

Note: Upon the recommendation of the Review Panel Advisory Recommendation, the Instructional Quality Commission recommended this program for adoption in October 2018 and the CA State Board of Education approved the recommendation in November 2018.

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)
Carolina Biological Supply Company	<i>Building Blocks of Science 3D</i>	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.

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