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| SC Science Grade Level Instructional Materials Review Process FormEighth 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*
* Discovery Education, Inc.
	+ *Discovery Education South Carolina Elementary Science*
* Houghton Mifflin Harcourt Publishing Company
	+ *HMH Into Science*
* McGraw Hill LLC
	+ *South Carolina Inspire Science*
* SASC, LLC d/b/a Activate Learning
	+ *IQWST*
* Savvas Learning Company LLC
	+ *South Carolina Elevate*

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| **8th Grade** |
| Science and Engineering Practices (SEPs):* Developing and Using Models
* Planning and Carrying Out Investigations
* Analyzing and Interpreting Data
* Using Mathematical and Computational Thinking
* Constructing Explanations and Designing Solutions
* Engaging in Argument from Evidence
* Obtaining, Evaluating and Communicating Information
 | Disciplinary Core Ideas (DCI):* Forces and Motion
* Types of Interactions
* Wave Properties
* Growth and Development of Organisms
* Inheritance of Traits
* Variation of Traits
* Evidence of Common Ancestry and Diversity
* Natural Selection
* Adaptation
* Biogeology
* The Universe and Its Stars
* Earth and the Solar System
* Information Technologies and Instrumentation
* Developing Possible Solutions
* Interdependence of Science, Engineering, and Technology
* Influence of Engineering, Technology, and Science on Society and the Natural World
 | Crosscutting Concepts (CCCs):* Patterns
* Cause and Effect
* Scale, Proportion and Quantity
* Systems and System Models
* Structure and Function
* Stability and Change
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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)*

| **8th 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:** |
| 8-PS2-1. Apply Newton’s third law to design a solution to a problem involving the motion of two colliding objects. |  |  |  |  |  |
| **8-PS2-2.** Plan an investigation to provide evidence that the change in an object’s motion depends on the sum of the forces on the object and the mass of the object. |  |  |  |  |  |
| **8-PS2-3.** Analyze and interpret data to determine the factors that affect the strength of electric and magnetic forces. |  |  |  |  |  |
| **8-PS2-4.** Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects and the distance between them. |  |  |  |  |  |
| **8-PS2-5.** Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact. |  |  |  |  |  |
| **8-PS4-1.** Using mathematical representations, describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave. |  |  |  |  |  |
| **8-PS4-3.** Communicate information to support the claim that digital devices are used to improve our understanding of how waves transmit information. |  |  |  |  |  |
| **8-LS1-4.** Use arguments, based on empirical evidence and scientific reasoning, to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. |  |  |  |  |  |
| **8-LS1-5.** Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. |  |  |  |  |  |
| **8-LS3-1.** Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. |  |  |  |  |  |
| **8-LS3-2.** Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation. |  |  |  |  |  |
| **8-LS4-1.** Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operated in the past as they do today. |  |  |  |  |  |
| **8-LS4-2.** Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer their ancestral relationships. |  |  |  |  |  |
| **8-LS4-4.** Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individual’s probability of surviving and reproducing in a specific environment. |  |  |  |  |  |
| **8-LS4-5.** Gather and synthesize information about technologies that have changed the way humans influence the inheritance of desired traits in organisms. |  |  |  |  |  |
| **8-LS4-6.** Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time. |  |  |  |  |  |
| **8-ESS1-1.** Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, tides, and seasons. |  |  |  |  |  |
| **8-ESS1-2.** Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. |  |  |  |  |  |
| **8-ESS1-3.** Evaluate information to determine scale properties of objects in the solar system. |  |  |  |  |  |
| 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: