

SB1.1

- [3] SB1.1 The student demonstrates an understanding of the structure and properties of matter by classifying matter according to physical properties (i.e., color, size, shape, weight, texture, flexibility).
- [4] SB1.1 The student demonstrates an understanding of the structure and properties of matter by identifying and comparing the characteristics of gases liquids, and solids.
- [5] SB1.1 The student demonstrates an understanding of the structure and properties of matter by comparing models that represent matter as solids, liquids, or gases and the changes from one state to another.
- [6] SB1.1 The student demonstrates an understanding of the structure and properties of matter by using models to represent matter as it changes from one state to another.
- [7] SB1.1 The student demonstrates an understanding of the structure and properties of matter by using physical properties (i.e., density, boiling point, freezing point, conductivity) to differentiate among and/or separate materials (i.e., elements, compounds, and mixtures).
- [8] SB1.1 The student demonstrates an understanding of the structure and properties of matter by using physical and chemical properties (i.e., density, boiling point, freezing point, conductivity, flammability) to differentiate among materials (i.e., elements, compounds, and mixtures).

SB3.1

- [3] SB3.1 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by recognizing that temperature changes cause changes in phases of substances (e.g., ice changing to liquid, water changing to water vapor, and vice versa).
- [4] SB3.1 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by explaining that temperature changes cause changes in phases of substances (e.g., ice changing to liquid water and liquid water to water vapor).
- [5] SB3.1 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by identifying physical and chemical changes based on observable characteristics (e.g., tearing paper vs. burning paper).
- [6] SB3.1 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by recognizing that most substances can exist as a solid, liquid, or gas depending on temperature.
- [7] SB3.1 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by recognizing that most substances can exist as a solid, liquid, or gas depending on the motion of their particles.

[8] SB3.1 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by exploring changes of state with increase or decrease of particle speed associated with heat transfer.

[9] SB3.1 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by recognizing that a chemical reaction has taken place.

SB3.3

[9] SB3.3 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by recognizing that atoms emit and absorb electromagnetic radiation.

[10] SB3.3 The student demonstrates an understanding of the interactions between matter and energy and the effects of these interactions on systems by comparing the relative wavelengths and applications of different forms of electromagnetic radiation (i.e., x-ray, visible, infrared, microwaves, radio).

SB4.1

[9] SB4.1 The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by explaining the relationship of motion to an object's mass and the applied force.

SB4.2

[3] SB4.2 The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by recognizing that objects can be moved without being touched (e.g., using magnets, falling objects, static electricity).

SB4.3

[6] SB4.3 The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by making waves move through a variety of media.

[7] SB4.3 The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by describing the characteristics of a wave (i.e., amplitude, wavelength, and frequency).

[9] SB4.3 The student demonstrates an understanding of motions, forces, their characteristics, relationships, and effects by describing the interactions of waves (i.e., reflection, refraction, wave addition).

SC3.2

[6] SC3.2 The student demonstrates an understanding that all organisms are linked to each other and their physical environments through the transfer and transformation of matter and energy by organizing a food web using familiar plants and animals.

[11] SC3.2 The student demonstrates an understanding that all organisms are linked to each other and their physical environments through the transfer and transformation of matter and energy by analyzing the potential impacts of changes (e.g., climate change, habitat loss/gain, cataclysms, human activities) within an ecosystem.

SD1.1

- 3] SD1.1 The student demonstrates an understanding of geochemical cycles by recognizing that most rocks are composed of combinations of different substances.
- [4] SD1.1 The student demonstrates an understanding of geochemical cycles by describing that most smaller rocks come from the breaking and weathering of larger rocks as part of the rock cycle.
- [5] SD1.1 The student demonstrates an understanding of geochemical cycles by observing a model of the rock cycle showing that smaller rocks come from breaking and weathering of larger rocks and that smaller rocks (e.g., sediments and sands) may combine with plant materials to form soils.
- [6] SD1.1 The student demonstrates an understanding of geochemical cycles by exploring the rock cycle and its relationship to igneous, metamorphic, and sedimentary rocks.
- [7] SD1.1 The student demonstrates an understanding of geochemical cycles by describing the rock cycle and its relationship to igneous, metamorphic, and sedimentary rocks.
- [8] SD1.1 The student demonstrates an understanding of geochemical cycles by making connections between components of the locally observable geologic environment and the rock cycle.
- [9] SD1.1 The student demonstrates an understanding of geochemical cycles by using a model to demonstrate the rock cycle.
- [10] SD1.1 The student demonstrates an understanding of geochemical cycles by using a model to explain the processes (i.e., formation, sedimentation, erosion, reformation) of the rock cycle.
- [11] SD1.1 The student demonstrates an understanding of geochemical cycles by creating a model to demonstrate the rock cycle.

SD2.1

- [3] SD2.1 The student demonstrates an understanding of the forces that shape Earth by identifying and comparing a variety of Earth's land features (i.e., rivers, deltas, lakes, glaciers, mountains, valleys, and islands).
- [4] SD2.1 The student demonstrates an understanding of the forces that shape Earth by observing models of how waves, wind, water, and ice shape and reshape the Earth's surface by eroding rock and soil.
- [5] SD2.1 The student demonstrates an understanding of the forces that shape Earth by describing how wind and water tear down and build up the Earth's surface resulting in new land formations (i.e., deltas, moraines, and canyons).
- [6] SD2.1 The student demonstrates an understanding of the forces that shape Earth by describing the formation and composition (i.e., sand, silt, clay, organics) of soils.

[7] SD2.1 The student demonstrates an understanding of the forces that shape Earth by identifying strategies (e.g. reforestation, dikes, wind breaks, off road activity guidelines) for minimizing erosion.

[8] SD2.1 The student demonstrates an understanding of the forces that shape Earth by interpreting topographical maps to identify features (i.e., rivers, lakes, mountains, valleys, island, and tundra).

[9] SD2.1 The student demonstrates an understanding of the forces that shape Earth by recognizing the dynamic interaction of erosion and deposition including human causes.

[10] SD2.1 The student demonstrates an understanding of the forces that shape Earth by recognizing the dynamic interaction of erosion and deposition including human causes.

[11] SD2.1 The student demonstrates an understanding of the forces that shape Earth by recognizing the dynamic interaction of erosion and deposition including human causes.

SD2.2

[4] SD2.2 The student demonstrates an understanding of the forces that shape Earth by identifying causes (i.e., earthquakes, tsunamis, volcanoes, landslides, and avalanches) of rapid changes on the surface.

[7] SD2.2 The student demonstrates an understanding of the forces that shape Earth by describing how the movement of the tectonic plates results in both slow changes (e.g., formation of mountains, ocean floors, and basins) and short-term events (e.g., volcanic eruptions, seismic waves, and earthquakes) on the surface.

[8] SD2.2 The student demonstrates an understanding of the forces that shape Earth by using models to show the relationships between convection currents within the mantle and the large-scale movement of the surface.

[9] SD2.2 The student demonstrates an understanding of the forces that shape Earth by describing how the theory of plate tectonics explains the dynamic nature of its surface.

[10] SD2.2 The student demonstrates an understanding of the forces that shape Earth by describing how the theory of plate tectonics explains the dynamic nature of its surface.

[11] SD2.2 The student demonstrates an understanding of the forces that shape Earth by describing how the theory of plate tectonics explains the dynamic nature of its surface

SD2.3

[6] SD2.3 The student demonstrates an understanding of the forces that shape Earth by describing how the surface can change rapidly as a result of geological activities (i.e., earthquakes, tsunamis, volcanoes, floods, landslides, avalanches).

SD3.1

[7] SD3.1 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by describing the weather using accepted meteorological terms (e.g., pressure systems, fronts, precipitation).

[10] SD3.1 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by describing causes, effects, preventions, and mitigations of human impact on climate.

[11] SD3.1 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by describing causes, effects, preventions, and mitigations on human impact on climate.

SD3.2

[8] SD3.2 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by recognizing types of energy transfer (convection, conduction, and radiation) and how they affect weather.

SA 1.1

[3-9] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

[10] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, analyzing data, developing models, inferring, and communicating.

[11] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, analyzing data, developing models, inferring, and communicating.

SA1.2

[3] SA1.2 The student demonstrates an understanding of the processes of science by observing and describing the student's own world to answer simple questions.

[4] SA1.2 The student demonstrates an understanding of the processes of science by observing, measuring, and collecting data from explorations and using this information to classify, predict, and communicate.

[5] SA1.2 The student demonstrates an understanding of the processes of science by using quantitative and qualitative observations to create inferences and predictions.

[6] SA1.2 The student demonstrates an understanding of the processes of science by collaborating to design and conduct simple repeatable investigations.

[7-8] SA1.2 The student demonstrates an understanding of the processes of science by collaborating to design and conduct simple repeatable investigations, in order to record, analyze (i.e., range, mean, median, mode), interpret data, and present findings.