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| SC Science Grade Level Instructional Materials Review Process Form  Seventh 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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| **7th 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):   * Structure and Properties of Matter * Chemical Reactions * Definitions of Energy * Relationship between Energy and Forces * Conservation of Energy and Energy Transfer * Energy in Chemical Processes and Everyday Life * Organization for Matter and Energy Flow in Organisms * Interdependent Relationships in Ecosystems * Cycle of Matter and Energy Transfer in Ecosystems * Ecosystem Dynamics, Functioning, and Resilience * Biodiversity and Humans * Natural Resources * Global Climate Change * Human Impact on Earth Systems * Developing Possible Solutions * Optimizing the Design Solutions * 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 * Scale, Proportion and Quantity * Systems and System Models * Energy and Matter * Structure and Function * Stability and Change |

**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)*

| **7th 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 | | | | | | |
| ***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:** |
| 7-PS1-1. Develop models to describe the atomic composition of simple molecules and extended structures. |  |  |  |  |  |
| **7-PS1-2.** Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. |  |  |  |  |  |
| **7-PS1-3.** Gather and make sense of information to describe that synthetic materials come from natural resources and impact society. |  |  |  |  |  |
| **7-PS1-5.** Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved. |  |  |  |  |  |
| **7-PS1-6.** Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes. |  |  |  |  |  |
| **7-PS3-1.** Construct and interpret graphical displays of data to describe the proportional relationships of kinetic energy to the mass of an object and to the speed of an object. |  |  |  |  |  |
| **7-PS3-2.** Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system. |  |  |  |  |  |
| **7-PS3-5.** Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object. |  |  |  |  |  |
| **7-LS1-6.** Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. |  |  |  |  |  |
| **7-LS1-7.** Develop a model to describe how food molecules in plants and animals are rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter moves through an organism. |  |  |  |  |  |
| **7-LS2-1.** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. |  |  |  |  |  |
| **7-LS2-2.** Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. |  |  |  |  |  |
| **7-LS2-3.** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. |  |  |  |  |  |
| **7-LS2-4.** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. |  |  |  |  |  |
| **7-LS2-5.** Evaluate competing design solutions for maintaining biodiversity and ecosystem services. |  |  |  |  |  |
| **7-ESS3-1.** Construct a scientific explanation based on evidence for how the uneven distributions of Earth’s mineral, energy, and groundwater resources are the result of past and current geoscience processes. |  |  |  |  |  |
| **7-ESS3-3.** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment. |  |  |  |  |  |
| **7-ESS3-4.** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth’s systems. |  |  |  |  |  |
| **7-ESS3-5.** Ask questions to clarify evidence of the factors that have impacted global temperatures over the past century. |  |  |  |  |  |
| 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: