**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)** |
| --- | --- | --- |
| TPS Publishing | Creative Science Curriculum | K–8d |

## 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.

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**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 at el. 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 CTE’s, 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, p.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 panel recommends the following edits and corrections:

| # | 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 panel identified the following social content violations:

| # | 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 p.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 | 5th | 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. |

California Department of Education, August 2018