**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 Integrated Program 6–8 | 6–8i |

## 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.

## 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>

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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/biographies/1014?student\_view=true [Link is no longer available.]

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/biographies?lesson\_id=2492&student\_view=true [Link no longer available.]

G6–8.S.Resources.Career Profiles https://subscriptions.teachtci.com/shared/programs/292/career\_profiles?lesson\_id=2492&student\_view=true [Link no longer available.]

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 |  |  | 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. | Add questions 8-12. | 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 | Add questions 11-12 and task that goes with rubric. | 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 | S | Seg3.L17.Vocabulary Cards  https://subscriptions.teachtci.com/shared/programs/290/lessons/2478/glossary\_cards&student\_view=true | Link not found  https://subscriptions.teachtci.com/shared/programs/290/lessons/2478/glossary\_cards&student\_view=true | Fix link | Broken link |
| 11 | 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 |
| 12 | 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 |
| 13 | 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 |
| 14 | 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 |
| 15 | 6-8 | S | Resources.  Biographies  https://subscriptions.teachtci.com/shared/programs/292/biographies/995?student\_view=true | Article on Stephen Hawking is written in present tense. | Correct article verb tenses to past tense. | Grammatical error |
| 16 | 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 |
| 17 | 7 | S | Seg3.L19.S2–3 (Text)  https://subscriptions.teachtci.com/shared/sections/17685?locale=en&program\_id=273 | (Broken link when clicking for the text.)  https://subscriptions.teachtci.com/shared/sections/17685?locale=en&program\_id=273 | Fix link | Broken link |
| 18 | 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. |
| 19 | 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 |
| 20 | 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 |
| 21 | 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 |
| 22 | 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 | Add question 6 or change text to “see # ?” | Are there supposed to be 6 questions in this section? |
| 23 | 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 |
| 24 | 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:**

The panel identified the following social content violation:

| # | SC Code | Grade Level | Component | Page number(s) | Current text | Proposed corrected text | Reason for citation |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | L.1 | 8 | T | Seg6.L32.LG  Slides 18–22 with Handouts A and B  https://subscriptions.teachtci.com/shared/programs/292/lessons/2490/slide\_shows/23492/present?student\_view=false | Choose a GMO for your group. Which one will you research:  Some GMO options are:  glow fish  Bt corn  Transgenic pigs for xenotransplatation (organ transplants)  Spider silk producing goats  Flavr Savr tomato  Brainbow mouse  Roundup Ready soybeans  SunUp papaya  golden rice  Or, find your own: | Replace brand name “Roundup” | Acceptable use of brand name? |

California Department of Education, August 2018