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| SC Science Grade Level Instructional Materials Review Process FormFourth Grade |

*Purpose: This process is designed to assist schools/districts with decision making regarding the adoption of science materials as correlated to the South Carolina College- and Career-Ready Science Standards 2021.*

*Directions: Use the* [*South Carolina College-and Career-Ready Science Standards 2021*](https://ed.sc.gov/instruction/standards-learning/science/standards/south-carolina-college-and-career-ready-science-standards-2021-approved/) *to determine how the instructional material(s) rate in providing opportunities for “Learning in Three Dimensional Science Classrooms” for each performance expectation. Specifically, how closely does each instructional material address the Science and Engineering Practices (SEPs), Disciplinary Core Ideas (DCIs) and Crosscutting Concepts (CCCs) as identified in the corresponding color for each performance expectation below. Total the ratings of the performance expectations to provide an overall rating for the instructional material. A notes section has been provided for observations and general information that might support the decision-making process.*

***Instructional Material Providers / Title(s):*** *All science* [*instructional materials*](https://ed.sc.gov/finance/instructional-materials/instructional-materials-and-district-selections/2022-23-instructional-materials-adoption-information/draft-2022-23-list-of-adopted-instructional-materials-for-science-k-8/) *available for the South Carolina Science adoption are listed below alphabetically based on provider. Order of appearance* ***does not indicate*** *a preference of curricular material.*

* Accelerate Learning Inc
	+ *STEMscopes 3D*
* Amplify Education, Inc
	+ *Amplify Science*
* Carolina Biological Supply Company
	+ *Building Blocks of Science 3D*
	+ *Smithsonian Science for the Classroom*
* Cengage Learning, Inc.
	+ *National Geographic Exploring Science*
* Discovery Education, Inc.
	+ *Discovery Education South Carolina Elementary Science*
* Great Minds PBC
	+ *PhD Science*
* Houghton Mifflin Harcourt Publishing Company
	+ *HMH Into Science*
* McGraw Hill LLC
	+ *South Carolina Inspire Science*
* SASC, LLC d/b/a Activate Learning
	+ *Activate Learning PRIME*
* Savvas Learning Company LLC
	+ *South Carolina Elevate Science*
* Teachers' Curriculum Institute
	+ *Bring Science Alive! Exploring Science Practices*
* TWIG Education, Inc
	+ *Twig Science South Carolina*

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| **4th Grade** |
| Science and Engineering Practices (SEPs):* Asking Questions and Defining Problems
* Developing and Using Models
* Planning and Carrying Out Investigations
* Analyzing and Interpreting Data
* Constructing Explanations and Designing Solutions
* Engaging in Argument from Evidence
* Obtaining, Evaluating and Communicating Information
 | Disciplinary Core Ideas (DCI):* Definitions of Energy
* Conservation of Energy and Energy Transfer
* Relationship between Energy and Forces
* Energy in Chemical Processes and Everyday Life
* Wave Properties
* Electromagnetic Radiation
* Information Technologies and Instrumentation
* Information Processing
* Structure and Function
* The History of Planet Earth
* Earth Materials and Systems
* Biogeology
* Plate Tectonics and Large-Scale System Interactions
* Natural Resources
* Defining and Delimiting an Engineering Problem
* Developing Possible Solutions
* Optimizing the Design Solution
* Influence of Engineering, Technology and Science on Society and the Natural World
* Interdependence of Science, Engineering and Technology
 | Crosscutting Concepts (CCCs):* Patterns
* Cause and Effect
* Systems and System Models
* Energy and Matter
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**SC SDE 2022-23 Instructional Materials** [**Adoption Information**](https://ed.sc.gov/finance/instructional-materials/instructional-materials-and-district-selections/2022-23-instructional-materials-adoption-information/)**:**

* State Adopted [Instructional Materials](https://ed.sc.gov/finance/instructional-materials/instructional-materials-and-district-selections/2022-23-instructional-materials-adoption-information/draft-2022-23-list-of-adopted-instructional-materials-for-science-k-8/) for Science (K–8)
	+ *State Adopted* [*Supplemental*](https://ed.sc.gov/finance/instructional-materials/instructional-materials-and-district-selections/2022-23-instructional-materials-adoption-information/draft-2022-23-list-of-adopted-supplemental-instructional-materials-for-science-k-8/) *Instructional Materials for Science (K–8)*
	+ [*Ancillary And Services List*](https://ed.sc.gov/finance/instructional-materials/instructional-materials-and-district-selections/2022-23-instructional-materials-adoption-information/draft-2022-23-ancillary-and-services-list-for-adopted-science-k-8-materials/) *for Adopted Instructional Materials for Science (K-8)*

| **4th Grade** |
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| *\*Use the following scale to determine the rating for each Instructional Material (IM) based on the performance expectation:* |
| **Fully** addresses  | **Partially** addresses  | **Minimally** addresses  | **Does not** address  |
| 3 | 2 | 1 | 0 |

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| ***Performance Expectations:*** *The standard that represents the three-dimensional end-of-instruction goal aligned to what students should know, understand, and be able to perform to show proficiency in science and engineering.* | **IM:**  | **IM:** | **IM:** | **IM:** | **IM:** |
| 4-PS3-1. Use evidence to construct an explanation relating the speed of an object to the energy of that object. |  |  |  |  |  |
| **4-PS3-2.** Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. |  |  |  |  |  |
| **4-PS3-3.** Ask questions and predict outcomes about the changes in energy that occur when objects collide. |  |  |  |  |  |
| **4-PS3-4.** Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. |  |  |  |  |  |
| **4-PS4-1.** Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. |  |  |  |  |  |
| **4-PS4-2.** Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. |  |  |  |  |  |
| **4-PS4-3.** Generate and compare multiple solutions that use patterns to transmit information. |  |  |  |  |  |
| **4-LS1-1.** Construct an argument that plants and animals have internal and external structures that function together in a system to support survival, growth, behavior, and reproduction. |  |  |  |  |  |
| **4-LS1-2.** Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. |  |  |  |  |  |
| **4-ESS1-1.** Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. |  |  |  |  |  |
| **4-ESS2-1.** Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. |  |  |  |  |  |
| **4-ESS2-2.** Analyze and interpret data from maps to describe patterns of Earth’s features. |  |  |  |  |  |
| **4-ESS3-1.** Obtain and combine information to describe that energy and fuels are derived from natural resources and how their uses affect the environment. |  |  |  |  |  |
| **4-ESS3-2.** Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans. |  |  |  |  |  |
| The content is engaging for students.  |  |  |  |  |  |
| Virtual labs are included AND appropriate. |  |  |  |  |  |
| The materials provided are easy to use by all (*students and teachers*). |  |  |  |  |  |
| Materials are equitable for all learners. |  |  |  |  |  |
| Kit materials are included and support student learning.  |  |  |  |  |  |
| All materials are compatible with current LMS. |  |  |  |  |  |
| Included videos are relevant and engaging. |  |  |  |  |  |
| Materials exemplify evidence of student learning. |  |  |  |  |  |
| These materials are described as “high quality”. |  |  |  |  |  |
| These materials are described as “effective”. |  |  |  |  |  |
| Additional Criteria: |  |  |  |  |  |
| **Total Score:** |  |  |  |  |  |

Notes: