. CLG (All Slides) <https://subscriptions.teachtci.com/shared/sections/16196?nav_info=&program_id=292>

These citations show evidence that student tasks are three-dimensional in nature and build in complexity.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1:

G7.T.Seg1.Performance Assessment: Animating Global Pathways.CLG (All slides) <https://subscriptions.teachtci.com/shared/programs/291/lessons/2367/slide_shows/16671/present?student_view=false>

Instructional resources reflect the three dimensional nature of the *CA NGSS* and the *CA Science Framework*. Assessment tools measure what students know and are able to do, as defined by the PEs in the *CA NGSS*.

* Criterion #3:

G6.T.Seg1.L4.CLG (Slide 21) <https://subscriptions.teachtci.com/shared/programs/290/lessons/1963/slide_shows/25626/present?student_view=false>

The Teacher Wrap Up provides support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.

* Criterion #6:

G8.T.Seg2.L10 (Click on Differentiating Instruction). <https://subscriptions.teachtci.com/shared/programs/292/lessons/1982/slide_shows?student_view=false>

This is a good example of how teacher resources supply a differentiated path for diverse students to build toward the PEs of the *CA NGSS*.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #2:

G8.T.Seg5.L24.CLG (Slide 15) (all slides + ISN) <https://subscriptions.teachtci.com/shared/programs/292/lessons/2485/slide_shows/20864/present?student_view=false>

This example shows evidence of instructional strategies and addresses the needs of students with disabilities in the resources, assessments, and lessons at every grade level.

* Criterion #3:

G7.T.Seg1.L4 (Click on Differentiating Instruction) <https://subscriptions.teachtci.com/shared/programs/291/lessons/2356/slide_shows?student_view=false>

This example shows evidence of instructional strategies and addresses the needs of students with disabilities in the resources, assessments, and lessons at every grade level.

* Criterion #4:

G6–8.S.Resources.Biographies.RideSally <https://subscriptions.teachtci.com/shared/programs/292/reference_materials?tag=Biographies>

This resource provides differentiated paths for all students within instructional resources, and guidance to support students whose special needs include ELs, foster youth, girls and young women, advanced learners, and students with disabilities in science skills, three-dimensional learning, literacy or math skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #2:

G6.T.Seg1.L1.Resources (Click on Pacing Guide) <https://subscriptions.teachtci.com/teacher/programs/290/pacings?lesson_id=2469&student_view=false>

G8.T.Seg2.L8.CLG (Slide 2) <https://subscriptions.teachtci.com/shared/programs/292/lessons/1980/slide_shows/25580/present?student_view=false>

These are examples of resources to advice teachers of estimated time frames for instructional time, activities, lessons, and units to allow for student engagement in the SEPs and design projects.

* Criterion #9:

G6.T.TOC (Scroll over 3D buttons for each lesson: Science and Engineering Practices, Crosscutting Concepts, Disciplinary Core Ideas) <https://subscriptions.teachtci.com/teacher/programs/290?student_view=false>

G7.T.Seg1.L4 (Click on Lesson Correlations upper right) <https://subscriptions.teachtci.com/shared/programs/291/lessons/2356/slide_shows?student_view=false>

*G8.T.*Seg5.L24.CLG (Slide 2) <https://subscriptions.teachtci.com/shared/programs/292/lessons/2485/slide_shows/20864/present?student_view=false>

These exemplars show where, in multiple places, teachers can access instructional objectives explicitly stated for three-dimensional learning.

* Criterion #15:

G6–8.S.Resources.Biographies [https://subscriptions.teachtci.com/shared/programs/292/reference\_materials?tag=Career+Profiles](https://urldefense.proofpoint.com/v2/url?u=https-3A__subscriptions.teachtci.com_shared_programs_292_reference-5Fmaterials-3Ftag-3DCareer-2BProfiles&d=DwMFaQ&c=SIStQSL0VMIUJoLS-Q8giiFlA-AKdP7tpJHyQh8DeXk&r=hfM0uqJqzFzsGNmQ1zgJh-IEW3C2NboiMkwZLZ6kCFs&m=Tcy_RU1-FTj-IBYgFWK6FoNpGAlOQz-czTm13v2VGE8&s=uQk8N5yC34gp7QtRK1Ixb63gaeWjstXo1l_ejtlr7IQ&e=)

G6–8.S.Resources.Career Profiles <https://subscriptions.teachtci.com/shared/programs/292/reference_materials?tag=Career+Profiles>

G7.S.Seg3.L20.Reading Further (Text) <https://subscriptions.teachtci.com/shared/sections/17397?program_id=291&student_view=true>

There are extensive resources provided for both teachers and students to access background information on scientists, engineers, careers and ideas.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page number(s) | Current text | Proposed corrected text | Reason for edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | n/a | n/a | Seg1.L4.LG (Slides 15–21 with Handouts A–B, slides 28–34 with Handout C)  Slide 15 Lesson Support  <https://subscriptions.teachtci.com/shared/programs/290/lessons/1963/slide_shows/25626/present?student_view=false> | Might want to have | You might want to have | Grammatical error |
| 2 | 6 | S | Seg1.L4.KSC  <https://subscriptions.teachtci.com/shared/sections/15775?locale=en&program_id=290&student_view=true> | Text says, “The three parts of cell theory…are listed below.” (but there is no way to go below) | Link the “three parts.” |  |
| 3 | 6 | T | Seg2.L13.LG (Slides 8, 20–29, 31–33)  <https://subscriptions.teachtci.com/shared/programs/290/lessons/1961/slide_shows/25619/present?student_view=false> | On Slide 25, under tissue slide is labeled “Mr.” B | Text should say, “Ms.” B | typo |
| 4 | 6 | T | Seg3.L15.LG (Slides 12–20 with Handout B) Slide 19  <https://subscriptions.teachtci.com/shared/programs/290/lessons/2476/slide_shows/25090/present?student_view=false> | “Used what you learned” | Should be “Use what you have learned” | Grammatical error |
| 5 | 6 | S | Seg1.L2.Investigation 3 (ISN #8–12)  <https://subscriptions.teachtci.com/shared/sections/17941?locale=en&program_id=290&student_view=true> | Questions show in citation ISN up to 12, only up to 7 show. | The Commission recommends using the publisher submitted comment in response to this edit. | Missing questions |
| 6 | 6 | S | Seg2.Engineering Challenge.Optimizing the Solution (ISN #12)  <https://subscriptions.teachtci.com/shared/sections/16073?locale=en&program_id=290&student_view=true> | (ISN #12)-only 1-10 show with a rubric | The Commission recommends using the publisher submitted comment in response to this edit. | Missing questions |
| 7 | 6 | T | Seg1.L5.LG on Slide 13  <https://subscriptions.teachtci.com/shared/programs/290/lessons/1964/slide_shows/25627/present?student_view=false> | “When you see thename of the type of cell …table of desk top before the time runs out” | “desktop” | Should be written as one word |
| 8 | 6 | T | Seg1.L5.LG slide 31  <https://subscriptions.teachtci.com/shared/programs/290/lessons/1964/slide_shows/25627/present?student_view=false> | On, semipermeable is written two ways”  The cell membrane and the dialysis tubing are “semi permeable”.  What does it mean to be “semipermeable”? | Semi permeable or semipermeable | Should be written consistently as one word |
| 9 | 6 | T | Seg2.L7.CLG  <https://subscriptions.teachtci.com/shared/programs/290/lessons/2473/slide_shows/24306/present?student_view=false> | where the “cloud” formed  If you look at the sky and see newly-formed clouds, what is the relative jumidity of the air where the “cloud” formed? | Should be plural as “clouds” | Grammatical error |
| 10 | 6 | T | Seg2.L14.LG Slide 29  <https://subscriptions.teachtci.com/shared/programs/290/lessons/1962/slide_shows/25621/present?student_view=false> | Discuss what body systems do you think might be involved. | “What body systems do you think might be involved? Discuss.” | Grammatical error |
| 11 | 6 | T | Seg1.L5. Investigation 2.  Slide 15  <https://subscriptions.teachtci.com/shared/programs/290/lessons/1964/slide_shows/25627/edit?module=4> | The animation of diffusion starts with 7 particles all on the outside of the membrane. They all move into the cell at the same time. Then four move out and then one moves back in. | Change animation to be more realistic, or offer students a chance to discuss the model vs. real world. | Academic misconception |
| 12 | 6 | T | Seg1.L4.LG  Video Slides 16, 17  <https://subscriptions.teachtci.com/shared/programs/290/lessons/1963/slide_shows/25626/edit> | Video verbal directions include “just grab the…” multiple times. | Rework video with language that suggests safe lab behaviors, not including “grabbing” everything. | unsafe language used in video |
| 13 | 6 | T | Seg1.L3.LG Slide 18, (Click the Earth’s Atmosphere button)  <https://subscriptions.teachtci.com/shared/programs/290/lessons/2471/slide_shows/23540/present?student_view=false> | The atmosphere is made up of 78 percent nitrogen gas (N<sub>2</sub>), 21 percent…. | Rewrite the text to show actual subscripts | Not actual subscript |
| 14 | 6–8 | S | Resources. Biographies  <https://subscriptions.teachtci.com/shared/programs/292/reference_materials?tag=Biographies> | Article on Stephen Hawking is written in present tense. | Correct article verb tenses to past tense. | Grammatical error |
| 15 | 7 | S | Seg2.L15.S3 (Text/ISN)  <https://subscriptions.teachtci.com/shared/sections/14576?locale=en&program_id=291&student_view=true> | D. “Artificial sweeteners can help people limit hot much sugar…” | …how much sugar…” | Typo |
| 16 | 7 | T | SegL6. Investigation 1  Slide 14  <https://subscriptions.teachtci.com/shared/programs/291/lessons/2360/slide_shows/25664/edit?module=2> | The fish shown in the slide does not eat diatoms. It does not have the type of feeding mechanism necessary. | Insert a visual of zooplankton eating the diatoms and then the fish eating the zooplankton. | The structure and function should match. |
| 17 | 7 | T | Seg4.L26.LG  Slide 13, item #4  <https://subscriptions.teachtci.com/shared/programs/291/lessons/2213/slide_shows/24407/present?student_view=false> | reset the “slop” angle | “slope” | Typo |
| 18 | 8 | T | Seg5.L27.LG (Slides 21–23 and Handout E)  <https://subscriptions.teachtci.com/shared/programs/292/lessons/2488/slide_shows/22756/present?student_view=false> | Both slide 22 & 23 produce an “agument” about… | “argument” | Typo |
| 19 | 8 | S | Seg5.L24.S4–KSC (Text/IT/ISN)#1  <https://subscriptions.teachtci.com/shared/sections/17580?locale=en&program_id=292&student_view=true> | ISN-#1-unclear: “1. Why would a collection of apples you take home with you be more red and crunchy on average than the average redness and crunchiness of the apples at the store?” | Reword to be clearer for the intent of the question regarding natural selection. | Reword question |
| 20 | 8 | S | Seg5.L28.S4 (Text, see #6)  <https://subscriptions.teachtci.com/shared/sections/18012?locale=en&program_id=292&student_view=true> | Question number from text said, “see #6”, text does not go to 6 | The Commission recommends using the publisher submitted comment in response to this edit. | Are there supposed to be 6 questions in this section? |
| 21 | 8 | T | Seg5.L25. Investigation 2.  Slide 3  <https://subscriptions.teachtci.com/shared/programs/292/lessons/2486/slide_shows/22436/edit?module=3> | “During the industrial revolution, black soot covered everything. Even the birch trees that were once white, looked black.” | This could be seen as a misconception as the reason for the dark form of the trees, leading to the moth’s selective advantage.  Possible inclusion on this slide/teacher notes: (The lichens growing on the tree trunks made the trunks lighter in color. The effects of the air pollution killed the sensitive lichens. This exposed the darker tree trunk bark and this imparted the camouflage advantage to the dark form of the moth.) | Misconception |
| 22 | 8 | T | Seg5.PA Evolutionary History.  Slide 6 (Click on Materials button, Handout C, Station 3: Embryonic Development)  <https://platoproduction20160712.s3.amazonaws.com/system/handouts/1616/original/Adaptations_U2_SH_PA_C.pdf?1528818510> | The first, early stages of all embryos shown are illustrated as identical at the one cell, two cell, and other early stages. | From the standards LS4.A, the structures are compared incorrectly in the first 6 images of embryonic development as being exactly the same. (The amount of yolk in the egg makes a difference in how these different embryos go through early development.) This is an incorrect representation and should not be included as part of the handout. | Structures are compared incorrectly |

#### Social Content Citations: None

### TCI, Bring Science Alive! California Program 6–8, Grades 6–8 (discipline specific)

#### Program Summary:

Bring Science Alive! includes: Lesson Guide (CLG), Interactive Student Notebook (ISN), Interactive Tutorial (IT).

#### Recommendation:

Bring Science Alive! California Program 6-8 is recommended for adoption for 6–8d because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade 6, Space.U3.L9.CLG (Slide 23); Grade 7, Ecosystems.T.U1.L1.LG (investigation 1); Grade 8, Waves.T.U1.L3.LG (investigation 1). We found numerous exemplars of students building to full understanding of each performance expectation.
* Criterion #3: Grade 6, Space.T.U1.L3.CLG (Slides 6, 10, 22, 32). Materials allow teachers to engage students in using each of the SEPs in multiple contexts and apply the CCCS to their ideas.
* Criterion #5: Grade 8, Matter.T.U3.L9.CLG (Slide 13). Teacher resources support instruction opportunities that engage students in three-dimensional learning.
* Criterion #10: Grade 6, G6.Space.S.U2.L6.S2; Grade 7, G7.Cells and Genetics.T.U5.L11 (Enhancing Learning, Lab Interactive: Mutations); Grade 8, G8. Forces and Energy.S.U2.L4.RF; Grade 6–8, G6-8.Resources.Biographies. There is evidence at all grade levels that the science curriculum is enriched with informational text, literature, and simulations, as well as diverse examples of notable scientists and engineers.
* Criterion #12: Grade 6, G6.Space.T.U1.L3.CLG (Slide 20, Math and ELA button); Grade 7, G7.Ecosystems.T.U1.L3.CLG (Slide 10, ELD Tips button); Grade 8, G8.Waves.T.U1.L2.CLG (Slide 28, Math and ELA button). We found evidence at all grade levels where student assignments make linkages to the CA Common Core Standards for ELA and Literacy in History/Social Studies, Science, and Technical Subjects, the CA ELD Standards, and CA Common Core Math Standards and are consistent with the guidance in the CA Science Framework.
* Criterion #13: Grade 6, G6.Space.T.TOC (click on Literacy Toolkits); Grade 7, G7.Cells and Genetics.T.U2.L3.CLG (Slide 2, click on Academic Vocabulary); Grade 8, G8.Waves.T.U1.L1.CLG (Slides 9–19). We found evidence in all grade levels, 6–8, that the materials provide support for students to develop grade-level appropriate academic language and classroom discourse.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #7: Grade 6, G6.Space.T.U2 Anchoring Phenomenon (Click on Unit Progressions, “this document”); Grade 7, G7.Adaptations.T.U2 Anchoring Phenomenon (Click on Unit Progressions, “this document”); Grade 8, G8.Matter.T.U2 Anchoring Phenomenon (Click on Unit Progressions “this document”). These documents clearly explain to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and to design solutions to problems and build toward the PEs of the CA NGSS.
* Criterion #8: Grade 6, G6.Planet Earth.T.U3.Anchoring Phenomenon.CLG (all Slides); Grade 7, G7.Ecosystems.T.U3.Anchoring Phenomenon.CLG (all Slides); Grade 8, G8.Forces and Energy.T.U1.Anchoring Phenomenon.CLG (all Slides). There is strong evidence to support topics selected for in depth study are developed through their role in explaining selected phenomena, chosen to support students.
* Criterion #9: Grade 6, G6.Planet Earth.T.U3.L7.CLG (Slide 4); Grade 7, G7.Adaptions.T.U1 Anchoring Phenomenon.CLG (Slide 2); Grade 8, G8.Matter.S.U2.L4.Investigation 1 (ISN). There is exemplary evidence of the meaningful use of technologies such as video clips or computer simulations that cannot be directly experienced in the classroom.
* Criterion #10: Grade 6, G6.Planet Earth.T.U2.Engineering Challenge: Test and Improve a Solar Distiller.CLG (all Slides); Grade 7, G7.Ecosystems.T.U3.Engineering Challenge: Designing a Fishing Net.CLG (all Slides); Grade 8, G8.Forces and Energy.T.U1.Engineering Challenge: Designing Safe Go-Carts.CLG (all Slides). Resources suggest appropriate engineering design tasks in varied contexts as a path to understanding and applying science ideas.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3: Grade 7, Adaptations.T.U2.L6.CLG (Slide 20). Learning and formative assessment opportunities occur at the same time and are embedded in the broader learning activity.
* Criterion #5: Grades 6–8, Gradebook (click on View Trends). Assessments to yield information teachers can use in planning and modifying instruction.
* Criterion #8: Grade 8, G8.Waves.U3.Performance Assessment: Selling Digital. Students progress toward meeting the three-dimensions of the CA NGSS is assessed through both writing and performance tasks.
* Criterion #9: Grade 6, G6.Planet Earth.U2.Performance Assessment: Fund a Natural Resource Company.CLG (Slide 4) (Materials, notebook answer key). This is an example of a resource that shows student work expectations and a rubric for scoring performance tasks.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade 6, G6.Space.T.U1.L4 (click on Differentiating Instruction); Grade 7, G7.Cells and Genetics.S.U1.L2.S1 (Interactive Tutorial); Grade 8, G8.Forces and Energy.S.U1.L2.S2 (click on Main Ideas). The instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grade 6, G6.Planet Earth.T.U1.L1.CLG (Slide 16 click on “ELD Tips”); Grade 7, G7.Adaptions.T.U2.L3.CLG (Slide 15 click on “ELD Tips”); Grade 8, G8.Waves.T.U2.L6 (click on Differentiating Instruction). We found evidence in all grades where teacher resources included research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3: Grade 6, G6.Space.T.U2.L5 (click on Differentiating Instruction, see Learners with Special Education Needs); Grade 7, G7.Cells and Genetics.T.U2.L4 (click on Differentiating Instruction, see Learners with Special Education Needs); Grade 8, G8.Waves.T.U1.L1 (Click on Differentiating Instruction, see Learners with Special Education Needs); Instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources.
* Criterion #4: Grade 6, G6.Planet Earth.T.U2.L4 (click on Differentiating Instruction); Grade 7, G7.Ecosystems.T.U1.L1. Resources.Other Resources (click on “Literacy in Science”); Grade 8, G8.Waves.T.U1.Engineering Challenge: Preventing Coastal Erosion.CLG (Slide 12, click on “lesson support”); There is exemplary evidence in all grades of instructional resources that provided guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5: Grade 6, G6.Planet Earth.T.U1 Anchoring Phenomenon.CLG (click on Unit Progressions, “this document”); Grade 7, G7.Ecosystems.T.U3 Anchoring Phenomenon.CLG (click on Unit Progressions, “this document”); Grade 8, G8.Waves.T.U1 Anchoring Phenomenon.CLG (click on Unit Progressions, “this document”). Teacher resources in grades 6–8, provide background knowledge about the SEPs, DCIs, and CCCs and discuss the desired level of SEPs in which students engage.
* Criterion #10: Grade 6, G6.Planet Earth.S.U2.L5.Observing Phenomena (ISN); Grade 7, G7.Adaptations.T.U1.Anchoring Phenomenon.CLG (Slide 2, click on video); Grade 8, G8.Waves.T.U1.Anchoring Phenomenon.CLG (Slide 2, click on video). We found evidence in all grade levels where student resources provided experiences that introduced phenomenon.
* Criterion #12: Grade 6, G6.Space.T.U1.L2.Materials; Grade 7, G7.Adaptions.T.U1.L1.Materials; Grade 8, G8.Waves.T.U2.L5.Materials (For each citation, also click on Program Safety, Science and Engineering Safety document). These are examples of lists of consumable and non-consumable equipment and materials required for each lesson along with safety issues aligned with the Science Safety Handbook for CA Public Schools.
* Criterion #14: Grade 6, G6.Space.T.U2.L5.CLG (click on Differentiating Instruction); Grade 7, G7.Cells and Genetics.T.U4.L8.Assessments (customize assessments); Grade 8, G8.Waves.T.U2.L6.CLG (all Slides). Electronic learning resources support instruction that is connected explicitly to the CA NGSS, have a well-designed use interface, provide technical support, and include suggestions.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 8 | Forces& Energy.T.U1. L3.LG | Slide 2 | Play a game, then plan an invetigation… | Play a game, then plan an investigation… | Misspelling |
| 2 | 8 | Matter.T.U2.L5 | Handout D | Station D: Depositing Materials  Salt, 40g | Salt, 50g | In the procedure, I…add 50g of salt |
| 3 | 8 | Matter.T.U3. EC.LG | Slide 12 | Record data: Mass of CaCl used | Mass of CaCl2 used | Calcium Chloride is CaCl2 |

#### Social Content Citations: None

### TCI, Bring Science Alive! California Program K–5, Grades K–5

#### Program Summary:

Bring Science Alive! California Program K–5 includes: Lesson Guide (CLG), Interactive Student Notebook (ISN), Interactive Tutorial (IT).

#### Recommendation:

Bring Science Alive! California Program K–5 is recommended for adoption for K–5 because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5. It is recommended that is that all publisher-submitted errata be included as a condition of adoption.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1:
  + Grade K, Unit 1, Performance Assessment: Making a Place for Animals to Live, ISN, <https://subscriptions.teachtci.com/shared/programs/151/lessons/2425/slide_shows/10522/edit?student_view=false>
  + Grade 1, Unit 1, Lesson 4, CLG, Slides 18-21, <https://subscriptions.teachtci.com/shared/programs/152/lessons/1558/slide_shows/145/edit?student_view=false>
  + Grade 2, Unit 1, Performance Assessment: Plan a Food Garden for Your School, <https://subscriptions.teachtci.com/shared/programs/153/lessons/2423/slide_shows/6569/edit?student_view=false>
  + Grade 3, Unit 3, Lesson 4, Investigation in ISN, <https://subscriptions.teachtci.com/shared/sections/12186?nav_info=investigation&program_id=154&student_view=true>
  + Grade 4, Unit 3, Performance Assessment: Developing Hazard Plans, <https://subscriptions.teachtci.com/shared/sections/17563?locale=en&nav_info=&program_id=155&student_view=true>
  + Grade 5, Unit 2, Lesson 1, CLC Slides 11–16, 19–22, [https://subscriptions.teachtci.com/shared/programs/156/lessons/1583/slide\_shows/31/edit. The program includes numerous exemplars of the standards being fully covered in grades K-5](https://subscriptions.teachtci.com/shared/programs/156/lessons/1583/slide_shows/31/edit.%20The%20program%20includes%20numerous%20exemplars%20of%20the%20standards%20being%20fully%20covered%20in%20grades%20K-5)
* Criterion #2: Grade 4, CLG (Slides 10–23, 25–27), <https://subscriptions.teachtci.com/shared/programs/155/lessons/1508/slide_shows/55/edit>. Instructional resources in grades K–5 engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the Science and Engineering Practices (SEPs), Crosscutting Concepts (CCCs), and Disciplinary Core Ideas (DCIs).
* Criterion #4: Grade 2, Unit 3 Progression, <https://platoproduction20160712.s3.amazonaws.com/system/info_bar_files/184/original/BSA_Unit_Progression_G5_U4.pdf?1522694014>. The instructional resources progressively build students’ abilities to meet all grade-level Performance Expectations (PEs) through a three-dimensional instructional sequence.
* Criterion #10: Grades K–5, Biographies, <https://subscriptions.teachtci.com/shared/programs/151/reference_materials?tag=Biographies>. The science curriculum is enriched with opportunities for students to access informational texts, literature, simulations and other media related to science and engineering, and it presents diverse examples of notable scientists and engineers.
* Criterion #13: Grade 1, Table of Contents, Literacy Toolkits, <https://subscriptions.teachtci.com/teacher/programs/152?student_view=false>. The materials provide support for students to develop grade-level appropriate academic language and discipline-specific vocabulary through their use in context in classroom discourse around science phenomena (science talk), and through well-written and grade-level appropriate text resources.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2: Grade 2, Unit 1.2, CLG, Slides 13, 14, 16, 20, 23, <https://subscriptions.teachtci.com/shared/programs/153/lessons/1465/slide_shows>. Instructional resources support teacher questioning strategies as a tool to assess students' knowledge and skills, promote student-to-student discourse, and guide student learning.
* Criterion #3: Grade 5, Unit 4.3, CLG, Learning Progressions, <https://subscriptions.teachtci.com/shared/programs/156/lessons/1601/slide_shows?student_view=false>. Instructional resources explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.
* Criterion #7: Grade 4, Unit 2, Anchoring Phenomena, CLG, Unit Progressions, <https://platoproduction20160712.s3.amazonaws.com/system/info_bar_files/173/original/BSA_Unit_Progression_G4_U2.pdf?1522692804>. Resources include explanations to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the PEs of the CA NGSS. Teacher resources support understanding of how PEs are developed within units and across units throughout a year.
* Criterion #8: Grade 1, Unit 2, Anchoring Phenomenon, CLG, <https://subscriptions.teachtci.com/shared/programs/152/lessons/2347/slide_shows/27468/edit?module=1>. Topics selected for in-depth study are developed through their role in explaining selected phenomena, chosen to support students in building the knowledge and abilities needed to achieve proficiency in a bundle of PEs.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provide guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1: Grade K, Unit 1.6, Assessment, <https://subscriptions.teachtci.com/staffer/lessons/1541/assessments?program_id=151&student_view=false>. Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and the CA Science Framework. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS. Assessments stress performance tasks rather than rote memorization.
* Criterion #3: Grade 4, Unit 4, Lesson 6, CLG, slide 25 + Teacher Note, <https://subscriptions.teachtci.com/shared/programs/155/lessons/1535/slide_shows/81/edit>. Teacher materials across grades K–5 provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.
* Criterion #6: Grade 5, Unit 1, Lesson 2.5, <https://subscriptions.teachtci.com/shared/sections/11403?program_id=156&student_view=true>. Teacher resources supply a differentiated path for diverse students to build toward the PEs of the CA NGSS. In particular, formative assessment tasks are designed to support teachers in collecting and analyzing data about student conceptual understanding.
* Criterion #10: Grade 2, Unit 1, Performance Assessment: Plan a Garden for Your School, <https://subscriptions.teachtci.com/shared/programs/153/lessons/2423/slide_shows/6569/edit?student_view=false>. Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade K, Unit 1, Lesson 1, Resources, Other Resources, <https://subscriptions.teachtci.com/teacher/programs/151/program_resources?lesson_id=1537&student_view=false>. The instructional resources reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grade 3, Unit 3, Lesson 6, Differentiating Instruction, <https://subscriptions.teachtci.com/shared/programs/154/lessons/1498/slide_shows?student_view=false>; Grade 3, Unit 3, Lesson 6, CLG (Spanish), <https://subscriptions.teachtci.com/shared/programs/154/lessons/1498/slide_shows/30772/edit>. At each K–5 grade level, suggested lessons and teacher resources include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
* Criterion #3: Grade 5, Unit 1, Lesson 5, Differentiating Instruction, <https://subscriptions.teachtci.com/shared/programs/156/lessons/1579/slide_shows?student_view=false>. Instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate, at every grade level.
* Criterion #4: Grade 1, Unit 1, Lesson 1, CLG (click on Differentiating Instruction), <https://subscriptions.teachtci.com/shared/programs/152/lessons/1556/slide_shows>. Teacher resources across grades K–5 supply a differentiated path for all students. In particular, instructional resources provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #2: Grade 1, Pacing Guide, <https://subscriptions.teachtci.com/teacher/programs/152/pacings?lesson_id=1556&student_view=false>. The teacher resources provide an estimated instructional time for each activity, lesson, chapter, and unit which allows for student engagement in the SEPs and engineering design projects.
* Criterion #4: Grade 4, Unit 4, Lesson 1, Learning Progression, <https://subscriptions.teachtci.com/shared/programs/155/lessons/1530/slide_shows?student_view=false>. Program resources address the articulation of three-dimensional learning by identifying the knowledge and skills learned in prior grades and prior grade-level units, and address how to connect and build on these learnings to help students develop increasingly sophisticated ideas.
* Criterion #6: Grade 5, Unit 4, Lesson 1, Assessments, See TCI Assessment: How Do Scientists Know When Substances Change? - English, Under Print Click on Answer Key, Scroll down to Question 17 to see rubric, <https://subscriptions.teachtci.com/staffer/lessons/1593/assessments?program_id=156&student_view=false>. All suggested student tasks, including classroom activities, end-of chapter tasks, suggested out-of-school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Assessment keys and rubrics are provided.
* Criterion #14: Grades K–5, TOC (Click on NGSS Design and Standards Map), <https://subscriptions.teachtci.com/teacher/programs/152>. Electronic learning resources, including technology-based assessments, support instruction that is connected explicitly to the CA NGSS, have a well-designed user interface, provide technical support, and include suggestions for appropriate and differentiated use.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 1 | Unit 2, Lesson 1, CLG | Slides 11–13 | “Here’s the first picture. Guess what it is.” | n/a | Image is black when clicked and remains inoperable (no spotlights appear). |
| 2 | K | Unit 1, Lesson 3 | Interactive Science Notebook | pdf links to English and Spanish are reversed | Change pdf link so that it corresponds to the correct language. | pdf link is not what is specified |
| 3 | 1 | Unit 1, Lesson 1 | Notebook Answer Key | pdf link for “Notebook Answer Key” links to Spanish: Interactive Notebook | pdf link to English “Notebook Answer Key.” | Answer key links to Spanish version of Notebook. Pdf link is not what is specified. |
| 4 | 1 | Unit 3, Lesson 1, Text | Section 2, paragraph 2 | “They expect the pattern tao happen again.” | “They expect the pattern to happen again.” | typo |
| 5 | 3 | Unit 4 | Performance Assessment | “an articles” | “an article” | typo |
| 6 | 4 | Unit 2 | Performance Assessment, slide 10 | “you bike device” | “your bike device” | typo |
| 7 | 4 | Unit 2 | Performance Assessment, slide 11 | “a helmet it important” | “a helmet important” | typo |
| 8 | 5 | Unit 2 | Performance Assessment, slide 2 | “Earth’s sphere’s interact for” | “Earth’s spheres interact” | typo |
| 9 | 5 | Unit 2 | Performance Assessment, slide 11 | “Earth’s spheres are connected?” | remove “are” | typo |

#### Social Content Citations: None

### TPS Publishing, *Creative Science Curriculum*, Grades K–8 (discipline specific)

#### Program Summary:

Creative Science Curriculum includes: Creative Science Curriculum K-8 includes: Combined TEACHER Textbook (CTE); Combined Student Textbook (CSE); STEM project edition (SPE); interactive assessment tool (TA); assessment generator (AD); intervention focus tutorial (FT); Crosscutting Concepts Digital Library (CCD); safety reasoning library (SSE); reader activity book series (RABS); blackline master (BM); Science, ELA, Arts, Engineering and Mathematics library (STEAM); Digital Frog (DF); Archway phonics program (AW); Alaska suite of products (Alaska); Really Good Stuff kit (RGS); reteach and alternate library (RAL); Team Up Math Game (TU); advanced learner and gifted and talented library (ALGT); parent library (PL); picture glossary cards (PGC); Nest Family DVDs (NEST); KL is kit library; Instructional Support Library (IS); Online Menu (OM); Educational Paper Craft Packs (EPC); Science Maker Assessments (CSM).

#### Recommendation:

Creative Science Curriculum is not recommended for adoption for K–8d because the instructional materials do not include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and do not meet all the Criteria in Category 1 or have strengths in Category 4.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program does not include content as specified in the CA NGSS and does not include a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criteria Category 1, criterion #9:
  + “Wiggly Worm”; Grade 4, CTE, pp. 458–463, Physical Science; Grade 5, CTE, pp. 386–391, Physical Science. The instructional resource is not using authentic and meaningful real world application to support student learning. The lesson presented is not authentic nor real world as worms do not use life jacket or use boats.
  + Grade K, p. 29, STEM, “Blue Skies”. Teddy bears are used as a lens to weather. These lesson does not use authentic and meaningful real world application or scenarios. This is very similar to the kindergarten lesson.
  + Kinder PS CTE, p. 206. “Dragon Shade”. The story is about an imaginary white dragon sensitive to light. Students are asked to create a shade structure for the dragon. This lesson is not authentic nor using meaningful real world applications or scenarios. An imaginary dragon is not authentic animal.
  + Olympic Reader 1 & 2, Grades K–8. This resource does not focus on the application of science to be learned.
* Criteria Category 1, criterion #11: Resources do not include examples of people and groups who used their content, learning, and intelligence to make important contributions to society through science and technology from different demographic groups, Native Americans et al. Resources emphasize the importance of science education to all members of our society in a way that is culturally and socially authentic.
  + Grades K–8, Example MS STEM ES CTE p. 15, p. 89, p. 186, p. 300; CSE p. 9, p. 88, p. 107, p. 165. The Mexican American and other Latino groups, Pacific Islanders, bisexual, transgender, lesbian, and gay Americans community’s contributions to science are completely absent.
  + The K–5 Student Editions did not have any reference to different demographic groups.
  + Science Fact Sheets listed Helen Keller, Joan of Arc, Pocahontas, Harriett Tubman, and Abraham Lincoln are not examples of people and groups who used their context, learning, and intelligence to make important contributions to society through science and technology.
  + In all third grade CTEs, People listed in the program are not known as scientists––for example, Harriett Tubman, Abraham Lincoln, William Bradford.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #1: Grades K–8, Pacing Plan in front of CTE books. There was sequential organization of the material that provides structure concerning what students should learn each year.
* Criterion #2: Grade K, CTE, p. 241, Science is a Verb, Earth Science. This is an example of instructional resources that support teacher questioning strategies as a tool to assess students’ knowledge and skills.
* Criterion #5: Grades K–8, Pacing Plan in front of CTE. This is an example of grade-level specific pacing and provides instructional content for 180 days of instruction.
* Criterion #12: Grades K–8, STEAM-Life Processes, Muscle Karts. Ancillary and support resources are an integral part of the instructional program.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3: Grades K–8, Graded Assessment Database by NGSS; Grades K–8, CTE, pp. 244–252, MS Life Science; Grades K–8, Graded Assessment Database and Middle School Life Science. These are exemplars of how teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.
* Criterion #9: Grades 6–8, NGSS Middle School Tiered Assessment with Rubric CTE, Elementary Tiered Assessment with Rubric CTE; Grade 5, CTE, pp. 32–41, STEM Project Guide; MS Earth Science, CTE XVI–XXIII. These are good examples of resources which include student work expectations and analytical rubrics for scoring performance tasks and, where possible, examples of student work at each scoring level. Resources include an explanation of the use of rubrics by teachers and students to evaluate the progress of students’ models, projects, writing, and progression toward understanding.
* Criterion #10: Grade 2, CTE, pp. 92–163, Life Science; MS, CTE, pp. 157–198, Physical Science. These materials are exemplars of assessment tools that include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer, and essay responses; lab reports; research projects; computational simulations; and oral presentations.
* Criterion #11: Grade 4, CTE, p. 438, p.445, Physical Science; Grade 5, CTE, pp. 20–28, p. 32, Physical Science. These show good examples of assessment tools that include guidance on measuring students’ ability to apply information literacy skills when obtaining and evaluating information about science topics.

#### Criteria Category 4: Access and Equity

Program materials do not ensure universal and equitable access to high-quality curriculum and instruction for all students and do not provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #3: Scientist Library K–8, All Live and Learn Resources, K–8 STEM and Creative Science Curriculum. Various clip art is used throughout. The materials fail to provide examples of how the instructional resources reflect the goals of access and equity in Ch. 10 of the CA Science Framework. Most notably, there is very little support for students living in poverty, foster students, girls and young women (gender equity) and Chicana/Chicano students.
* Criterion #4: Grades K–5 and Middle School, NGSS Planning and Pacing Guide Homework; Grade 3, TE, p. 15, p. 155, Life Science Creative Science Curriculum STEM Homework Activity; Grade 2, TE, p. 99, p. 194, Earth Science Creative Science Curriculum. The teacher resources provide excessive amounts of homework and the need for outside access to supplies and resources that do not support students living in poverty or foster youth.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #1: Grades K–8, NGSS Creative Science Curriculum Guide. The program resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.
* Criterion #12: Grade 4, pp. 2–3, Safety Library K–8 Major Points Summary. Instructional resources address safety issues included in the Science Safety Handbook for California Public Schools (CDE 2014).
* Criterion #16: Grade 3, CTE, p. 27, Physical Science. Teacher resources discuss and identify preconceptions typical at a grade span, such as the difference between weather and climate, and provide guidance to help students build more accurate understandings of the scientific concept or process.
* Criterion #19: Grade 3, TE, pp. 60–61, STEM Project Guide. Resources provide teachers with instructions on how outside resources, such as creating school compost, can be incorporated into a standards-based science curriculum.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | K–5 | TE/SE CTE, STEM, STEAM, etc. | Throughout materials  Examples:  K – p. 57  Gr. 2 – pp. 3–4; p. 13; p. 23; p. 25; p. 47; p. 51; pp. 60–61; p. 67  STEM Book, Gr. 2 – p. 5; Gr. 3––p. 8; p. 17; p. 36; p. 39–41; p. 51. | The use of mass vs. weight  Example:  As stated in the Gr. 2 CTE, p. 4, It should be noted that weight is a much more difficult concept for students to understand. Mass is simply the amount of stuff in an object. Weight, however depends on an invisible force, gravity and its interactions in it. It is very common for mass and weight to be confused. And in fact the standards calls for weight to be substituted for mass. | Replace the word mass with weight | CA NGSS uses the term weight and not mass. The citation shows that the term mass is used regardless of the CA NGSS-designated term. |
| 2 | K | STEM Project Guide TE | TPE p. 11  SPE p. 8 | Can you hook pick… | Can your hook pick... | Simple spelling errors |
| 3 | K | TE ES | p. 275 | larder | Replace with pantry | Confusing vocabulary |
| 4 | K | CTE ES | p. 277 | torch | Replace with flashlight | Confusing vocabulary |
| 5 | 3 | CTE ES  STCE | p. 5  p. 1 | advised | advise | Confusing vocabulary |
| 6 | 4 | CTE ES  CSE | p. 233  p. 141 | Mexican Wave | Stadium Wave | Confusing vocabulary |
| 7 | 5 | CTE PS | p. V – Arts column | TE – 34 copied all the way down the column | Should only be in the first row | Multiple not necessary |
| 8 | 5 | STEM Project TE | p. 36 | Addres | Address | Simple spelling error |
| 9 | MS | STEM LS | p. 33 | Tableau | Representations or models | Confusing vocabulary |
| 10 | MS | STEM LS | p. 109 | Plenary | Replace with equivalent term | Confusing vocabulary |
| 11 | K | CTE | pp. 100–115 | Needs where from | Needed from where | Confusing vocabulary |
| 12 | 1 | CTE | pp. 41–48 | Togs | Replace with equivalent term | Confusing vocabulary |
| 13 | 1 | CTE | pp. 105–107 | Tumble dryer and Settee | Dryer and Couch or Chair | Confusing vocabulary |
| 14 | 1 | CTE PS | pp. 13–47 | Can you hear the feeling? | Delete the sentence | Cannot understand the reference and not clear how to reword. |
| 15 | 1 | CTE PS | pp.136–37 | Headlamp  Potholers | Car headlight  Unknown | Confusing vocabulary |
| 16 | 2 | ES AR | pp. 55–60 | Grumps | Gramps | Confusing Vocabulary |
| 17 | MS | TE/TPE Spirit of the Arctic DVD | Act 2, p. 180 | Mating with noises during the rut | Replace with age-appropriate content | Inappropriate content for age |
| 18 | MS | PS/TE/CTE CSE | p. 175 p. 110 | vapour | vapor | Confusing vocabulary |
| 19 | MS | TE/CTE CSE | p. 179 p.114 | Images of molecules in three different states in answer key differ from images shown in lesson | Align images between CTE and CSE | Misaligned |
| 20 | MS | Tiered Assessment with Rubric TE | p. 4 | A solution of salt | Remove | Does not have anything to do with PE ESS1-1 |
| 21 | MS | SE Life Science | p. 31 | Images cuts off text | Shrink image | Text is cut off |
| 22 | K | CTE PS | p. 84 | ensure | Ensure | Needs to be capitalized. |
| 23 | 1 | CTE LS | p. 160 | Discuss as a class how you might evidence claims that | Discuss as a class how you might make evidence claims… | ….(omitted the word make before evidence) |
| 24 | 1 | CTE LS | p. 160 | Can you design to evidence if you look like your family | Can you provide evidence if you look like your family | Unclear language |
| 25 | 1 | CTE LS | p. 281 | Also, even… | Omit the word even | Unclear language |
| 26 | 1 | CTE LS | p. 161 | Explain how the pictures evidence facts | Explain how the pictures provide factual evidence | Unclear language |
| 27 | 1 | NS SE | p. 151 | Incorrect graph | Replace with correct graph. | shows temp doubling rate when topic is height of family members |
| 28 | 3 | CTE | p. LX | They really felt they could Creative Science Curriculum K-8 | Delete | Unclear language |
| 29 | K-8 | CTE | K – p. 9; p. 316  1st – LS p. 82; ES p. 80  2nd – p. 83 Continues throughout curriculum | The PE is referred to as a Phenomena in the Phenomena text box. | Reflect the lessons actual phenomena or re-label as performance expectation. | Mislabeled |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | A.1 | K–8 | Olympic Reader #2 | p. 33 | All sorts of girls, tall and slim with long dark hair, very pretty blonds and some funky red heads | All sorts of girls. | Misrepresentation of girls. Focus on slim. Also “pretty blonds and funky red heads” |
| 2 | A.1 | K–8 | Olympic Reader #2 | p. 33 | He wondered why it was this tiny figure that made him look at her again and again | He wondered why he looked at her again and again. | Brand names and corporate logos |
| 3 | A.1 | K–8 | Olympic Reader #2 | p. 30 | You stupid girl | Delete. | Inappropriate way to describe someone. |
| 4 | L.2 | K–8 | Case Study Digital Library | p. 1 | Use of Star Wars and Google | Remove | Brand Name/ Corporate Logo. |
| 5 | L.2 | K–8 | CTE ES | p. 156 | YouTube | Remove | Brand Name/Corporate Logo |
| 6 | L.2 | MS | MS STEM ES CSE | CSE p. 235  CTE p. 405 | Power point | Remove | Brand Name/Corporate Logo |
| 7 | L.2 | MS | MS PS CTE | CTE pp. 710–11  CSE pp. 494–495 | Candy Nerds | Remove | Brand Name/Corporate Logo |
| 8 | L.2 | MS | MS PS | CTE p. 907  CSE p. 619 | Power Point | Remove | Brand Name/Corporate Logo |
| 9 | L.2 | MS | MS STEM ES | CSE p. 144 | Gore-Tex, Mylar | Remove | Brand Name/Corporate Logo |
| 10 | A.2 | K–8 | All Scientist Maker Lessons | Example: LS Steam project guide – 3rd grade p. 287 | Use of clip art showing clip art of a stereo typical white male scientist with all Maker lessons | Use various examples | Disproportion representation |
| 11 | B.1 | K–8 | All Tier Assessment with Rubric documents | Example: LS Steam project guide – 3rd grade p. 228 | African American Male is shown looking down without shoes | Replace with an example reading a book dressed accordingly | Adverse reflection |
| 12 | B.1 | 3 | CTE | p. 39 | Some animals form groups to survive. Use this lesson to review Harriet Tubman. Students look at ways groups or communities help animals (or humans) survive | Omit Harriet Tubman as she was not a scientist. | Adverse reflection. |
| 13 | J.2  J.5 | 5 | CTE PS | p. 127 | Provide students with matches for experiment if they want them | Delete | Unsafe practice without method of fire safety rules. |
| 14 | B.1 | MS LS | CSE STEM Project Guide | p. 146 | Photograph of cowboy image that resembles vaqueros with a phrase “What’s that smell?” over the face. | Replace image without a human. | The unit “What that smell?” is about composting and trash, photo not appropriate. |
| 15 | A.2  E.2  A.4  B.2 | K–8 | Science Fact Sheets | Per sheet | 43 males, 13 females, 2 African Americans, 2 LGBT, 1 Chinese, 1 Blind, and 1 ALS | More variety, especially Mexican Americans and other Latino groups | There is an overabundance of white males and very limited representation of the other demographics groups that represent the diverse demographics of California. |

### TPS Publishing, *STEAM Exploration*, Grades K–8 (integrated)

#### Program Summary:

STEAM Exploration K–8i includes: STEAM Exploration K-8 includes: Combined TEACHER Textbook (CTE); Combined Student Textbook (CSE); STEM project edition (SPE); interactive assessment tool (TA); assessment generator (AD); intervention focus tutorial (FT); Crosscutting Concepts Digital Library (CCD); safety reasoning library (SSE); reader activity book series (RABS); blackline master (BM); Science, ELA, Arts, Engineering and Mathematics library (STEAM); Digital Frog (DF); Archway phonics program (AW); Alaska suite of products (Alaska); Really Good Stuff kit (RGS); reteach and alternate library (RAL); Team Up Math Game (TU); advanced learner and gifted and talented library (ALGT); parent library (PL); picture glossary cards (PGC); Nest Family DVDs (NEST); KL is kit library; Instructional Support Library (IS); Online Menu (OM); Educational Paper Craft Packs (EPC).

#### Recommendation:

STEAM Exploration K–8i is not recommended for adoption for K–8 because the instructional materials do not include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and do not meet all the Criteria in Category 1 or have strengths in Category 4.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program does not include content as specified in the CA NGSS and does not include a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

Criteria Category 1, criterion #1: Standards Not Met:

* Criterion #1: K-ESS2-2, pp. 11–23, CTE S2. No opportunities for students to construct an argument on how plants change the environment to meet their needs
* Criterion #1: K-ESS3-2, pp. 233–236, CTE S3. No opportunities for students to ask questions of their own to obtain information.
* Criterion #1: 3-LS4-1, pp. 3–5, CTE S3. Data sets are missing. No data given for students to “analyze and interpret” to “provide evidence of organisms and the environments in which they lived long ago.” The Clarification Statement in the PE states that fossil data could include “type, size, and distributions of fossil organisms...” Page 5 of Appendix 1 of the CA Science Framework, it states that in grades 3–5 students “analyze and interpret data to make sense of phenomena using logical reasoning, mathematics, and/or computation.”
* Criterion #1: 3-LS4-2, pp. 119–133, CTE S2. No opportunities given for students to use evidence to construct their own “explanations for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.” The teacher, rather than the student, gives explanation and guides the students to why variation in species exists.
* Criterion #1: MS-LS2-2, p. 80, CTE STEAM Exploration S3. No opportunities given to predict “consistent patterns of interaction” across multiple ecosystems (as stated in the Clarification Statement for MS-LS2-2). Students instead are given the pattern by the text that “helpful and harmful relationships and interactions exist in every ecosystem.” Students are then asked to research organisms that fulfill particular roles (predator, prey, pollinator, producer, decomposer) in different ecosystems without having opportunity to identify these relationships and patterns on their own.
* Criterion #1: MS-LS2-4, pp. 18–27, CTE S4. Students are neither given empirical evidence, nor are they given opportunity to obtain empirical evidence in the form of graphs, data, charts, etc., on which to base their argument.
* Criterion #1: MS-PS1-3; Grade 7, pp. 71–74, SE S1, p. 134, CTE S1. Students do not evaluate credibility, accuracy and possible bias of each publication and methods used as outlined in the SEP: Obtaining, Evaluating, and Communicating Information.
* Criterion #1: MS-ESS2-3, Grade 7, pp. 273–285 TPE, pp. 161–165 SE, pp. 170–185 CTE S3 DCI ESS2.B is not met. No opportunity for students to analyze maps of water patterns. DCI ESS2.B states: “Maps of ancient land and water patterns based on investigations of rocks and fossils make clear how Earth’s plates have moved great distances, collided, and spread apart.”
* Criterion #1: MS-LS3-1, pp. 53, 84–107, CTE S3, p.148, STEM Project Guide. Students are given many opportunities to use models (diagramming genetic inheritance in fruit flies, building DNA models with blocks, and DNA mutations caused by UV rays using UV beads and non UV beads) which help them begin to visualize how mutations in DNA can occur. However, the students are not given the opportunity to model the complete process and “describe why structural changes to genes located on chromosome may affect proteins.”
* Criterion #1: 8 MS-ESS1-4, pp. 18–28 CTE S3. The text thoroughly addresses DCI ESS1.C for this PE, which states: “The geologic timescale interpreted from rock strata provides a way to organize Earth’s history. Analyses of rock strata and the fossil record provide only relative dates, not an absolute scale.” As required by MS-ESS1-4 students are not given the opportunity to construct a scientific explanation appropriate for grade 8 students as described in the SEP progression of the framework.
* Criterion #2: Grades K–8. The following is an example that resources do not develop mastery of the three integrated dimensions of the CA NGSS. Grade 1, p. 66, CTE S2; Grade 4, p. 68, SE S2.
* Criterion #3: Grades K–8. The following are examples that instructional resources do not reflect the full content of the CA Science Framework; Grade 7, p. 70, CTE S3; Crosscutting Concepts Digital Library. Resources do not allow teachers to engage students in using each of the SEPs in multiple contexts, and the resources do not apply the CCCs to connect ideas across science topics.
* Criterion #4: Grades K–8. The following is an example that instructional resources do not progressively build students’ abilities to meet all grade level performance expectations through a three-dimensional instructional sequence, Grade K, p. 90, CTE S1.
* Criterion #10: Grades K–8, Nest Family Cartoons–Engineers and Scientists. The curriculum does not contain diverse examples of notable scientists and engineers.
* Criterion #11: Grades K–8. The following are examples that resources do not include examples of different demographic groups who used their context, learning, and intelligence to make important contributions to society through science and technology: Nest Family Cartoons–Engineers and Scientists and Grade 6, p. 10, CTE S1.
* Criterion #20: Grades K–8. The following is an example that instructional resources do not include opportunities for reflection on the nature of science, Grade 2, pp. 77–96, CTE S2.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #3: Grade 2, p. 13, CTE S2; Grade 4, p. 266, CTE S4. These are examples of instructional resources that explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.
* Criterion #5: Grade 1, pp. 184–194, CTE S4; Grade 4, pp. 350–366 CTE S4. These are examples of the instructional resources are grade-level specific and provide instructional content for 180 days of instruction for at least one daily class period, including an estimate of the necessary instructional time.
* Criterion #9: K–8 STEM Videos; Grade 2, p. 37, SE S1. Resources encourage the meaningful use of technologies such as videos or computer simulations to investigate phenomena that cannot be directly experienced in the classroom; effective measuring tools (computer-linked thermometer or range-finder, digital scales, etc.); and spreadsheets and other software to record, display, and analyze data, etc. In these contexts, the materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.
* Criterion #12: Grade 1, p. 44, NS S2; Grade 6, pp. 40–41 CTE S1. These are examples of ancillary and support resources are an integral part of the instructional program and are clearly aligned with the CA NGSS.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1: Grade K, Rubric, pp. xiii–xiv, CTE. Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and the CA Science Framework. Assessment tools measure what students know and are able to do as defined by the PEs in the CA NGSS.
* Criterion #3: Grade 2, pp. 1–8, CTE S3. Grade two is an example of how teacher materials provide support to engage students in tasks that provide both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.
* Criterion #4: Grade 4, pp. 11–23, CTE S2. Grade four is an example of how brief formative assessment tools and practices at key stages in the unit of instruction are designed to elicit current understandings and preconceptions and to provide evidence of students’ progress toward mastering the three-dimensional learning called for in the CA NGSS and the CA Science Framework. The teacher materials also provide teachers with strategies of how to address preconceptions during instruction, and the strategies are differentiated for different age levels.
* Criterion #7: Grade 8, pp. 32–34, CTE S4. Grade eight is a good example of a summative assessment designed to provide valid, reliable, fair measures of students’ progress and attainment of three-dimensional learning after a period of instruction. Multiple component tasks include hands on tasks, performance tasks, and multiple choice tests.

#### Criteria Category 4: Access and Equity

Program materials do not ensure universal and equitable access to high-quality curriculum and instruction for all students and do not provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grades K–8. The following are examples that instructional resources do not reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework: Grade 2, S1; Grade 5, S4. In both the second and fifth grade texts cited above, the overwhelming majority of students depicted are white, and all scientists depicted are males, while the teachers are nearly all female. In neither text was there mention of scaffolding for or materials to support ethnically diverse learners, students living in poverty, foster youth, or students with disabilities.
* Criterion #1: Grades K–8. The following is an example that instructional resources do not reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework: Grade 1, pp. 14–15, CTE S3. There is no mention of non-standard English spoken by English only students (namely African American Vernacular English, and Chicana/Chicano English as outlined in chapter 10 of the CA Science Framework) or any strategies or scaffolds for assisting these students in developing science specific vocabulary.
* Criterion #1: Grades K–8. The following is an example that instructional resources do not reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework: Grade 8, pp. 256–257, CTE S3. There are no modifications, accommodations, or any resources for special needs students, students in poverty, foster youth, migrant students, or long-term English learners.
* Criterion #2: Grades K–8. The following is an example that at no grade level are there suggested lessons and teacher resources that include research-based strategies to address the needs of English learners consistent with the CA ELD Standards: Grade 5, p. 91, CTE S2. There is no differentiation in the curriculum for proficiency levels of English learners or long-term English learners.
* Criterion #2: Grades K–8. The following is an example that at no grade level are there suggested lessons and teacher resources that include research-based strategies to address the needs of English learners consistent with the CA ELD Standards: Grade 1, p. 125, CTE S4. There are no research-based strategies for addressing the needs of English learners. The program EL strategies include “speaking slowly” and “having wait times after asking a question,” which are not strategies listed in the CA ELD Standards that call for supporting the acquisition of science-related academic vocabulary.
* Criterion #3: Grades K–8. The following are examples that instructional resources do not incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate, at every grade level: Grade 1, pp. 3–11, CTE S4; Grade 8, pp. 200–207, CTE S3. Teacher Editions make no mention of students with disabilities, nor do they provide resources for assisting these students.
* Criterion #4: Grades K–8. The following is an example that teacher resources do not supply a differentiated path for all students: Grade 2, p. 17, CTE S4. There are no resources for providing guidance for students living in poverty or foster care, who tend to lack engagement, as referenced in the CA Science Framework, chapter 10.
* Criterion #4: Grades K–8. The following are examples of teacher resources do not supply a differentiated path for all students: Grade 1, pp. 41, 73, 99, CTE S3. There are no resources for engaging girls or young women I science, as is made a priority in chapter 10 of the CA Science Framework. On page 41 a woman is seen working on crafts. On page 73 a woman is sitting and looking confused. On page 99 there is a group of students with two boys looking happy and confident and three girls who all appear confused and unhappy.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5: Grade 4, pp. 82–83, CTE S3. Teacher resources provide background knowledge about the SEPs, DCIs, and CCCs and discuss the desired level of SEPs in which students will engage, including how the three dimensions are integrated into units and lessons.
* Criterion #7: Grade 7, pp. 29–32, CTE S2, referencing pp. 11–14, SE S2. Teacher and student resources have correlating page numbers in print resources or corresponding references in electronic resources.
* Criterion #10: Grade 6, p. 103, CTE S2 and p. 58, SE S2. While learning goals may be explicitly stated in the teacher materials student resources will provide experiences that clearly build to the development of those learning goals without explicitly stating those goals prior to the instruction. In most cases prior to instruction, introduce a phenomenon or guiding question or the end result of the lesson series.
* Criterion #12: Grade 2, p. 172, CTE S2. Instructional resources include a list of consumable and non-consumable equipment and materials required for each lesson and address safety issues included in the Science Safety Handbook for California Public Schools (CDE 2014).

#### Edits and Corrections: None

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L. 1. | 8 | Stem Guide | 223 | Lego | Building Bricks | Brand names and corporate logos |
| 2 | L. 1. | 8 | Stem Guide | 223 | Zip Lock Bags | Resealable plastic bags | Brand names and corporate logos |
| 3 | L. 1. | 8 | Stem Guide | 32 | Hot Wheels Cars | Metal toy car | Brand names and corporate logos |
| 4 | L. 1. | 8 | Stem Guide | 32 | Graphic Calc TI 82/82 | Graphing Calculator | Brand names and corporate logos |
| 5 | L. 1. | 8 | Stem Guide | 122, 137 | Popsicle Sticks | Wood craft sticks | Brand names and corporate logos |
| 6 | L.1. | 8 | SE S3 and multiple instances for both | 35  108  32 | Model Magic Clay  Play-Doh | Baking soda clay  Salt dough | Brand names and corporate logos |
| 7 | L.1. | 7 | SE S4 and multiple instances | 166 | Elmer’s Glue | White glue or white school glue | Brand names and corporate logos |
| 8 | L.1. | 7 | TE S3  SE S3 | 224  138 | iPod | Digital audio player | Brand names and corporate logos |
| 9 | L.1. | 7 | STEM Project Guide | 96 | Frisbee  Nerf Ball  Super Glue | Plastic disc toy  Sponge ball  Permanent glue | Brand names and corporate logos |
| 10 | L.1. | 7 | SE S2 | 134 | Alka-Seltzer Tablets | Fizzy antacid tablets | Brand names and corporate logos |
| 11 | L.1. | 7 | SE S1 | 91 | PowerPoint | Slide presentation | Brand names and corporate logos |
| 12 | L.1. | 7 | STEM Project Guide and various instances | 56 | AAA American Automobile Association | Insurance Company or other vendor | Brand names and corporate logos |
| 13 | L.1. | 7 | STEM Project Guide | 261 | Alka-Seltzer | Fizzy antacid tablet | Brand names and corporate logos |
| 14 | L.1. | 7 | STEM Project Guide | 261 | Tums Tablet | Chalky antacid tablet | Brand names and corporate logos |
| 15 | L.1. | 7 | STEM Project Guide and various instances | 326 | Sim City 2000 | Video game simulating cities | Brand names and corporate logos |
| 16 | L.1. | 6 | STEM Project Guide | 32 | Coke  Diet Coke | Cola  Diet cola | Brand names and corporate logos |
| 17 | L.1. | 6 | SE S3 | 86 | Candy Nerds | Small pebble-shaped candy | Brand names and corporate logos |
| 18 | L.1. | 5 | SE S1, S4 and various instances | 10  39 | Scotch Tape | Cellophane tape | Brand names and corporate logos |
| 19 | B.1. | 6 | SE S1 | 76 | African American boy with baggy pants | Very few pictures of African American children; both clip art depictions have baggy pants | Adverse Reflection of African American students. |
| 20 | B.1. | 8 | SE S1 | 84 | African American girl with baggy pants | Very few pictures of African American children; both clip art depictions have baggy pants | Adverse Reflection of African American students. |
| 21 | B.1. | 2 | Supplemental Reader Poetry in Motion | 23 | Depiction of Asian boy | Choose a picture that is not demeaning | Adverse Reflection of Asian American students. |
| 22 | B.1. | 7 | SE S3  SE S4 | 209  171 | Same picture of man of color in an oil field | Choose a picture that is not demeaning | Adverse reflection of man of color |

### TPS Publishing, *STEAM into NGSS*, Grades K–8 (integrated)

#### Program Summary:

Steam into NGSS K-8 includes: STEAM into NGSS K-8 includes: Combined TEACHER Textbook (CTE); Combined Student Textbook (CSE); STEM project edition (SPE); interactive assessment tool (TA); assessment generator (AD); intervention focus tutorial (FT); Crosscutting Concepts Digital Library (CCD); safety reasoning library (SSE); reader activity book series (RABS); blackline master (BM); Science, ELA, Arts, Engineering and Mathematics library (STEAM); Digital Frog (DF); Archway phonics program (AW); Alaska suite of products (Alaska); Really Good Stuff kit (RGS); reteach and alternate library (RAL); Team Up Math Game (TU); advanced learner and gifted and talented library (ALGT); parent library (PL); picture glossary cards (PGC); Nest Family DVDs (NEST); KL is kit library; Instructional Support Library (IS); Online Menu (OM); Educational Paper Craft Packs (EPC); Science Maker Assessments (CSM).

#### Recommendation:

Steam into NGSS K-8 is not recommended for adoption for K–8i because the instructional materials do not include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and do not meet all the Criteria in Category 1.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program does not include content as specified in the CA NGSS and does not include a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1.1: Standards Not Met:
  + Grade K, PE K-LS1-1, CTE Segment 1, p. 66. While the students are making observations, the materials did not have students making observations to describe patterns, a component of the Science and Engineering Practice and the Cross Cutting Concept.
  + Grade K, PE ESS2-2, VG Segment 2, p. 1-1 and CCD. The program does not have the students discuss what a system is. In the CCD the photo examples of systems are not related to the Performance Expectation.
  + Grade K, PE ESS3-2, 1–7 VG Segment 3, pp. 211–216; CTE Segment 3, pp. 136–139; CSE Segment 3, pp. 224–235; WW Segment 3, pp. 146–152; WW SE Segment 3, pp. 243–245; AR Segment 3, pp. 156–157; AR SE Segment 3, pp. 250–254; and CSM Segment 3. Materials do not show that people question the natural world everyday as a component of the Cross Cutting Concept (CCC).
  + Grade 1, PE 1-PS4-1, TE Segment 2, pp. 194–200. The grade one activities did not have students plan the investigation. They did conduct the investigation but part of the performance expectation requires grade one students to plan the investigation.
  + Grade 1, PE 1-PS4-3, TE Segment 2, pp. 233–241. The grade one activities did not require students to plan the investigation. The students conducted the investigation as directed from the teacher but students did not take part in the planning process as required by the performance expectation.
  + Grade 1, PE K-2-ETS1-3, TE Segment 4, pp. 157–181. Students were expected to analyze data from tests of two objects designed to solve the same problem but the program only required the students to analyze one.
  + Grade 2, PE 2-LS2-1, TE, pp. 59–67. Students did not plan and conduct the investigation; they only brainstormed ideas and followed directions.
  + Grade 2, PE K-2-ETS1-1, TE, pp. 252–259. Students do not gather information about a situation people want to change in order to define the problem.
  + Grade 3, PE 3-LS1-1, TE Segment 2, pp. 11–26. While students did develop a model as addressed in the PE, it did not require students to develop a model to address a phenomenon.
  + Grade 3, PE 3-LS4-1, TE Segment 3, pp. 203–215. Students were given some images of fossils and scientists studying fossils but the program did not provide experiences for students to analyze and interpret that fossils existed from environments in which they lived long ago.
  + Grade 3, PE 3-PS2-4, TE Segment 1, pp. 228–232, p. 241. Experiences provided by the publisher did not address the Crosscutting Concept Connections to Engineering, Technology, and Applications of Science where science discoveries about the natural world can often lead to new and improved technologies, which are developed through the engineering design process.
  + Grade 3, PE 3-5-ETS1-3, TE Segment 4, pp. 191–199, pp. 200–209, pp. 299–332. Students were not prompted nor asked to plan the fair tests as indicated in the PE. Students only carried out a test per teacher’s directions.
  + Grade 4, PE 4-LS1-1, TE Segment 5, pp. 1–9. There were no instances where students were constructing an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction a component of the performance expectation.
  + Grade 4, PE 4-LS1-2, TE Segment 5, pp. 1–9. We found no evidence that students were using a model to test interactions concerning the functioning of a natural system, a component of the Science and Engineering Practice (SEP).
  + Grade 4, PE 4-ESS2-2, TE Segment 4, pp. 5–6. In all activities we found no evidence that students discussed patterns as evidence to support an explanation, a component of the Cross Cutting Concept (CCC).
  + Grade 4, PE 4-ESS3-1, TPE/SPE Segment 3, pp. 20–25/pp. 9–14. We found no evidence in all activities that cause and effect relationships are routinely identified and used to explain change, or that reliable media is used to explain phenomena components of the Cross Cutting Concept (CCC) and the Science and Engineering Practice (SEP).
  + Grade 4, PE 4-ESS3-2, TPE Segment 3, pp. 101–114. We found no evidence that students generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design solution, a component of the Science and Engineering Practice.
  + Grade 4, PE 4-PS3-1, TPE Segment 5, pp. 167–185. We found that the activities focused on force and electrical circuitry rather than energy and energy transfer, components of the Disciplinary Core Idea and Cross Cutting Concept.
  + Grade 4, PE 4-PS3-3, TPE Segment 5, pp. 167–185. We found no evidence that students were asking questions, a component of the Science and Engineering Practice (SEP).
  + Grade 4, PE 4-PS3-4, TPE Segment 5, pp. 255–257. We found no evidence that students solve design problems, understand that energy can be transferred in various ways and between objects, and engineers improve existing technologies or develop new ones components of the Science and Engineering Practice (SEP) and the Cross Cutting Concept (CCC).
  + Grade 4, PE 4-PS4-1, TPE Segment 3, pp. 101–114. We found no evidence that students develop their own models, understand that science findings are based on recognizing patterns, and know that similarities and differences in patterns can be used to sort, classify and analyze simple rates of change for natural phenomena, components of the Science and Engineering Practices and the Cross Cutting Concepts.
  + Grade 4, PE 4-PS4-2, TE Segment 5, pp. 1–9. We found no evidence in all activities that students develop a model to describe phenomena or identify cause and effect relationships, components of the Science and Engineering Practice (SEP) and the Cross Cutting Concept (CCC).
  + Grade 4, PE 4-PS4-3, TE Segment 5, pp. 1–9. We found no evidence that students generate and compare multiple solutions to a problem based on how well they meet the criteria and constraints of the design solution, understand that similarities and differences in patterns can be used to sort and classify designed products, and know that relevant scientific concepts and research findings are important in engineering, components of the Science and Engineering Practice (SEP) and the Cross Cutting Concept (CCC).
  + Grade 4, PE 3-5 ETS1-2, CTE Segment 4, pp. 315–338. In grade 4 materials we found no evidence that students understand that Engineers improve existing technologies or develop new ones to increase their benefits, decrease known risks, and meet societal demands, a component of the Cross Cutting Concept (CCC).
  + Grade 5, PE 5-LS1-1, TE Segment 2, pp. 10–30. Students constructed an argument but did not support the argument with evidence, data, or a model as stated in the Science and Engineering Practice (SEP).
  + Grade 5, PE 5-LS2-1, TE Segment 2, pp. 79–99. Students developed a model of a food web but the model developed did not describe a phenomenon as shared in the Science and Engineering Practice (SEP).
  + Grade 5, PE 5-ESS3-1, TE Segment 3, pp. 143–164. The program did not address for teachers the Crosscutting Concept Connections to Nature of Science where science findings are limited to questions that can be answered with empirical evidence.
  + Grade 5, PE 5-PS3-1, TE Segment 2, pp. 172–194. Students developed a model of a food web but the model developed did not describe a phenomenon as shared in the Science and Engineering Practice (SEP).
  + Grade 6, PE MS-LS1-3, TE Segment 1, pp. 105–138. Students did not use evidence to support or refute an explanation or a model for a phenomenon with a missing phenomenon in their use of an argument.
  + Grade 6, PE MS-LS3-2, TE Segment 3, pp. 345–382. No phenomenon was introduced to students so that they could ultimately develop and use a model to describe it.
  + Grade 6, PE MS-ESS2-6, TE Segment 1, pp. 259–304. Students were never asked to develop and use a model to describe the phenomenon.
  + Grade 6, PE MS-ESS3-5, TE Segment 4, pp. 78–113. Teachers asked the questions. Students were supposed to be asking the questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century, which they were never asked to do.
  + Grade 6, PE MS-ETS1-4, TE Segment 2, pp. 113–125. The model that students were asked to develop did not include inputs or outputs as indicated in the Science and Engineering Practice (SEP).
  + Grade 7, PE MS-LS1-7, SIAV TE Segment 2, pp. 55–63. Did not meet the standard due to students not building a model of food molecule, an integral part of the Performance Expectation (PE).
  + Grade 7, PE MS-LS2-2, CTE Segment 3, pp. 66–89. Although the Disciplinary Core Idea (DCI) was met, there is not sufficient evidence for students to use patterns to identify cause and effect relationships, a part of the Cross-cutting Concept (CCC).
  + Grade 7, PE MS-LS2-5, NS SE Segment 4, pp. 57–58. This activity does not provide criteria that needs to be followed or accomplished by students for the project. The problem is well defined, but the constraints were not given, as required by the Disciplinary Core Idea (DCI).
  + Grade 7, PE MS-ESS2-1, SIAV TE Segment 2, pp. 106–114. Provided students the opportunity to observe the phenomenon, but students were not granted the chance to develop model. This does not accomplish the PE to develop and use a model.
  + Grade 7, PE MS-ESS3-1, CSE Segment 1, pp. 352–371. Students did not develop an explanation to explain their finding of uneven mineral distribution, an integral part of the Science and Engineering Practices (SEP).
  + Grade 7, PE MS-PS1-2, SIAV TE Segment 2, pp. 161–164. The activity fulfills the DCI, but the cross cutting concept of macroscopic patterns as related to the nature of microscopic and atomic-level structure is not present.
  + Grade 7, PE MS-PS1-3, CSE Segment 1, pp. 78–94. The assignment of researching synthetic materials did not connect to the Science and Engineering Practices (SEP); students did not have the opportunity to Gather, read, and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported.
  + Grade 7, PE MS-PS1-5. SIAV TE Segment 2, pp. 213–218. The Conservation of Matter activity does not accomplish the Science and Engineering Practice (SEP) of students developing a model to describe the chemical reactions.
  + Grade 7, PE MS-PS1-6, SIAV TE Segment 2, pp. 257–266. The activity provides an opportunity to have students observe chemical reactions. Students did not have the opportunity to modify their design solution as described in the Disciplinary Core Idea (DCI).
  + Grade 7, PE MS-ETS1-4. CSE Segment 4, pp. 199–208. The activity call for students to develop a model, but the inputs and outputs are not specified within the projects as required in the Science and Engineering Practices (SEPs).
  + Grade 8, PE MS-LS3-1, TPE Segment 3, pp. 70–124. Students do not develop a model to describe why structural changes on chromosomes may affect proteins and may result in harmful, beneficial or neutral effects to the structure and function of the organism.
  + Grade 8, PE MS-LS4-1, TPE Segment 3, pp. 129–165. There is no data introduced that allows students to analyze and interpret patterns in the fossil record that document the existence, diversity, extinction and change of life forms.
  + Grade 8, PE MS-ESS1-1, TPE Segment 2, pp. 21–49. While this segment does have students model the phases of the moon, per the science practice, it does not have them make sense of the seasons through modeling, but rather provides the explanation that the earth has an axis and then has students show how that creates the seasons.
  + Grade 8, PE MS-ESS1-2, TPE Segment 2, pp. 76–11. The PE requires that students develop and use a model to describe the role of gravity.  Students are told much information about gravity in this segment, but are not asked to make sense of it through the development of a model.
  + Grade 8, PE MS-ESS1-4, TPE Segment 3, pp. 17–63. Students are not asked to construct a scientific explanation based on evidence from rock strata for how the geological time scale is used to organize earth’s history.
  + Grade 8, PE MS-PS2-2 SE Segment 1, pp. 85–123. Students are not asked to plan an investigation to provide evidence of how net forces work and so does not meet the Science Practice outlined in the PE.
  + Grade 8, PE MS-PS2-3, TPE Segment 2, pp. 175–207. Students are not prompted to ask questions around the phenomena of electric and magnetic forces in order to determine the factors that affect their strengths, as the scientific practice identified in the PE dictates.
  + Grade 8, PE MS-PS2-4, TPE Segment 2, pp. 209–254. Students are not asked to construct an argument, per the scientific practice in the PE, to support the claim that gravitational force is attractive and proportional to the mass of the two objects involved.
  + Grade 8, PE MS-PS3-1, SE Segment 1, pp. 142–170. Students are not asked to construct graphs from data relating kinetic energy to speed in order to describe the relationship per the performance expectation.
  + Grade 8, PE MS-PS3-2, SE Segment 1, pp. 130–141. While students engage in a number of activities around how potential energy changes with gravitational distance, they are not asked to develop a model that generalizes these findings, per the Science Practice identified in the PE.
  + Grade 8, PE MS-PS4-1, CTE Segment 4, pp. 22–65. Students do not use a mathematical representation to describe the relationship of the amplitude of a wave to its energy, which is the performance expectation.
  + Grade 8, PE MS-PS4-2, CTE Segment 4, pp. 71–123. While the investigations into the properties of light are strong, students are not asked to develop a model showing that behavior, per the Science Practice in the PE.
  + Grade 8, PE MS-PS4-3, CTE Segment 4, pp. 133–161. Students are not asked to compare the reliability of digital vs. analog waves, and why, but rather are asked which is “better.” The Performance Expectation demands students must state why a particular wave is reliable, not “better.”
  + Grade 8, PE MS-ETS1-2, CTE Segment 4, pp. 369–394. We did not find evidence that students engaged in the evaluation of their design criteria or in analyzing that criteria.
  + Grade 8, PE MS-ETS1-3, CTE Segment 4, pp. 369–394. We found no evidence that students were engaged in structured analysis of data from tests in their designs and then combining those criteria into new and improved designs.
* Criterion #1.2: Grade K, TPE 14-22 and Grade 1, TE Segment 2, pp. 80–93. Instructional resources did not engage the students in all three dimensions through text, discourse, and experiential learning.
* Criterion #1.3: Grade 3, TE Segment 4, pp. 1–9. We did not find that instructional resources reflected the full content of the science and engineering practice or the cross-cutting concepts at any grade level, and so resulted in a number of standards not being met.
* Criterion #1.4: Grade 7, WW SE Segment 3, pp. 52–53. Instructional resources do not progressively build students’ abilities to meet all grade level performance expectations as evidenced by grade level performance expectations not being met.
* Criterion #1.5: Grade K, TE Segment 3, pp. 1–7, and Grade 5, Segment 3, TE, pp. 1–8. No evidence was found that teacher resources support instructional opportunities and assessments that engage students in three-dimensional learning.
* Criterion #1.11: Grades K–8, CCD – SCIENTIST FACT SHEETS. We did not find that the materials include examples of people and groups who used their context, learning, and intelligence to make important contributions to society through science and technology from different demographic groups.
* Criterion #1.14: Grade 1, TE Segment 1, p. 99, and Grade 5, TE Segment 2, p. 126. Teacher resources did not provide guidance to support all students.
* Criterion #1.20: Grades K–8, Alaska. We did not find evidence throughout the materials that instructional resources include opportunities for reflection on the nature and history of science and on their science learning as indicated in the CA Science Framework.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2.11: Grade 3, Vignette S4, pp. 1–9, and Grade 7, Vignette TE, pp. 3–14. The materials include teacher resources to where supplemental resources may be found.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #3.9: Grade 2, TE pp. 285–286, and Grade 5, TE pp. 245–246. Grades 2 and 5 are good examples of how resources include rubrics for scoring performance tasks.
* Criterion #3.10: Grade 4, SE (3) p. 108, pp. 109–112, p. 164. These materials show examples of assessment tools that use multiple measures such as open-ended questions (p. 108), performance-based tasks (pp. 109–112), and short answer responses (p. 164).

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #4.3: Grades K–8, STEAM Project Library. The components of the STEAM Project Library addresses the needs of students with disabilities.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #5.6: Grades 6, TPE pp. 26–28. Material provides an example of guidance for the teacher on how to implement a classroom activity.
* Criterion #5.18: Grades 3–5, PG pp. 1–161; Grades 6–8, PG pp. 1–64; and IS-TPS Report Card. We found evidence in all grades where the parent guides can be used to inform families about the CA NGSS and student progress.
* Criterion #5.19: Grades K–8, Digital Frog; Grades K–8, Alaska K–8; and Grades K–8, Nest Family Movies. We found evidence in all grades where resources provide teachers with instructions on how outside resources can be incorporated into a three-dimensional learning, standards-based science program.

#### Edits and Corrections:

The following edits and corrections must be made as a condition of adoption:

| # | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Edit |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 6 | SE Segment 2 | 161 | No punctuation on question 4 and 5. | Add the punctuation. | Grammatical error or misspelling |
| 2 | 3 | VG Segment 1 | 4 | acalf | a calf | Grammatical error or misspelling |
| 3 | 8 | TE Segment 3 | 28 | If you have are looking… | If you are looking… | Grammatical error or misspelling |

#### Social Content Citations:

The following social content citations must be addressed as a condition of adoption:

| # | SC Code | Grade Level | Component | Page Number(s) | Current Text | Proposed Corrected Text | Reason for Citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | A.2. | 5 | Example provided uses Grade 5 Segment 2 but this is seen across all grades. | xi, 73, 163-166, 217-219, 290-293 | Repeated clip art of older white male scientist | Depict a diverse range of scientists. | Reinforces stereotypes of male scientists |
| 2 | L.1. | 3 | WordWall Segment 4 | 143 | Activity requires Monopoly-style houses | Remove Monopoly name and replace with miniature house figures. | Brand names and corporate logos |
| 3 | A.1.  A.2. | 3 | WordWall  Segment 2 | 90 | States “Both the boys were really good at math, but that was because they had learned those skills from both parents,” and the picture is of a family with female members. | Replace “boys” with “children.” | Equal portrayal is lacking and adverse reflection of female scientists. |
| 4 | G.3. | K | SE Segment 1 | 59 | First, daddy says Grace. | Eliminate the sentence. | Grace does not reflect religious diversity. |

### Twig Education, Inc., *Twig Science*, Grades K–6 (integrated)

#### Program Summary:

Twig Science includes: Twig Science includes: Twig Science Teacher Editions (TE), Twig Science Student Twig Books (TB), Leveled Readers (LR) (On-, Above, Below and English Learner Levels), www.twigscience.com, www.twigsciencetools.com, www.twigsciencereporter.com.

#### Recommendation:

Twig Science is recommended for adoption for K–6i because the instructional materials include content as specified in the Next Generation Science Standards for California Public Schools (CA NGSS) and meet all the criteria in Category 1 with strengths in categories 2–5.

#### Criteria Category 1: Alignment with the CA NGSS Three-Dimensional Learning

The program includes content as specified in the CA NGSS and includes a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations.

**Citations:**

* Criterion #1: Grade K, PE K-LS1-1, Module 1, TE p. 58/TB p. 15; Grade 1, PE 1-LS1-2, Module 2, TE p. 120/TB p. 45; Grade 2, PE 2-ESS2-1, Module 3, TE p. 18/TB p. 7; Grade 3, PE 3-PS2-1, Module 1, TE p. 121/TB p. 35; Grade 4, PE 4-ESS 3-2, 3-5 ETS1-1, Module 4**,** TE p. 133/TB pp. 67–68; Grade 5, PE 5-ESS2-1, Module 3, TE p. 6; Grade 6, PE MS-LS1-1, Module 1, TE p. 246. The materials align to the CA NGSS, adopted by the SBE in September 2013.
* Criterion #2: Grade 4, Module 2, TE p. 106; Grade 3, Module 2, TE p. 184. There are examples of opportunities for students to use text, engage in discourse, and employ experiential learning to develop mastery of the three integrated dimensions (SEPs, CCCs, and DCIs) of the CA NGSS.
* Criterion #7: Grade 1, Module 1, TE p. 217; Grade 6, Module 1, TE p. 199. These are examples of the use of primary sources such as scientific research, and photographs that are integrated into the three-dimensional learning, as grade level appropriate.
* Criterion #13: Grade 5, Module 3, TE p. 160; Grade 4, Module 4, TE p. 19. The materials provide support for students to develop grade-level appropriate academic language and use discipline-specific vocabulary through their use in context of classroom discourse around science phenomena and written grade level appropriate text resources.
* Criterion #18: Grade 5, Module 3, TE p. 178; Grade 4, Module 2, TE p. 57. The instructional materials provide support to students to address the applications of science in the development of technologies and in fields such as agriculture, medicine, engineering, and environmental protection. Resources support students to reflect on the interconnection between science, engineering, and technology, and to discuss ethical and regulatory issues.

#### Criteria Category 2: Program Organization

The organization and features of the instructional materials support instruction and learning of the CA NGSS.

**Citations:**

* Criterion #2: Grade 3, Module 2, TE pp. 210–217, TB pp. 73–78, TE pp. 232–239 and TB pp. 82–85; Grade 4, Module 5, TE pp. 54–62 and TB pp. 25–26. These are examples of instructional resources that support teacher questioning strategies as a tool to access students’ knowledge and skills, promote student-to-student discourse, and guide student learning.
* Criterion #3: Grade 1, Module 3, TE CA NGSS Framework Alignment foldout located at the back cover of the TE; Grade 5, Module 4, CA NGSS Framework Alignment foldout located at the back cover of the TE. These are examples of instructional resources that explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.
* Criterion #4: Grade 1, Module 1, TE pp. 75–129 and TB pp. 23–36; Grade 4, Module 4, TE pp. 200–226 and TB pp. 87–96. These are examples of teacher resources that support student engagement in three-dimensional learning and suggest research-based strategies to elicit student thinking and support student discourse.
* Criterion #7: Grade 2, Module 2, TE pp. 2–3, TE pp. 48–49, TE pp. 94–97, TE pp. 144–147, and TE pp. 202–205; Grade 6, Module 3, TE pp. 2–3, TE pp. 90–91, TE pp. 186–187, and TE pp. 250–251. These are examples of resources that include explanations to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the PEs of the CA NGSS. Teacher resources support understanding of how PEs are developed within units and across units throughout a year.

#### Criteria Category 3: Assessment

The program includes multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provides guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.

**Citations:**

* Criterion #1: Grade 4, Module 4, TE p. 94; K–6 online multiple choice assessments; Grade 5, Module 1, TE p. 224. Assessments in the instructional resources reflect the three dimensional nature of the CA NGSS and the CA Science Framework. Assessment tools measure what students know and are able to do as defined by the PEs in the CA NGSS.
* Criterion #3: Grade 2, Module 3, TE p. 166; Grade 4, Module 2, TE p. 202. Grades two and four are examples of how teacher materials provide support to engage students in tasks that provide both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.
* Criterion #4: Grade K, Module 4, TE p. 232; Grade 6, Module 3, TE p. 270. Grades kindergarten and six are examples of how brief formative assessment tools and practices at key stages in the unit of instruction are designed to elicit current understandings and preconceptions and to provide evidence of students’ progress toward mastering the three-dimensional learning called for in the CA NGSS and the CA Science Framework. The teacher materials also provide teachers with strategies of how to address preconceptions during instruction, and the strategies are differentiated for different age levels.
* Criterion #7: Grade 1, Module 4, TE p. 156; Grade 5, Module 2, TE p. 223. Grades one and five are good examples of summative assessments designed to provide valid, reliable, and fair measures of students’ progress and attainment of three-dimensional learning after a period of instruction. Multiple component tasks include hands on tasks, performance tasks, open-ended constructed response, and student work samples.

#### Criteria Category 4: Access and Equity

Program materials ensure universal and equitable access to high-quality curriculum and instruction for all students and provide teachers with suggestions for differentiation for students with special needs.

**Citations:**

* Criterion #1: Grade 4, Module 1, TE p. 56. Materials provide examples of how the instructional resources reflect the goals of access and equity, as outlined in chapter 10 of the CA Science Framework.
* Criterion #2: Grade 5, TB Module 2, TE pp. 70–77, pp. 100–105. Strong supports for English learners in all modules of each grade, including using diagrams, photographs, and videos to support accessibility of the content.
* Criterion #3: Grade 1, Module 2, TE p. 6. Teacher’s Edition has each Driving Question accompanied by supports and scaffolds for English learners, special needs students, and some cultural concerns. There is also a challenge for students who are above level and/or finish early.
* Criterion #4: Grade 5, TB Module p. 4, p. 11, p. 21, p. 40; Grade 2, TB Module 2, p. 23, pp. 95–96. Student books contain images of students of color, mixed groups of students working together, instances of girls engaging in science, and female scientists.

#### Criteria Category 5: Instructional Planning and Support

The instructional materials provide coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

**Citations:**

* Criterion #1: Grade K–6, all modules. Resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.
* Criterion #2: Grade 4, Module 2, TE pp. 16–23. The teacher resources provide an estimated instructional time for each activity, lesson, chapter, and unit which allows for student engagement in the SEPs and engineering design projects.
* Criterion #12: Grade 5, Module 1, TE p. 3, p. 5. Instructional resources include a list of consumable and non-consumable equipment and materials required for each lesson and address safety issues included in the Science Safety Handbook for California Public Schools (CDE 2014).
* Criterion #14: Grade 5, Module 1, TE p. 3, p. 53, p. 167, p. 285, and p. 321. Electronic learning resources, including technology-based assessments, support instruction that is connected explicitly to the CA NGSS, have a well-designed user interface, provide technical support, and include suggestions for appropriate and differentiated use.

#### Edits and Corrections: None

#### Social Content Citations: None

## Appendix A: Evaluation Criteria

**Chapter 13––2016 Science Framework for California Public Schools Kindergarten through Grade Twelve**

### Criteria for Evaluating Instructional Resources for Kindergarten Through Grade Eight

The adoption of new science instructional resources will be guided by the criteria described below. To be adopted, resources must meet Category 1, Alignment with CA NGSS Three-Dimensional Learning, in full. Resources will be evaluated holistically for strengths in the other categories of Program Organization, Assessment, Access and Equity, and Instructional Planning and Support. This means that while a program may not meet every criterion listed in those categories, they must on balance meet the intent stated in the introductory paragraph of each category to be eligible for state adoption. Programs that do not meet Category 1 in full and do not show strengths in each one of the other four categories will not be adopted. These criteria are designed to be a guide to publishers in developing their instructional resources and to local educational agencies when selecting instructional resources for their students. To assist in the evaluation of instructional resources, publishers will use SBE-approved standards map and evaluation criteria map templates, developed and supplied by the California Department of Education (CDE), to provide evidence that the program provides students a path to meet the appropriate grade-level performance expectations of the CA NGSS by the end of the year.

It is the intent of the SBE that these criteria be seen as neutral on the format of instructional resources. Print-based, kit-based, digital, interactive online, and other types of programs may all be submitted for adoption as long as they are aligned to the evaluation criteria. Any gross inaccuracies or deliberate falsification revealed during the review process may result in disqualification; any found during the adoption cycle may subject the program to removal from the list of state-adopted instructional resources. Gross inaccuracies and deliberate falsifications are defined as those requiring changes in instructional content. All authors listed in the instructional program are held responsible for the content. Beyond the title and publishing company’s name, the only name to appear on a cover and title page shall be the actual author or authors.

The criteria for the evaluation of science instructional resources for kindergarten through grade eight are organized into five categories:

1. **Alignment with CA NGSS Three-Dimensional Learning:** Instructional resources include content as specified in the CA NGSS. Programs must include a well-defined sequence of instructional opportunities that provides a path for all students to become proficient in all grade-level performance expectations to be eligible for adoption.
2. **Program Organization:** Instructional resources support instruction and learning of the CA NGSS and include such features as the organization, coherence, and design of the program; chapter, unit, and lesson overviews; and glossaries.
3. **Assessment:** Instructional resources include multiple models of both formative and summative assessment tasks for measuring what students know and are able to do and provide guidance for teachers on how to use scoring rubrics and interpret assessment results to guide instruction.
4. **Access and Equity:** Instructional resources should include suggestions for teachers on how to differentiate instruction to meet the needs of all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long-term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities, gifted learners, students below grade level in reading comprehension or mathematics skills and knowledge, and students below grade level in science skills and knowledge.
5. **Instructional Planning and Support:** Information and resources suggest coherent guidelines for teachers to follow when planning three-dimensional instruction and are designed to help teachers provide effective standards-based instruction.

Resources that fail to meet the criteria in Category 1: Science Content/Alignment with the Standards, will not be considered suitable for adoption. All criteria statements in Category 1 must be met for a program to be adopted. The criteria for Category 1 must be met in the core resources or via the primary means of instruction, rather than in ancillary components. In addition, programs must have strengths in each of categories 2 through 5 to be suitable for adoption. Extraneous resources should be minimal and clearly purposeful.

#### Category 1: Alignment with the CA NGSS Three-Dimensional Learning

All programs must include the following features:

1. Instructional Resources, as defined in EC Section 60010(h), must align to the CA NGSS, adopted by the SBE in September 2013 for kindergarten through grade five and resources from grades six through eight must be aligned either to the Integrated Learning Progression Courses for Middle Grades Six through Eight adopted in November 2013 found in chapter 5 of the CA Science Framework or, alternatively, the Discipline Specific Courses for Grades Six through Eight found in chapter 6 of the CA Science Framework. Alignment shall be determined by assessing a full year’s program, not unit by unit. When developing Discipline Specific courses, the publisher should consider which disciplinary core ideas, if any, from the other science domains would need to be introduced in specific grade-level courses in order to facilitate students’ full understanding of each performance expectation by the end of the year. For this reason, some units of the Discipline Specific Course model contain supplemental Disciplinary Core Ideas (DCIs) from other domains.
2. Instructional resources engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the Science and Engineering Practices (SEPs), Crosscutting Concepts (CCCs), and DCIs.
3. Instructional resources reflect the full content of the CA Science Framework allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.
4. Instructional resources progressively build students’ abilities to meet all grade-level Performance Expectations (PEs) through a three-dimensional instructional sequence.
5. Teacher resources support instructional opportunities and assessments that engage students in three-dimensional learning.
6. Instructional resources shall use proper grammar and spelling (EC Section 60045).
7. Use of primary sources, such as scientific research, case studies, and photographs, are integrated into the three-dimensional learning, as grade-level appropriate.
8. Instructional resources introduce real-world phenomena and systems that students can investigate, model, and explain using the targeted DCIs and CCCs.
9. Instructional resources focus on the application of science to be learned (e.g., medicine, engineering, environmental science) using authentic and meaningful real-world applications and scenarios that are specific to California when appropriate.
10. The science curriculum is enriched with opportunities for students to access informational texts, literature, simulations and other media related to science and engineering and it presents diverse examples of notable scientists and engineers.
11. Resources include examples of people and groups who used their context, learning, and intelligence to make important contributions to society through science and technology from different demographic groups: Native Americans; African Americans; Mexican Americans and other Latino groups; Asian Americans; Pacific Islanders; European Americans; lesbian, gay, bisexual, and transgender Americans; persons with disabilities; women; and members of other ethnic and cultural groups. Resources emphasize the importance of science education to all members of our society in a way that is culturally and socially authentic [EC Sections 51051, 60040(b), and 60044(a)].
12. Student assignments make linkages and are consistent with the grade-level appropriate expectations in the California Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects (CA CCSS for ELA/Literacy), the California English Language Development Standards: Kindergarten through Grade 12 (CA ELD Standards), and California Common Core State Standards: Mathematics (CA CCSSM) and are consistent with the guidance in the CA Science Framework.
13. The materials provide support for students to develop grade-level appropriate academic language and discipline-specific vocabulary through their use in context in classroom discourse around science phenomena (science talk), and through well-written and grade-level appropriate text resources.
14. Teacher resources provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.
15. Instructional resources, where appropriate, examine humanity’s place in ecological systems and the necessity for the protection of the environment (EC Section 60041). Resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency and adopted by the SBE (Public Resources Code Section 71301) in context and aligned to the CA NGSS, as exemplified in Appendix 2.
16. Instructional resources include explanations about human organ and tissue donation, as age and grade-level appropriate, aligned to the relevant standards and related science research (EC Section 33542).
17. Instructional resources, as age and grade-level appropriate, discuss trends and research in science, including medical research, neuroscience and neurological diseases (such as Amyotrophic Lateral Sclerosis, or Lou Gehrig’s disease) and inform students about career pathways in science.
18. Instructional resources support students to address the applications of science in the development of technologies and in fields such as agriculture, medicine, engineering, and environmental protection. Resources support students to reflect on the interconnections between science, engineering and technology, and to discuss ethical and regulatory issues that can arise when new science and technology allow new capabilities.
19. Instructional resources engage students in the SEPs. Teacher resources will include discussion of expendable and permanent equipment and materials necessary to conduct activities, guidance on obtaining those materials inexpensively, recycling or disposing of materials, and explicit instructions for organizing and safely conducting instruction, labs and activities. (Aligned to the Science Safety Handbook for California Public Schools, California Department of Education [CDE] 2014).
20. Instructional resources include opportunities for reflection on the nature and history of science and on their science learning as indicated in the CA Science Framework.

#### Category 2: Program Organization

Sequential organization and a coherent instructional design of the science program provide structure for what students should learn each year and allow teachers to facilitate exposure to the content efficiently and effectively, incorporating the three dimensions of the CA NGSS. Instructional resources must have strengths in these areas to be considered for adoption:

1. Sequential organization of the material provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.
2. Instructional resources support teacher questioning strategies as a tool to assess students' knowledge and skills, promote student-to-student discourse, and guide student learning.
3. Instructional resources explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.
4. Teacher resources provide support to engage students in three-dimensional learning and suggest research-based strategies to elicit student thinking and support student discourse.
5. The instructional resources are grade-level specific and provide instructional content for 180 days of instruction for at least one daily class period, including an estimate of the necessary instructional time.
6. The content is well organized and presented in a manner consistent with providing all students an opportunity to achieve the essential knowledge and skills described in the CA NGSS and the CA Science Framework.
7. Resources include explanations to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the PEs of the CA NGSS. Teacher resources support understanding of how PEs are developed within units and across units throughout a year.
8. Topics selected for in-depth study are developed through their role in explaining selected phenomena, chosen to support students in building the knowledge and abilities needed to achieve proficiency in a bundle of PEs.
9. Resources encourage the meaningful use of technologies such as video clips or computer simulations to investigate phenomena that cannot be directly experienced in the classroom; effective measuring tools (computer linked thermometer or range-finder, digital scales, etc.); and spreadsheets and other software to record, display, and analyze data, etc. In these contexts, the materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.
10. Resources suggest appropriate engineering design tasks in varied contexts as a path to understanding and applying the science ideas being learned. Where appropriate, resources suggest computational tools and software to support the design process and allow students to model or simulate their designed products.
11. Teacher resources include references to where related supplemental open educational resources may be found.
12. Ancillary and support resources are an integral part of the instructional program and are clearly aligned with the CA NGSS.
13. Course descriptions are aligned to a specific progression of courses across each grade band so that students completing the course sequence can meet all grade band CA NGSS PEs. The progression builds ideas in a planned sequence, so that each unit builds progressively on prior learning. The logic of the progression is described and explained in teacher resources.
14. Suggested student tasks, including end-of-chapter or culminating problems and exercises, are three-dimensional in nature and build in complexity throughout the year and across years.

#### Category 3: Assessment

The program provides teachers with assistance in using both formative and summative assessment tasks for planning and modifying instruction, and for measuring the effectiveness of instruction through progress monitoring. Instructional resources must have strengths in these areas to be considered suitable for adoption:

1. Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and the CA Science Framework. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS. Assessments stress performance tasks rather than rote memorization.
2. Entry-level assessments for each unit are provided to help teachers elicit students’ prior knowledge and preconceptions and gauge their facility for using the SEPs and CCCs. Information is provided to teachers to help them use the results of those assessments to guide instruction and to determine modifications for specific students or groups of students.
3. Teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.
4. Brief formative assessment tools and practices at key stages in the unit of instruction are designed to elicit current understandings and preconceptions and to provide evidence of students’ progress toward mastering the three-dimensional learning called for in the *CA NGSS* and the *CA Science Framework*. In addition to providing formative assessment tools, instructional materials must also provide teachers with strategies of how to address preconceptions during instruction. These strategies are to be differentiated for different age levels.
5. Assessments should yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards.
6. Teacher resources supply a differentiated path for diverse students to build toward the PEs of the CA NGSS. In particular, formative assessment tasks are designed to support teachers in collecting and analyzing data about student conceptual understanding.
7. Summative assessments designed to provide valid, reliable and fair measures of students' progress and attainment of three-dimensional learning after a period of instruction (for example at the end of a chapter, unit, or course) should involve multi-component tasks including, but not limited to: hands-on or simulation-based performance tasks, open-ended constructed response problems, and scoring of portfolios of student work collected over the course of instruction. Selected-response items, if used, should require analysis and reasoning to answer them, rather than simply memorized responses.
8. Students’ progress toward meeting the three-dimensions of the CA NGSS is assessed through both writing and performance tasks. Student written responses are consistent with the grade-level writing and mathematics requirements in the CA CCSS for ELA/Literacy and the CA CCSSM.
9. Resources include student work expectations and analytical rubrics for scoring performance tasks and, where possible, examples of student work at each scoring level. Resources include an explanation of the use of rubrics by teachers and students to evaluate the progress of students’ models, projects, writing, and progression toward understanding.
10. Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the CA Science Framework, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.
11. Assessment tools include guidance on measuring students’ ability to apply information literacy skills when obtaining and evaluating information about science topics.

#### Category 4: Access and Equity

The goal of science programs in California is to ensure universal and equitable access to high-quality curriculum and instruction for all students (all standards, all students) so they can meet or exceed the PEs as described in the CA NGSS. To reach the goals of access and equity, instructional resources must provide teachers with the necessary content and pedagogical tools to teach all students the CA NGSS. In particular, the instructional resources provide support for differentiated instruction for students with special needs, including standard English learners, English learners, long-term English learners, students living in poverty, foster youth, girls and young women, advanced learners, gifted learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills or mathematics skills. Resources should incorporate recognized principles, concepts, and research-based strategies to meet the needs of students and provide equal access to learning, which could include Universal Design for Learning, Response to Intervention and Instruction, and Multi-tiered System of Supports, as outlined in chapter 10 on access and equity, in the CA Science Framework. Instructional resources must have strengths in these areas to be considered for adoption:

1. The instructional resources should reflect the goals of access and equity outlined in chapter 10 of the CA Science Framework.
2. At every grade level, suggested lessons and teacher resources will include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.
3. Instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate, at every grade level.
4. Teacher resources supply a differentiated path for all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.

#### Category 5: Instructional Planning and Support

The resources present explicit guidance to help teachers plan instruction. The resources should be designed to help teachers provide instruction that ensures opportunities for all students to learn the essential skills and knowledge specified in the CA NGSS. The resources must have strengths in these areas of instructional planning and teacher support to be considered suitable for adoption:

1. Program resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.
2. The teacher resources provide an estimated instructional time for each activity, lesson, chapter, and unit which allows for student engagement in the SEPs and engineering design projects.
3. The teacher resources provide guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons, if necessary, to ensure three-dimensional learning.
4. Program resources address the articulation of three-dimensional learning by identifying the knowledge and skills learned in prior grades and prior grade-level units, and address how to connect and build on these learnings to help students develop increasingly sophisticated ideas.
5. Teacher resources provide background knowledge about the SEPS, DCIs, and CCCs and discuss the desired level of SEPs in which students will engage, including how the three dimensions are integrated into units and lessons.
6. All suggested student tasks, including classroom activities, end-of chapter tasks, suggested out-of-school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Assessment keys and rubrics are provided.
7. Teacher and student resources have correlating page numbers in print resources or corresponding references in electronic resources.
8. Teacher resources include a planning guide describing the relationships between the components of the program and how to use all the components to meet all of the CA NGSS.
9. Instructional objectives for three-dimensional learning are explicitly stated and clearly identifiable in the teacher resources. Teacher resources include guidance on explaining these objectives to parents.
10. While learning goals may be explicitly stated in the teacher materials, student resources will provide experiences that clearly build to the development of those learning goals without explicitly stating those goals prior to the instruction. In most cases, prior to instruction, introduce a phenomenon or guiding question or the end result of the lesson series.
11. Lessons include instructional strategies aligned to the CA NGSS, the CA Science Framework and based on current and confirmed research (e.g., teacher facilitated student-led conversations, as well as hands-on activities and laboratories). Resources are clearly connected to and support the goals of the CA CCSSM and CCSS for ELA/Literacy.
12. Instructional resources should include a list of consumable and non-consumable equipment and materials required for each lesson and address safety issues included in the Science Safety Handbook for California Public Schools (CDE 2014).
13. Terms from the CA NGSS and CA Science Framework are used appropriately and accurately in the instructions.
14. Electronic learning resources, including technology-based assessments, support instruction that is connected explicitly to the CA NGSS, have a well-designed user interface, provide technical support, and include suggestions for appropriate and differentiated use.
15. The teacher resources provide background information about important events, diverse people, places, ideas, and scientific principles appearing in, but not limited to the CA NGSS and CA Science Framework.
16. Teacher resources discuss and identify preconceptions typical at a grade span (such as inaccurate explanations based on everyday experiences or vernacular conflicts between the everyday use of a term and the meaning of the term in a scientific context) and provide guidance to help students build more accurate understandings of the scientific concept or process.
17. Suggested homework, if included, extends and reinforces classroom instruction. Homework should also provide opportunities to support student learning through shared experiences with family. Opportunities may include projects, journaling, reflection, or interviews with parents around a concept or activity such as family history used in genetics, decomposition in gardening, or chemistry in cooking.
18. The program should include resources that teachers can use to inform families about the CA NGSS and student progress.
19. Resources provide teachers with instructions on how outside resources (e.g., guest speakers; museum visits; electronic field trips, informal science education providers including state parks, nature parks, science centers, local organizations, school gardens or schoolyard open spaces, local parks, etc.) can be incorporated into a three-dimensional learning, standards-based science program.
20. Using guidance from the Model School Library Standards for California Public Schools, resources provide information for teachers on the effective use of library and media resources that best complement the standards.
21. The teacher resources provide guidance and support for engaging students in collaborative conversations using grade level appropriate academic vocabulary for scientific discourse.

## Appendix B: Learning Resources Display Centers

Learning Resource Display Centers (LRDCs) are sites where instructional materials programs submitted for the 2018 Science Adoption are on public display. Please call for hours, as staffing varies.

**Fresno County Office of Education**Instructional Technology Services  
Brigeen Radoicich   
1111 Van Ness   
Fresno, CA 93721  
559-497-3711

**Humboldt County Office of Education**Colby Smart  
901 Myrtle Avenue   
Eureka, CA 95501   
707-445-7088

**Kern County Superintendent of Schools Office**The Learning Center  
Teresa Twisselman   
2020 K Street  
Bakersfield, CA 93301  
661-636-4645

**Sacramento County Office of Education**David Chun/Parrish Chavez  
Bradview Warehouse  
3735 Bradview Drive, Suite 200  
Sacramento, CA 95827  
916-228-2574

**San Diego County Office of Education**

Oscar Ramirez  
5304 Metro Street, Suite C  
San Diego, CA 92110  
619-718-4987

**Stanislaus County Office of Education**Debra Boggs  
Director 1, K–12 Literacy   
1100 H Street  
Modesto, CA 95354   
209-238-1305

**Tulare County Office of Education**Educational Resource Services  
Kim Rice   
7000 Doe Avenue, Suite A   
Visalia, CA 93291   
559-651-3031

**University of California, Riverside**Rivera Library  
Christina Cicchetti   
900 University Ave   
Riverside, CA 92521  
951-827-3715

**University of California, Santa Barbara**Davidson Library, Curriculum Lab  
Lorna Lueck   
Santa Barbara, CA 93106-9010   
805-893-7111

**Ventura County Office of Education**  
Rene Hohls  
5100 Adolfo Road   
Camarillo, CA 93012  
805-437-1340