Science (Middle School Integrated Science) Evaluation Form

2025 Curricular Materials Review

# Publisher information

* Publisher Name:
* Title:
* ISBN #:
* Author:
* Copyright:
* Most Recently Published Edition and Website:
* Materials provided for evaluation:
* Intended Teacher Audience(s):
* Intended Student Audience(s):
* Is this curriculum in a digital format, print format, or both?

# Instruction

## Publishing Company

* Complete the curriculum evaluation form below. Please provide written justification as to how the material meets the criterion along with location references. If a justification requires additional space, please submit a response on an additional document.

## Review Team Member:

* Please use information and attachments to complete the curriculum evaluation form.
* Explain any discrepancies between your findings and the provided information.
* Findings, explanations, and comments should directly reflect the rubric.

# Scoring for Middle School Integrated Science Alignment to Science Standards

To evaluate each grade or course’s materials for alignment to [**Idaho Content Standards**](https://www.sde.idaho.gov/topics/admin-rules/files/negotiated-rulemaking/Idaho-K-12-State-Standards-for-Science.pdf), analyze the materials against the relevant criteria in the tables below. Instructional materials must meet most criteria and metrics to align with content standards.

| 0 PointsNo Alignment | 1 PointPartial Alignment | 2 PointsHigh Alignment | NANot Applicable |
| --- | --- | --- | --- |
| Standard for Science is not evident. | There is some evidence of the Standard for Science. | Materials explicitly align to and support the Standard for Science through regular and authentic engagement opportunities for students. |  |

Middle School Earth and Space Science

| Earth’s Place in the Universe | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| 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, and seasons. (1.1) | 0 1 2 N/A |  |
| Develop and use a model to describe the role of gravity in the orbital motions within galaxies and the solar system. (1.2) | 0 1 2 N/A |  |
| Analyze and interpret data to determine scale properties of objects in the solar system. (1.3) | 0 1 2 N/A |  |
| Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to analyze Earth’s history. (1.4) | 0 1 2 N/A |  |

| Earth’s Systems | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Develop a model to describe the cycling of Earth’s materials and the internal and external flows of energy that drive the rock cycle processes. (2.1) | 0 1 2 N/A |  |
| Construct an explanation based on evidence for how geoscience processes have changed Earth’s surface at varying time and spatial scales. (2.2) | 0 1 2 N/A |  |
| Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions. (2.3) | 0 1 2 N/A |  |
| Develop a model to describe the cycling of water through Earth’s systems driven by energy from the Sun and the force of gravity. (2.4) | 0 1 2 N/A |  |
| Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. (2.5) | 0 1 2 N/A |  |
| Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. (2.6)  | 0 1 2 N/A |  |

| Earth and Human Activity | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Construct a scientific explanation based on evidence for how Earth’s mineral, energy, and groundwater resources are unevenly distributed as a result of past and current geologic processes. (3.1) | 0 1 2 N/A |  |
| Analyze and interpret data on natural hazards to forecast future catastrophic events to mitigate their effects. (3.2) | 0 1 2 N/A |  |
| Apply scientific practices to design a method for monitoring human activity and increasing beneficial human influences on the environment. (3.3) | 0 1 2 N/A |  |
| Construct an argument based on evidence for how changes in human population and per-capita consumption of natural resources positively and negatively affect Earth’s systems. (3.4) | 0 1 2 N/A |  |
| Ask questions to interpret evidence of the factors that cause climate variability throughout Earth’s history. (3.5) | 0 1 2 N/A |  |

Middle School Life Science

| From Molecules to Organisms: Structure and Processes | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. (1.1) | 0 1 2 N/A |  |
| Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. (1.2) | 0 1 2 N/A |  |
| Make a claim supported by evidence for how a living organism is a system of interacting subsystems composed of groups of cells. (1.3) | 0 1 2 N/A |  |
| Construct a scientific argument based on evidence to defend a claim of life for a specific object or organism. (1.4) | 0 1 2 N/A |  |
| 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. (1.5) | 0 1 2 N/A |  |
| Develop a conceptual model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as matter moves through an organism. (1.6) | 0 1 2 N/A |  |

| Ecosystems: Interactions, Energy and Dynamics | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. (2.1) | 0 1 2 N/A |  |
| Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. (2.2) | 0 1 2 N/A |  |
| Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. (2.3) | 0 1 2 N/A |  |
| Develop a model to describe the flow of energy through the trophic levels of an ecosystem. (2.4) | 0 1 2 N/A |  |
| Construct an argument supported by evidence that changes to physical or biological components of an ecosystem affect populations. (2.5) | 0 1 2 N/A |  |
| Design and evaluate solutions for maintaining biodiversity and ecosystem services. (2.6)  | 0 1 2 N/A |  |

| Heredity: Inheritance and Variation of Traits | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Develop and use a model to describe why mutations may result in harmful, beneficial, or neutral effects to the structure and function of the organism. (3.1) | 0 1 2 N/A |  |
| 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. (3.2) | 0 1 2 N/A |  |

| Biological Adaptation: Unity and Diversity | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| 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 operate today as in the past. (4.1) | 0 1 2 N/A |  |
| Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer relationships. (4.2) | 0 1 2 N/A |  |
| Analyze visual evidence to compare patterns of similarities in the anatomical structures across multiple species of similar classification levels to identify relationships. (4.3) | 0 1 2 N/A |  |
| Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals’ probability of surviving and reproducing in a specific environment. (4.4) | 0 1 2 N/A |  |
| Obtain, evaluate, and communicate information about how technologies allow humans to influence the inheritance of desired traits in organisms. (4.5) | 0 1 2 N/A |  |
| Use mathematical models to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time. (4.6) | 0 1 2 N/A |  |

Middle School Physical Science

| Matter and Its Interactions | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Develop models to describe the atomic composition of simple molecules. (1.1) | 0 1 2 N/A |  |
| Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. (1.2) | 0 1 2 N/A |  |
| Construct a scientific explanation, based on evidence, to describe that synthetic materials come from natural resources. (1.3) | 0 1 2 N/A |  |
| Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed. (1.4) | 0 1 2 N/A |  |
| 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. (1.5) | 0 1 2 N/A |  |
| Undertake a design project to construct, test, and/or modify a device that either releases or absorbs thermal energy by chemical processes. (1.6) | 0 1 2 N/A |  |

| Motion and Stability: Forces and Interactions | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Apply Newton’s Third Law to design a solution to a problem involving the motion of two colliding objects. (2.1) | 0 1 2 N/A |  |
| Plan and conduct 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. (2.2) | 0 1 2 N/A |  |
| Ask questions about data to determine the factors that affect the strength of electric and magnetic forces. (2.3) | 0 1 2 N/A |  |
| Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects. (2.4) | 0 1 2 N/A |  |
| 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. (2.5) | 0 1 2 N/A |  |

| Energy | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object. (3.1) | 0 1 2 N/A |  |
| Develop a model to describe the relationship between the relative positions of objects interacting at a distance and the relative potential energy in the system. (3.2) | 0 1 2 N/A |  |
| Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer. (3.3) | 0 1 2 N/A |  |
| Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample. (3.4) | 0 1 2 N/A |  |
| 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. (3.5) | 0 1 2 N/A |  |

| Waves | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| *Students who demonstrate understanding can:* |
| Use diagrams of a simple wave to explain that (1) a wave has a repeating pattern with a specific amplitude, frequency, and wavelength, and (2) the amplitude of a wave is related to the energy in the wave. (4.1) | 0 1 2 N/A |  |
| Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials. (4.2) | 0 1 2 N/A |  |
| Present qualitative scientific and technical information to support the claim that digitized signals (0s and 1s) can be used to encode and transmit information. (4.3) | 0 1 2 N/A |  |

Category 1: 3D Design (Lessons and Units)
Lessons and units are designed so students make sense of phenomena and/or design solutions to problems by engaging in student performances that integrate the three dimensions.

| Lessons and units include clear and compelling evidence of the following: | Meets Criteria | Justification: Provide examples from materials as evidence to support each response for this section. Provide descriptions in addition to page numbers. |
| --- | --- | --- |
| **Explaining Phenomena/Designing Solutions:** Making sense of phenomena and/or designing solutions to a problem drive student learning.* Student questions and prior experiences related to the phenomenon or problem motivate sense-making and/or problem solving.
* The focus of the lesson is to support students in making sense of phenomena and/or designing solutions to problems.
* When engineering is a learning focus, it is integrated with developing disciplinary core ideas from physical, life, and/or earth and space sciences.
 | 0 1 2 N/A |  |
| **Three Dimensions:** Builds understanding of multiple grade-appropriate elements of the science and engineering practices (SEPs), disciplinary core ideas (DCIs), and crosscutting concepts (CCCs) that are deliberately selected to aid student sense-making of phenomena and/or designing of solutions. | **Three Dimensions (overall)**0 1 2 N/A |  |
| 1. Provides opportunities to develop and use specific elements of the SEP(s).
 | 0 1 2 N/A |  |
| 1. Provides opportunities to develop and use specific elements of the DCI(s).
 | 0 1 2 N/A |  |
| 1. Provides opportunities to develop and use specific elements of the CCC(s).
 | 0 1 2 N/A |  |
| **Integrating the Three Dimensions:** Student sense-making of phenomena and/or designing of solutions requires student performances that integrate elements of the SEPs, CCCs, and DCIs. | 0 1 2 N/A |  |
| **Unit Coherence:** Lessons fit together to target a set of standards.* Each lesson builds on prior lessons by addressing questions raised in those lessons, cultivating new questions that build on what students figured out, or cultivating new questions from related phenomena, problems, and prior student experiences.
* The lessons help students develop toward proficiency in a targeted set of performance expectations.
 | 0 1 2 N/A |  |
| **Multiple Science Domains:** *When appropriate*, links are made across the science domains of life science, physical science and Earth and space science.* Disciplinary core ideas from different disciplines are used together to explain phenomena.
* The usefulness of crosscutting concepts to make sense of phenomena or design solutions to problems *across science domains* is highlighted.
 | 0 1 2 N/A |  |
| **Math and ELA:** Provides grade-appropriate connection(s) to the Idaho Content Standards in Mathematics and/or English Language Arts & Literacy in History/Social Studies, Science and Technical Subjects. | 0 1 2 N/A |  |

# CATEGORY 2: Instructional Supports (Lessons and Units)

Lessons and units support three-dimensional teaching and learning for ALL students by placing the lesson in a sequence of learning for all three dimensions and providing support for teachers to engage all students.

| Lessons and units include clear and compelling evidence of the following: | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| **Relevance and Authenticity:** Engages students in authentic and meaningful scenarios that reflect the practice of science and engineering as experienced in the real world.* Students experience phenomena or design problems as directly as possible (firsthand or through media representations).
* Includes suggestion for how to connect instruction to the students’ home, neighborhood, community and/or culture as appropriate.
* Provides opportunities for students to connect their explanation of a phenomenon and/or their design solution to a problem—to questions from their own experience.
 | 0 1 2 N/A |  |
| **Student Ideas:** Provides opportunities for students to express, clarify, justify, interpret, and represent their ideas and respond to peer and teacher feedback orally and/or in written form as appropriate.  | 0 1 2 N/A |  |
| **Building Progressions:** Identifies and builds on students’ prior learning in all three dimensions, including providing the following support to teachers: * Explicitly identifying prior student learning expected for all three dimensions.
* Clearly explaining how the prior learning will be built upon.
 | 0 1 2 N/A |  |
| **Scientific Accuracy:** Uses scientifically accurate and grade-appropriate scientific information, phenomena, and representations to support students’ three-dimensional learning.  | 0 1 2 N/A |  |
| **Teacher support for unit coherence:** Supports teachers in facilitating coherent student learning experiences over time by:* Providing strategies for linking student engagement across lessons (e.g. cultivating new student questions at the end of a lesson in a way that leads to future lessons, helping students connect related problems and phenomena across lessons, etc.).
* Providing strategies for ensuring student sense-making and/or problem-solving is linked to learning in all three dimensions.
 | 0 1 2 N/A |  |

# CATEGORY 3: Monitoring Student Progress (Lessons and Units)

Lessons and units support monitoring student progress in all three dimensions as students make sense of phenomena and/or design solutions to problems.

| Lessons and units include clear and compelling evidence of the following: | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| **Monitoring student performances:** Elicits direct, observable evidence of three-dimensional learning; students are using practices with core ideas and crosscutting concepts to make sense of phenomena and/or to design solutions.  | 0 1 2 N/A |  |
| **Formative:** Embeds formative assessment processes throughout that evaluate student learning to inform instruction.  | 0 1 2 N/A |  |
| **Scoring guidance:**  Includes aligned rubrics and scoring guidelines that provide guidance for interpreting student performance along the three dimensions to support teachers in (a) planning instruction and (b) providing ongoing feedback to students.  | 0 1 2 N/A |  |
| **Unbiased tasks/items:** Assesses student proficiency using methods, vocabulary, representations, and examples that are accessible and unbiased for all students.  | 0 1 2 N/A |  |
| **Coherent assessment system**: Includes pre-, formative, summative, and self-assessment measures that assess three-dimensional learning.  | 0 1 2 N/A |  |

# Scoring for Best Practices

| 0 PointsNo Alignment | 1 PointPartial Alignment | 2 PointsHigh Alignment | NANot Applicable |
| --- | --- | --- | --- |
| There is no evidence of the teaching practice. | The teaching practice is embedded in some lessons. | Materials regularly embed supports for teachers to implement best practices.  |  |

Scoring for Alignment to Best Practices

| Best Practices | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| 1. Materials contain clear statements and explanations of science and engineering practices (SEPs), disciplinary core ideas (DCIs), and crosscutting concepts (CCCs).
 | 0 1 2 N/A |  |
| 1. Materials provide questioning and discussion techniques that promote learning through thinking, discussion, and reflection.
 | 0 1 2 N/A |  |
| 1. Digital materials and assessments are easy to edit and revise and access to distribute and/or print.
 | 0 1 2 N/A |  |
| 1. Materials contain teacher-specific instructions and explanations for expanding content knowledge and lesson planning development.
 | 0 1 2 N/A |  |

# Scoring for Multi-Tiered Systems of Support

| 0 PointsNo Alignment | 1 PointPartial Alignment | 2 PointsHigh Alignment | NANot Applicable |
| --- | --- | --- | --- |
| There is no evidence of the feature. | The feature is included and partially aligned to Tier II instruction. | The feature is included and fully aligned to Tier II instruction. |  |

## Scoring for Alignment to Idaho Multi-Tiered Systems of Support

| Multi-tiered Instruction | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| 1. **Interventions:** Materials provide interventions aligned to core instruction. Interventions are more frequent and varied to support acquisition of identified skills.
 | 0 1 2 N/A |  |
| 1. **Differentiated Instruction:** Provides guidance for teachers to support differentiated instruction by including:
* Materials provide a variety of resources and strategies for small group instruction that can be used for differentiation in the general education classroom.
* Supportive ways to access instruction, including appropriate linguistic, visual, and kinesthetic engagement opportunities that are essential for effective science and engineering learning and particularly beneficial for multilingual learners and students with disabilities.
* Extra support (e.g. phenomena, representations, tasks) for students who are struggling to meet the targeted expectations.
* Extensions for students with high interest or who have already met the performance expectations to develop deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts.
 | 0 1 2 N/A |  |
| 1. **Scaffolded differentiation over time:** Provides supports to help students engage in the practices as needed and gradually adjusts supports over time so that students are increasingly responsible for making sense of phenomena and/or designing solutions to problems.
 | 0 1 2 N/A |  |
| 1. **Opportunity to learn:** Provides multiple opportunities for students to demonstrate performance of practices connected with their understanding of disciplinary core ideas and crosscutting concepts and to receive feedback.
 | 0 1 2 N/A |  |

# Scoring for Additional Indicators of Quality Materials

| 0 PointsNo Alignment | 1 PointPartial Alignment | 2 PointsHigh Alignment | NANot Applicable |
| --- | --- | --- | --- |
| There is no evidence of scaffolding, differentiation elements, or engaging tools.  | There is some evidence of scaffolding, differentiation elements, or engaging tools. | Materials include scaffolding and differentiation elements as well as engaging tools. |  |

Scoring for Alignment to Additional Indicators of Quality Materials

| Indicators of Quality Materials | Meets Criteria | Justification or Comments |
| --- | --- | --- |
| 1. Materials provide examples of scaffolding and guided practice.
 | 0 1 2 N/A |  |
| 1. Materials include supports for differentiation, pacing, remediation and extension activities, and alternative teaching approaches.
 | 0 1 2 N/A |  |
| 1. Materials provide instructional strategies to accommodate the learning differences of all students.
 | 0 1 2 N/A |  |
| 1. Materials are relevant and interesting for grade level with authentic contexts and tools that allow students to make connections.
 | 0 1 2 N/A |  |
| 1. Materials integrate technology and interactive tools, visuals, videos, or dynamic software to engage students.
 | 0 1 2 N/A |  |
| 1. Materials are available in language(s) other than English.
 | Yes N/A |  |

For Questions Contact

Content & Curriculum – Curricular Materials

Idaho Department of Education

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