**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)** |
| --- | --- | --- |
| Impact Science Education, Inc. | Impact Science: Middle School Program for CA NGSS | 6–8d |

## 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.

## 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.

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* 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: Grade 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 PE’s 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 PE’s 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 Earths Place in the Universe, Lesson 2 p.7. The panel found that 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 SEP’s, DCI’s, and CCC’s and discusses the desired level of SEP’s 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 5 E 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, 1st paragraph | and the communication | and then communicate | Missing the “n” |
| 2 | 8 | Unit 9 Lesson 9 | 3 | “mediums” (highlighted yellow) | “media” (Correct plural form) | Incorrect plural form for “medium” |

## 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.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 |

California Department of Education, August 2018