6th Grade Science Curriculum
Elevate Science Course 1 copyright 2019
Summer 2023

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Topic 1- Introduction to Matter
(MS-PS1-1, MS-PS1-2, DCI PS1.A, DCI PS1.B, CCC.1, CCC.3, SEP.2, SEP.4)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
MP.2 **6.G.A.2** **6. RP.A.2**	**RST.6-8.1** **RST.6-8.4** **RST.6-8.7** **WHST.6-8.2** **WHST.6-8.2.d**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Objectives:

- Students will construct and use models to explain and describe what makes up matter
- Students will use visual examples to describe the properties of matter
- Students will use visual examples to describe examples of chemical and physical properties of matter
- Students will cite evidence to classify different types of matter
- Students will cite evidence to classify homogenous and heterogenous mixtures
- Students will use evidence to identify and describe how matter can be measured
- Students will use evidence to identify and describe how mass compares to weight
- Students will analyze data to identify and calculate properties of matter that can be determined through measurement
- Students will analyze data to identify and calculate density as a function of mass and volume
- Students will use ratio reasoning and data to determine how matter is conserved during a physical and chemical change
- Students will use ratio reasoning and data to determine how thermal energy is transformed during a chemical change
- Students will write to explain the difference between a physical and chemical change
- Students will write to explain how changes in matter are related to changes in energy

Extended Activities:

- Help students remember the makeup of matter by having them create a graphic organizer to explain atoms, molecules, elements and compounds. Students will create a matrix with four columns and five rows. Label the columns term, definition, properties and examples, and label the rows term, atom, element, molecule and compound. Record examples in both words and pictures.

- Have students reread the text and underline key words that relate to the properties of oil and water. (Sample answers: oil is less dense than water; oil floats; oil mixed with natural gas and water; etc.) Discuss how scientists used these properties to aid in cleanup.

Gifted and Talented Activities:

- Ductility is another physical property of metals. Have students find out what ductility is, what metals are ductile, and why this property is important. Have students report their findings to the class, listing several metals that are ductile.

- Explain to students that thermal energy moves in one of three ways: conduction, convection, and radiation. On a poster or sheet of paper, have students define each of these terms and provide examples to share with the class. In each case, the students should illustrate the transfer of energy from warmer matter to cooler matter.

Topic 2- Solid, Liquids, and Gases
(MS-PS1-4, DCI PS1.A, CCC.2, SEP.2)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
7.RP.2.c	**RST.6-8.1** **RST.6-8.2** **RST.6-8.7** **WHST.6-8.1.b** **WHST.6-8.2** **WHST.6-8.2.d** **WHST.6-8.4**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Objectives:

- Students will write informative text to explain similarities and differences between solids, liquids, and gases
- Students will write informative text to explain similarities and differences between high-viscosity liquids and low-viscosity liquids
- Students will write informative text to explain the relationship between particle motion and the state of matter
- Students will develop and use models to demonstrate how the arrangement and movement of particles compare in solids, liquids, and gases
- Students will describe cause and effect relationships related to the role thermal energy plays in particle motion
- Students will describe cause and effect relationships related to the role thermal energy plays in changes of state
- Students will use text information to explain how pressure affects a change of state from a liquid to a gas
- Students will develop and use models to describe what happens to particles of matter during changes of state between solids, liquids, and gases
- Students will demonstrate comprehension of text by summarizing how Charles's Law relates temperature and volume of gases
- Students will demonstrate comprehension of text by summarizing how Boyle's Law relates pressure and volume in gases
- Students will construct graphs to illustrate the directly proportional relationship between volume and temperature
- Students will construct graphs to illustrate the inversely proportional relationship between volume and pressure

Extended Activities

- Have students use pictures and symbols to help them remember Charles's Law. Have them label and explain this law on a sheet of paper. Then have students draw two examples to show this law. Students might draw a deflated balloon in a freezer and draw two down arrows beside the words *temperature* and *pressure*. They can draw a balloon in a hot tub and draw two up arrows besides the words *temperature* and *pressure*.

- If students are unable to conduct research on their own, assign them a partner with whom to conduct the research, or lead a small group in the online search. Provide an appropriate graphic organizer for students to complete. Or, assign specific online reading appropriate for students's abilities.

Gifted and Talented

- Have students conduct further research on the topic of solids to help explain in more detail why their properties differ. For example, they could research why some solids bend, while others snap in half.

- Increasing pressure can cause gases to change to liquids. Have students research this occurrence and give examples of uses for this process.

Topic 3- Energy
(DCI PS3.A, DCI PS3.C, DCI PS3.D, CCC.2, CCC.5, SEP.6, SEP.7, SEP.2, SEP.4, MS-PS3-1, MS-PS3-2, MS-PS3-5,CCC.3,CCC.4, DCI PS3.B)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
7.RP.2.c **6.RP.A.1** **6.EE.C.9, 6.EE.2.c**	**RST 6.8.1** **RST 6.8.2 RST 6.8.4** **RST.6-8.7** **WHST 6.8.4.4** **WHST 6-8.4**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Objectives:

- Students will use text evidence to define energy, motion, force, and work.
- Students will use text evidence to relate energy to motion and force.
- Students will use text evidence to determine the relationships among energy, motion, force, and work
- Students will apply mathematical reasoning in order to calculate the amount of work done
- Students will apply mathematical reasoning in order to calculate the amount of power used
- Students will use visual representations to identify factors related to kinetic energy
- Students will use visual representations to identify factors that affect potential energy
- Students will integrate quantitative information to explain the relationship between potential and kinetic energy

- Students will evaluate expressions to identify the linear relationship of gravitational potential energy
- Students will evaluate expressions to identify the nonlinear relationship of kinetic energy
- Students will use scientific reasoning to classify, quantify, and measure different forms of energy
- Students will use models to represent relationships among different forms of energy
- Students will cite textual evidence to explain how energy changes from one form to another
- Students will use models to demonstrate how energy transfers between objects
- Students will use proportional relationships to explain how energy is conserved in a system

Extended Activities:

- Remind students that force is measured in newtons (N), and distance is measured in meters (m). Show students the formula with blank boxes beneath each face and product. Demonstrate how to insert each measurement in each box to make the calculations.

- Call on students to list the different forms of energy they have learned about. Write them on the board for quick reference during the class discussion.

Gifted and Talented Activities:

- Have students research and report to the class how horsepower is calculated for various car, truck, and machine engines.

- Have students conduct online research to find a current event article related to the use of renewable energy sources. Have students summarize the article for the class, including who or what the article is about, where it takes place, how it is happening, and why it is newsworthy.

Topic 4- Thermal Energy
(MS-PS3-4, MS-PS3-5, DCI PS3.A, DCI PS3.B, CCC.3, CCC.5, SEP.3, SEP.7,)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
MP2, 7.RP.2.c	**RST.6-8.2, RST.6-8.4, RST.6-8.7, WHST.6-8.1b**	**8.1 8.2**	**SEL.PK-12.1.4 SEL.PK-12.2.1 SEL.PK-12.4.1 SEL.PK-12.5.2**

Objectives:

- Students will use text evidence to describe and explain how the total thermal energy of a system depends on the types, states, and amounts of matter present
- Students will use text evidence to describe and explain the relationship among thermal energy, temperature, and heat
- Students will use text evidence to describe and explain how adding and removing heat energy affects the kinetic and thermal energy of matter
- Students will use text evidence to describe and explain how changes in temperature can cause a change in state
- Students will construct graphs to identify the proportional relationship between Celsius and Farenheit scales
- Students will investigate and identify evidence to describe how heat is transferred between substances
- Students will identify evidence to explain how heat flows from warmer to cooler objects
- Students will identify evidence to explain the law of conservation of energy
- Students will explain how different materials respond to heat
- Students will explain how changes in kinetic energy affect heat transfer
- Students will use reasoning and evidence to evaluate differences in temperature and changes in temperature over time
- Students will use reasoning and evidence to evaluate how energy is transferred between materials and their surroundings

Extended Activities:

- Review how energy moves from warmer to cooler matter. Have students draw arrows with labels to show the flow of heat in the figure Temperature and Melting. For example, students should draw an arrow pointing to the icicles and label the arrow “Thermal energy moves from the air to the icicles.”

- Have students hold an ice cube for a brief period. Remind students that this is an example of heat transfer by conduction; their hands are in contact with the ice cube. Tell students they should notice the thermal energy flowing away from their hands into the ice.

Gifted and Talented:

- Challenge students to research the electromagnetic spectrum and explain how humans perceive the different types of waves.

- Have students consider how the thermal materials of a space ship might change if it was built to enter other planets' atmospheres.

Topic 5: Introduction to Earth's System
(MS-ESS2-1, MS-ESS2-4, DCI ESS2.A, DCI ESS2.C, CCC.7, CCC.5, SEP.2)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
MP.2	**RST.6-8.1,** **RST.6-8.2,** **RST.6-8.7,** **RST.6-8.9,** **WHST.6-8.2** **RH.6-8.5,** **RH.6-8.7** **RH.6-8.5,** **RST.6-8.9,** **RH.6-8.7**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Objectives:

- Students will analyze and interpret data to describe evidence that Earth has four major subsystems, or spheres, that cycle matter and energy and shape Earth's surface: atmosphere, geosphere, hydrosphere, and the biosphere.

- Students will construct explanations using reasoning to predict similar patterns by recognizing that the Earth system involves flows of matter and energy through different components.
- Students will construct explanations using reasoning to predict similar patterns by recognizing that the Earth system has two main sources of energy: heat from the sun and heat from the Earth's interior.
- Students will develop and use models to demonstrate how a system returns information about itself, and that information results in change.
- Students will develop and use models to demonstrate how there are a variety of landforms on Earth because Earth's surface is different from place to place.
- Students will analyze and interpret data to describe evidence that the topography of the land is constantly being created and destroyed by competing constructive and destructive forces.
- Students will analyze and interpret data to describe evidence that the geosphere, atmosphere, and biosphere interact with each other to affect Earth.
- Students will develop and use models to demonstrate how computers create topographic and other maps from aerial photography and satellite imagery to model Earth's landforms.
- Students will analyze and interpret data to describe evidence that the majority of Earth's fresh water is frozen into glaciers and thickened ice masses.
- Students will analyze and interpret data to describe evidence that the remaining fresh water is found underground, in lakes and rivers, and ponds are all part of the surface water in the hydrosphere.
- Students will develop and use models to demonstrate how the process of evaporation, condensation, transpiration, and precipitation continually cycle water from Earth's surface to the atmosphere and back again.

Extended Activities:

- Have students create a graphic organizer to list different interactions among Earth's spheres. In the columns, list each sphere. List the spheres again in the rows. Have students select a row and a column. Students should then list one interaction between the two spheres they identified. Repeat until the entire chart is complete.

- Students may be overwhelmed by the Distribution of Earth's Water diagram on the page. Guide them as they make sense of this information by having the students discuss each of the labels and percentages as a pair.

Gifted and Talented:

- Challenge students to reach a destination with only the latitude and longitude information for their destination. Have them discuss obstacles they might encounter along their journey with only this information.

- Have students make a table with columns for each sphere. Put a hypothetical change in each column in one color. Students can then research the effects of that change on the other systems, noting the basic changes it will have in the appropriate columns. If time permits, have students present their findings.

Topic 6: Weather In The Atmosphere
(MS-ESS2.4, MS-ESS2-5, MS-ESS2.6, MS-ESS3-2, MS-ESS3.2, MS-PS1-4, DCI ESS2.C, DCI ESS2.D, DCI ESS3.C, DCI PS1.A, CCC.2, CCC.4, CCC.5, DCI ESS3.B, SEP.2, SEP.3, SEP.4)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
MP.2 **MP.4**	**RST.6-8.2** **WHST.6-8.2.d** **RST.6-8.1**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Objectives:

- Students will identify and synthesize data to construct an explanation of the structure and layers of Earth's atmosphere
- Students will identify and synthesize data to construct an explanation of the composition and characteristics of each layer in Earth's atmosphere
- Students will use models and analyze information to predict the stability and change caused by unequal heating of Earth's atmosphere by the sun
- Students will analyze and interpret data to describe evidence that water vapor enters the atmosphere through a number of processes
- Students will analyze and interpret data to describe evidence that water is continually evaporating and condensing in the atmosphere and this process forms clouds
- Students will analyze and interpret data to describe evidence that precipitation is a vital part of the water cycle
- Students will develop and use models to demonstrate water is always moving between the surface of Earth and the atmosphere
- Students will analyze cause-and-effect relationships in order to predict how temperature determines the type of precipitation for an area
- Students will analyze and interpret data to describe evidence that air masses are moved by the prevailing winds and jet streams
- Students will develop and use models to demonstrate how air masses of different temperatures and humidity collide, resulting in a front

- Students will construct explanations using reasoning to predict similar patterns by recognizing that storms and changeable weather often develop along fronts
- Students will construct explanations using reasoning to predict similar patterns by recognizing that the type of front that develops depends on the characteristics of the air masses and the direction in which they move
- Students will develop and use models to demonstrate how meteorologists use observations, patterns, and tools to predict the weather
- Students will develop and use models to demonstrate how meteorologists determine the effect of global patterns on local weather by observing and tracking the movements of jet streams and ocean currents
- Students will analyze and interpret data to describe evidence that technological improvements in gathering weather data have improved weather forecast accuracy
- Students will analyze and interpret data to describe evidence that computers process weather data quickly and help forecasters make predictions
- Students will construct explanations using reasoning to predict similar patterns by recognizing that pattern analysis is essential for weather forecasting
- Students will construct explanations using reasoning to predict similar patterns by recognizing that technology makes data collection and analysis more accurate, easier, and quicker that direct observation
- Students will identify and describe evidence that describes the characteristics of different types of severe weather
- Students will identify and describe evidence that describes the causes associated with different types of severe weather
- Students will identify and describe evidence that describes damage associated with each type of storm
- Students will analyze and interpret data to explain measure that can be taken to ensure safety in a storm

Extended Activities:

- Tell students to sketch a stick figure going up a mountain. Then have them add graphical representations of how the air density is changing and how air pressure is changing as the climber goes upward.

- Some students may become overwhelmed with the plethora of information that comes back from a broad meteorologist search. Have students select one of the specific types of meteorologists mentioned in the article to research further.

Gifted and Talented:

- Challenge students to describe the climate for each season in their area. Then, have them select a past date for each season and describe the expected weather for that day. Lastly, have students research their dates to evaluate the accuracy of their predictions.

- Give students additional problems in calculating relative humidity. Have students look for information on relative humidity using online weather maps and describe the connection between relative humidity and chance of precipitation in a specific area.

Topic 7: Minerals and Rocks in the Geosphere
(MS-ESS2-1, DCI ESS2.A, CCC.7, SEP.2, MS-ESS3-1, DCI ESS3.A, ETS2.B,)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
6.EE.A.2 **6.EE.C.9**	**RL.7.1, RST.6-8.4** **RH.6-8-7** **RST.6-8.2** **RH.6-8.5**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Observations:

- Students will examine evidence to determine how geologists learn what Earth's interior is like
- Students will identify and describe evidence that Earth is made up of a lithosphere, a mantle, and an outer and inner core
- Students will use what they learned to explain how convection occurs in Earth's mantle
- Students will use visuals and models to identify characteristics of mineral and explore their properties
- Students will use textual evidence to identify the processes that result in the formation of minerals
- Students will use textual evidence to explain the distribution of mineral resources on Earth
- Students will apply mathematical formulas to determine the density of minerals
- Students will use visuals and models to the three major types of rocks
- Students will use visuals and models to explain how the formation of rocks is the result of the flow of energy and cycling of matter within Earth
- Students will use visuals and models to observe rocks and classify them according to the three major types
- Students will use textual evidence to explain how each of the three major types of rocks form

- Students will develop and use models to demonstrate how processes that occur on Earth's surface and in the crust and mantle slowly change rocks from one kind to another
- Students will develop and use models to demonstrate that material is not lost or gained
- Students will analyze cause-and-effect relationships in order to predict how energy from deep inside Earth drives the forces that build and change the rocks of Earth's crust
- Students will analyze cause-and-effect relationships in order to predict how patterns of repeating events in the rock cycle constantly change rocks from one type into another type
- Students will analyze cause-and-effect relationships in order to predict how the flow of energy within Earth cause the plate movements that help drive the rock cycle

Extended Activities:

- Provide students with a graphic organizer in which to list the science facts from the script, the scientific errors, and how the science can be presented accurately.

- If students are having trouble understanding that the rock cycle is continuous, create a flowchart with them of the various pathways of the rock cycle diagram. Use different colors to represent different processes. Encourage students to use arrows to model how there is no starting or stopping point. This can also be done on a whiteboard, but a hard copy provides students with a reference for later review.

Gifted and Talented:

- Have students tell the temperature (in °C) at each of the following depths:
    - 750 km (1,700°C)
    - 1,250 km (2000°C)
    - 1,750 km (2,350°C)
    - 2,250 km (2,700°C)

- Minerals have definite, but not fixed, chemical compositions. There may be some substitution of atoms. Have students research forsterite and fayalite, two varieties of olivine, and describe how the chemical formula changes.

Topic 8: Plate Tectonics
(MS-ESS2-2, MS-ESS2-3, MS-ESS3-2, DCI ESS1.C, DCI ESS2.B,DCI ESS3.B, DCI ESS2.A, CCC.1, CCC.3,, SEP.4,SEP.6)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
MP.2 **6.RP.A.3c**	**RST.6-8.1** **WHST.6-8.9** **RH.6-8.2 RH-6.8.7**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Observations:

- Students will identify and describe evidence that supports that all the continents were once fused together in a supercontinent called *Pangea*
- Students will identify and describe evidence that supports how land masses drifted apart over time into the continents known today
- Students will identify and describe evidence that continental coastlines appear to fit together and mountain ranges on different continents line up
- Students will identify and describe evidence that similar plant and animal fossils are found on continents that are separated by oceans
- Students will identify and describe evidence that Earth's continents experienced different climates than the ones they have today
- Students will analyze cause and effect relationships to describe how mid-ocean ridges and deep-sea trenches provide evidence for plate movement
- Students will analyze and interpret data to describe evidence that Earth's plates are in slow, constant due to forces within the mantle
- Students will analyze and interpret data to describe evidence that convection drives plate motion
- Students will develop and use models to demonstrate that some features and events on Earth's surface coincide with plate boundaries
- Students will develop and use models to demonstrate that the movement of Earth's plates has greatly changed the locations of the continents and the size and shape of the ocean basins
- Students will analyze relationships to predict the different features and events that occur at different types of plate boundaries
- Students will analyze relationships to predict the results of plate movement at different scales

- Students will use and develop models to explain how plate movement and stress produce new landforms
- Students will analyze and interpret data as evidence that energy released from interacting plates results in an earthquake
- Students will analyze and interpret data to compare the magnitudes of earthquakes
- Students will analyze and interpret data to relate the energy of an earthquake to the formation of a tsunami
- Students will use and develop models to demonstrate that the characteristics of earthquakes and tsunamis can be predicted
- Students will use and develop models to demonstrate that the prediction of natural phenomena can be used to migrate risk
- Students will identify patterns to explain how plate tectonics is connected to volcanic eruptions and landforms
- Students will use models to study systems of different sizes in order to explain the role volcanic activity plays in shaping Earth"s surface
- Students will construct explanations of the hazards that different types of volcanoes pose

Extended Activities:

- Rather than having struggling students do a blind information search, provide them with a list of preselected Web sites to help focus their research.

- Have struggling students focus on one plate movement at a time. Then encourage them to examine how the motion of that plate will affect the next plate and so on.

Gifted and Talented:

- Challenge students to research the frequency of volcanic and earthquake activity in the Ring of Fire. Have students write a report about the effect this has on population, economic development, and housing in this area.

- Have students investigate the ten largest earthquakes ever recorded around the world. Have them include the location, the magnitude, and a brief description of the damage.

Topic 9: Earth's Surface Systems
(MS-ESS3-2, MS-ESS2-2, DCI ESS2.A, CCC.3, SEP-6, SL.6.1.c, DCI ESS3.B, CCC.1, SEP.4,)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**

MP.2	**RST.6-8.7** **WHST.6-8.2** **RI.6.7** **RI.6.1**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Objectives:

- Students will describe and give examples of ways in which Earth's surface is torn down by mechanical and chemical weathering
- Students will describe and give examples of ways in which Earth's surface is built up by the formation of soil
- Students will describe and give examples of ways in which Earth's surface is torn down by processes of erosion
- Students will describe and give examples of processes that change Earth's surface, such as erosion and deposition
- Students will describe how mass movement of rock and soil on Earth's surface change that surface
- Students will describe how wind contributes to erosion and deposition and causes changes to Earth's surface
- Students will describe and give examples of ways in which Earth's surface is built up and torn down by water erosion
- Students will describe and give examples of landforms that form from water erosion and deposition
- Students will describe and give examples of ways in which groundwater effects and changes Earth's surface
- Students will describe and give examples of ways in which Earth's surface is changed by glaciers
- Students will describe and give examples of ways in which Earth's surface is changed by wave erosion

Extended Activities:

- Compose a list of agents of weathering (wind, water, lichens, plant roots, animals, ice, snow, acid rain, and so on). Have students identify which is an agent of mechanical weathering and which is an agent of chemical weathering.

- Find images on the Internet or in magazines to represent volcanoes, hurricanes, floods, and earthquakes. Also, find images of the changes in Earth's surface that each one can cause. Have students connect each image of a natural disaster to the image of the damage it causes.

Gifted and Talented:

- Have students locate the waterfall nearest their area and research it, answering the following questions: When did it form? How tall is it? How deep is the water beneath it? This may require communicating with a geologist from a nearby college or university.

- Have students research the last glacial period that Earth has gone through and how it might have changed the landscape. When they are done, ask them to report their findings to the class.

Topic 10: Living Things in the Biosphere
(MS-LS-1,MS-LS-2,MS-LS-3,MS-LS-4.2, DCI LS1.A, CC.3,CC.4, CC.6, SEP.2,SEP.3, SEP.7)

Cross Curricular Standards			
Math	**ELA**	**Technology**	**SEL**
6. EE.C.9	**RST 1.1** **RST 6-8.1** **RST 6-8.2** **RST 6-8.8** **WHST.6-8.8** **WHST.6-8.9**	**8.1** **8.2**	**SEL.PK-12.1.4** **SEL.PK-12.2.1** **SEL.PK-12.4.1** **SEL.PK-12.5.2**

Objectives:

- Students will conduct an investigation to provide evidence that supports living things are made of cells
- Students will identify evidence that explains where living things come from
- Students will conduct an investigation to provide evidence that explains what living things need to stay alive, grow, and reproduce
- Students will identify and describe evidence that explains how living things are classified into groups
- Students will identify and describe evidence that examines the organization of levels of classification
- Students will identify and describe evidence that explains how the theory of evolution supports the classification of organisms
- Students will identify and describe evidence that explains what all living things are made of

- Students will conduct an investigation to provide evidence that describes the characteristics of viruses, bacteria, protists, and fungi
- Students will construct explanations that explain how viruses, bacteria, protists, and fungi interact with nature and people
- Students will determine differences to identify the forms and functions of different plants and animals
- Students will interpret data to determine an organism's characteristics
- Students will cite text evidence to illustrate differences and similarities in plant and animal cells
- Students will identify and describe animal traits

Extended Activities:

- Provide additional support by monitoring student progress as they get to each Check-In. Give students a graphic organizer to collect information at each Check-In to use in their Findings.

- Encourage students to infer the meaning of the text by reading the section headings first. Pair more advanced students with struggling students.

Gifted and Talented:

- Have students research current information about the tardigrade and watch a video of this mysterious creature in action. Students can write a summary of their findings and present it to the class.

- Have students research viruses to choose one aspect of viruses to present to the class. Have students submit topics for approval before proceeding with the project. Try to have each student present a different aspect of viruses. You might suggest that they create posters to make their presentations more varied and informative.

Additional Activities: BrainPop, EdPuzzle, Commonlit, IXL, Newsela

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)									
	Amistad Law: *N.J.S.A. 18A 52:16A-88*		Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*		Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*	x	Standards in Action: *Climate Change*