**This advisory recommendation has not been approved by the Instructional Quality Commission or the State Board of Education.**

# REVIEW PANEL ADVISORY RECOMMENDATION 2018 SCIENCE ADOPTION OF INSTRUCTIONAL MATERIALS

| **Publisher** | **Program** | **Grade Level(s)** |
| --- | --- | --- |
| TCI | Bring Science Alive! California Program 6-8 | 6–8d |

## 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.

## 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.

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* 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:

The panel identified no social content violations.

California Department of Education, August 2018