Middle School Grade 6 Science Tutorials offer targeted instruction, practice, and review designed to help students develop scientific literacy, deepen conceptual understanding, and apply scientific practices. Students explore concepts such as Earth's weather and climate, energy transfer and conservation, and the diversity of life.

Students engage with the content in an interactive, feedback-rich environment as they progress through standards-aligned modules. By continually honing their ability to apply knowledge in real-world scenarios, students build the depth of knowledge and higher-order skills required to demonstrate their mastery when put to the test.

In each module, the Learn It and Try It make complex ideas accessible to students as they explore the nature of science through focused content, interactive mini investigations, multi-modal representations, and personalized feedback. The Review It offers a high-impact summary of key concepts and relates those concepts to students' lives. The Test It assesses students' mastery of the module's concepts, providing granular performance data to students and teachers after each attempt. To help students focus on the content most relevant to them, unit-level pretests and posttests can quickly identify where students are strong and where they're still learning.

These Tutorials are built to the Next Generation Science Standards for middle school science.

Unit 1: Nature of Science

- **WHAT IS SCIENCE?**
  - 6.S.1A.1.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Ask questions to generate hypotheses for scientific investigations,
  - 6.S.1A.3.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Plan and conduct controlled scientific investigations to answer questions, test hypotheses, and develop explanations: formulate scientific questions and testable hypotheses,
  - 6.S.1A.4.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific

thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Analyze and interpret data from informational texts, observations, measurements, or investigations using a range of methods (such as tabulation, graphing, or statistical analysis) to support hypotheses, explanations, claims, or designs.

- **TYPES OF INVESTIGATIONS**
  - 6.S.1A.3.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Plan and conduct controlled scientific investigations to answer questions, test hypotheses, and develop explanations: select and use appropriate tools or instruments to collect qualitative and quantitative data, and
  - 6.S.1A.1.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Ask questions to generate hypotheses for scientific investigations,
  - 6.S.1A.3.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Plan and conduct controlled scientific investigations to answer questions, test hypotheses, and develop explanations: formulate scientific questions and testable hypotheses,
  - 6.S.1A.4.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Analyze and interpret data from informational texts, observations, measurements, or investigations using a range of methods (such as tabulation, graphing, or statistical analysis) to support hypotheses, explanations, claims, or designs.
  - 6.S.1A.1.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by

scientists and engineers. Ask questions to extend the results of investigations or challenge claims.

- 6.S.1A.3.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Plan and conduct controlled scientific investigations to answer questions, test hypotheses, and develop explanations: identify materials, procedures, and variables,
- 6.S.1A.4.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Analyze and interpret data from informational texts, observations, measurements, or investigations using a range of methods (such as tabulation, graphing, or statistical analysis) to reveal patterns and construct meaning or

- **USING MODELS**
  - 6.S.1A.2.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Develop, use, and refine models to understand or represent phenomena, processes, and relationships,
  - 6.S.1A.6.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using primary or secondary scientific evidence and models,
  - 6.S.1A.6.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using predictions based on observations and measurements, or

- 6.S.1A.8.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to develop models,

Unit 2: Measurement and Data

- **TOOLS AND MEASUREMENT**
  - 6.S.1A.3.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Plan and conduct controlled scientific investigations to answer questions, test hypotheses, and develop explanations: select and use appropriate tools or instruments to collect qualitative and quantitative data, and
  - 6.S.1A.5.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Use mathematical and computational thinking to use and manipulate appropriate metric units,
  - 6.S.1A.5.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Use mathematical and computational thinking to collect and analyze data,
  - 6.S.1A.3.4: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Plan and conduct controlled scientific investigations to answer questions, test hypotheses, and develop explanations: record and represent data in an appropriate form. Use appropriate safety procedures.
- **DISPLAYING AND INTERPRETING DATA**

- 6.S.1A.2.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Develop, use, and refine models to understand or represent phenomena, processes, and relationships,
- 6.S.1A.3.4: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Plan and conduct controlled scientific investigations to answer questions, test hypotheses, and develop explanations: record and represent data in an appropriate form. Use appropriate safety procedures.
- 6.S.1A.4.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Analyze and interpret data from informational texts, observations, measurements, or investigations using a range of methods (such as tabulation, graphing, or statistical analysis) to reveal patterns and construct meaning or
- 6.S.1A.5.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Use mathematical and computational thinking to collect and analyze data,
- 6.S.1A.5.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Use mathematical and computational thinking to express relationships between variables for models and investigations, or
- 6.S.1A.5.4: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific

thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Use mathematical and computational thinking to use grade-level appropriate statistics to analyze data.

- 6.S.1A.7: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct and analyze scientific arguments to support claims, explanations, or designs using evidence from observations, data, or informational texts.

Unit 3: Energy

- **DESCRIBING ENERGY**

- 6.P.3A.1: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and thermal energy. According to the principle of conservation of energy, energy cannot be created nor destroyed, but it can be transferred from one place to another and transformed between systems. Analyze and interpret data to describe the properties and compare sources of different forms of energy (including mechanical, electrical, chemical, radiant, and thermal).
- 6.S.1A.4.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Analyze and interpret data from informational texts, observations, measurements, or investigations using a range of methods (such as tabulation, graphing, or statistical analysis) to reveal patterns and construct meaning or
- 6.S.1A.5.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Use mathematical and computational thinking to collect and analyze data,
- 6.S.1A.5.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by

scientists and engineers. Use mathematical and computational thinking to express relationships between variables for models and investigations, or

- 6.S.1A.6.4: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using data communicated in graphs, tables, or diagrams.
- 6.S.1A.8.4: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to evaluate hypotheses, explanations, claims, or designs or

- **ENERGY TRANSFER AND TRANSFORMATION**
  - 6.P.3A.3: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and thermal energy. According to the principle of conservation of energy, energy cannot be created nor destroyed, but it can be transferred from one place to another and transformed between systems. Construct explanations for how energy is conserved as it is transferred and transformed in electrical circuits.
  - 6.P.3A.2: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and thermal energy. According to the principle of conservation of energy, energy cannot be created nor destroyed, but it can be transferred from one place to another and transformed between systems. Develop and use models to exemplify the conservation of energy as it is transformed from kinetic to potential (gravitational and elastic) and vice versa.
  - 6.S.1A.5.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Use mathematical and computational thinking to collect and analyze data,

- 6.S.1A.5.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Use mathematical and computational thinking to express relationships between variables for models and investigations, or
- 6.S.1A.6.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using primary or secondary scientific evidence and models,
- 6.S.1A.7: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct and analyze scientific arguments to support claims, explanations, or designs using evidence from observations, data, or informational texts.
- 6.S.1A.8.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to answer questions,
- 6.S.1A.8.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to explain or describe phenomena,

Unit 4: Energy, Force, and Work

- **ELECTROMAGNETIC FORCE**
  - 6.P.3A.4: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and thermal energy. According to the principle of conservation of energy, energy cannot be created

nor destroyed, but it can be transferred from one place to another and transformed between systems. Develop and use models to exemplify how magnetic fields produced by electrical energy flow in a circuit is interrelated in electromagnets, generators, and simple electrical motors.

- **WORK AND SIMPLE MACHINES**
  - 6.P.3B.1: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy transfer occurs when two objects interact thereby exerting force on each other. It is the property of an object or a system that enables it to do work (force moving an object over a distance). Machines are governed by this application of energy, work, and conservation of energy. Plan and conduct controlled scientific investigations to provide evidence for how the design of simple machines (including levers, pulleys, inclined planes) helps transfer mechanical energy by reducing the amount of force required to do work.
  - 6.S.1B.1.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. Technology is any modification to the natural world created to fulfill the wants and needs of humans. The engineering design process involves a series of iterative steps used to solve a problem and often leads to the development of a new or improved technology. Construct devices or design solutions using scientific knowledge to solve specific problems or needs: ask questions to identify problems or needs,
  - 6.P.3B.2: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy transfer occurs when two objects interact thereby exerting force on each other. It is the property of an object or a system that enables it to do work (force moving an object over a distance). Machines are governed by this application of energy, work, and conservation of energy. Design and test solutions that improve the efficiency of a machine by reducing the input energy (effort) or the amount of energy transferred to the surrounding environment as it moves an object.

Unit 5: Thermal Energy and Heat

- **THERMAL ENERGY AND TEMPERATURE**
  - 6.P.3A.1: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and thermal energy. According to the principle of conservation of energy, energy cannot be created nor destroyed, but it can be transferred from one place to another and transformed between systems. Analyze and interpret data to describe the properties and compare sources of different forms of energy (including mechanical, electrical, chemical, radiant, and thermal).
- **HEAT AND THERMAL ENERGY**

- 6.S.1A.2.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Develop, use, and refine models to understand or represent phenomena, processes, and relationships,
- 6.S.1A.2.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Develop, use, and refine models to communicate ideas to others.
- 6.S.1A.6.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using primary or secondary scientific evidence and models,
- 6.S.1A.6.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using predictions based on observations and measurements, or
- 6.P.3A.5: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and thermal energy. According to the principle of conservation of energy, energy cannot be created nor destroyed, but it can be transferred from one place to another and transformed between systems. Develop and use models to describe and compare the directional transfer of heat through convection, radiation, and conduction.

- **ENERGY TRANSFER AND TECHNOLOGY**
  - 6.S.1B.1.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. Technology is any modification to the natural world created to fulfill the wants and needs of humans. The engineering design process involves a series of iterative steps used to solve a problem and often leads to the development of a new or

improved technology. Construct devices or design solutions using scientific knowledge to solve specific problems or needs: ask questions to identify problems or needs,

- 6.S.1B.1.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. Technology is any modification to the natural world created to fulfill the wants and needs of humans. The engineering design process involves a series of iterative steps used to solve a problem and often leads to the development of a new or improved technology. Construct devices or design solutions using scientific knowledge to solve specific problems or needs: generate and communicate ideas for possible devices or solutions,
- 6.S.1A.2.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Develop, use, and refine models to communicate ideas to others.
- 6.S.1A.6.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using primary or secondary scientific evidence and models,
- 6.P.3A.3: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and thermal energy. According to the principle of conservation of energy, energy cannot be created nor destroyed, but it can be transferred from one place to another and transformed between systems. Construct explanations for how energy is conserved as it is transferred and transformed in electrical circuits.
- 6.S.1A.2.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Develop, use, and refine models to understand or represent phenomena, processes, and relationships,
- 6.P.3A.6: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and

thermal energy. According to the principle of conservation of energy, energy cannot be created nor destroyed, but it can be transferred from one place to another and transformed between systems. Design and test devices that minimize or maximize heat transfer by conduction, convection, or radiation.

Unit 6: Thermal Energy and Earth Systems

- **FRESHWATER AND ICE**
  - 6.E.2A.3: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. Earths atmosphere, an envelope of gases that surround the planet, makes conditions on Earth suitable for living things and influences weather. Water is always moving between the atmosphere (troposphere) and the surface of Earth as a result of the force of gravity and energy from the Sun. The Sun is the driving energy source for heating Earth and for the circulation of Earths atmosphere. Construct explanations of the processes involved in the cycling of water through Earths systems (including transpiration, evaporation, condensation and crystallization, precipitation, and downhill flow of water on land).
  - 6.E.2B.1: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Analyze and interpret data from weather conditions (including wind speed and direction, air temperature, humidity, cloud types, and air pressure), weather maps, satellites, and radar to predict local weather patterns and conditions.
- **OCEANS**
  - 6.E.2B.3: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Develop and use models to represent how solar energy and convection impact Earths weather patterns and climate conditions (including global winds, the jet stream, and ocean currents).
  - 6.E.2B.4: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Construct explanations for how climate is determined in an area (including latitude, elevation, shape of the land, distance from water, global winds, and ocean currents).

- **THE ATMOSPHERE**
  - 6.E.2A.1: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. Earths atmosphere, an envelope of gases that surround the planet, makes conditions on Earth suitable for living things and influences weather. Water is always moving between the atmosphere (troposphere) and the surface of Earth as a result of the force of gravity and energy from the Sun. The Sun is the driving energy source for heating Earth and for the circulation of Earths atmosphere. Develop and use models to exemplify the properties of the atmosphere (including the gases, temperature and pressure differences, and altitude changes) and the relative scale in relation to the size of Earth.
  - 6.S.1A.7: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct and analyze scientific arguments to support claims, explanations, or designs using evidence from observations, data, or informational texts.
  - 6.S.1A.8.4: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to evaluate hypotheses, explanations, claims, or designs or
  - 6.E.2A.1: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. Earths atmosphere, an envelope of gases that surround the planet, makes conditions on Earth suitable for living things and influences weather. Water is always moving between the atmosphere (troposphere) and the surface of Earth as a result of the force of gravity and energy from the Sun. The Sun is the driving energy source for heating Earth and for the circulation of Earths atmosphere. Develop and use models to exemplify the properties of the atmosphere (including the gases, temperature and pressure differences, and altitude changes) and the relative scale in relation to the size of Earth.
  - 6.E.2B.3: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Develop and use models to represent how solar energy and convection impact Earths weather patterns and climate conditions (including global winds, the jet stream, and ocean currents).

- 6.P.3A.5: Physical Science: Energy Transfer and Conservation The student will demonstrate an understanding of the properties of energy, the transfer and conservation of energy, and the relationship between energy and forces. Energy manifests itself in multiple forms, such as mechanical (kinetic energy and potential energy), electrical, chemical, radiant (solar), and thermal energy. According to the principle of conservation of energy, energy cannot be created nor destroyed, but it can be transferred from one place to another and transformed between systems. Develop and use models to describe and compare the directional transfer of heat through convection, radiation, and conduction.

Unit 7: Weather and Climate

- **WEATHER**
  - 6.E.2B.1: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Analyze and interpret data from weather conditions (including wind speed and direction, air temperature, humidity, cloud types, and air pressure), weather maps, satellites, and radar to predict local weather patterns and conditions.
  - 6.E.2B.3: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Develop and use models to represent how solar energy and convection impact Earths weather patterns and climate conditions (including global winds, the jet stream, and ocean currents).
  - 6.E.2B.2: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Develop and use models to explain how relationships between the movement and interactions of air masses, high and low pressure systems, and frontal boundaries result in weather conditions and storms (including thunderstorms, hurricanes and tornadoes).
  - 6.E.2B.3: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Develop and use models to represent how solar energy

and convection impact Earths weather patterns and climate conditions (including global winds, the jet stream, and ocean currents).

- 6.S.1A.8.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to explain or describe phenomena,
- 6.E.2B.1: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Analyze and interpret data from weather conditions (including wind speed and direction, air temperature, humidity, cloud types, and air pressure), weather maps, satellites, and radar to predict local weather patterns and conditions.

- **SEVERE WEATHER**
  - 6.E.2B.2: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Develop and use models to explain how relationships between the movement and interactions of air masses, high and low pressure systems, and frontal boundaries result in weather conditions and storms (including thunderstorms, hurricanes and tornadoes).
  - 6.S.1B.1.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. Technology is any modification to the natural world created to fulfill the wants and needs of humans. The engineering design process involves a series of iterative steps used to solve a problem and often leads to the development of a new or improved technology. Construct devices or design solutions using scientific knowledge to solve specific problems or needs: ask questions about the criteria and constraints of the device or solutions,
  - 6.E.2B.1: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Analyze and interpret data from weather conditions

(including wind speed and direction, air temperature, humidity, cloud types, and air pressure), weather maps, satellites, and radar to predict local weather patterns and conditions.

- **CLIMATE**
  - 6.S.1A.8.4: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to evaluate hypotheses, explanations, claims, or designs or
  - 6.E.2B.4: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Construct explanations for how climate is determined in an area (including latitude, elevation, shape of the land, distance from water, global winds, and ocean currents).
  - 6.E.2B.3: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Develop and use models to represent how solar energy and convection impact Earths weather patterns and climate conditions (including global winds, the jet stream, and ocean currents).
  - 6.E.2B.4: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. The complex patterns of changes and movement of water in the atmosphere determined by winds, landforms, ocean temperatures and currents, and convection are major determinants of local weather patterns and climate. Technology has enhanced our ability to measure and predict weather patterns. Construct explanations for how climate is determined in an area (including latitude, elevation, shape of the land, distance from water, global winds, and ocean currents).
  - 6.S.1A.7: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct and analyze scientific arguments to support claims, explanations, or designs using evidence from observations, data, or informational texts.

- 6.S.1A.8.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to explain or describe phenomena,
- 6.E.2A.2: Earth Science: Earths Weather and Climate The student will demonstrate an understanding of the interactions within Earths systems (flow of energy) that regulate weather and climate. Earths atmosphere, an envelope of gases that surround the planet, makes conditions on Earth suitable for living things and influences weather. Water is always moving between the atmosphere (troposphere) and the surface of Earth as a result of the force of gravity and energy from the Sun. The Sun is the driving energy source for heating Earth and for the circulation of Earths atmosphere. Critically analyze scientific arguments based on evidence for and against how different phenomena (natural and human induced) may contribute to the composition of Earths atmosphere.

Unit 8: Life on Earth

- **CHARACTERISTICS OF LIFE**
  - 6.L.4A.1.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms obtain and use resources for energy,
  - 6.L.4B.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how animal responses (including hibernation, migration, grouping, and courtship) to environmental stimuli allow them to survive and reproduce.
  - 6.L.4A.1.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an

environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms reproduce, and

- 6.L.4A.1.4: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms grow and develop.
- 6.L.4A.1.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms respond to stimuli,
- 6.L.4B.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how animal responses (including hibernation, migration, grouping, and courtship) to environmental stimuli allow them to survive and reproduce.

- **CHEMISTRY OF LIFE**
  - 6.L.4A.1.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms obtain and use resources for energy,

Unit 9: Diversity of Life

- **DOMAINS AND KINGDOMS OF LIFE**
  - 6.L.4A.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Develop and use models to classify organisms based on the current hierarchical taxonomic structure (including the kingdoms of protists, plants, fungi, and animals).
  - 6.L.4B.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data related to the diversity of animals to support claims that all animals (vertebrates and invertebrates) share common characteristics.
  - 6.L.5A.1: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Protist Kingdom is one of the most diverse groups and includes organisms that have characteristics similar to but are not classified as plants, animals, or fungi. These microorganisms live in moist environments and vary in how they obtain energy and move. The Fungi Kingdom consists of organisms that do not make their own food (heterotrophs) but obtain their nutrition through external absorption. Fungi can be grouped by their growth habit or fruiting structure and respond to changes in the environmental stimuli similar to plants. Analyze and interpret data from observations to compare how the structures of protists (including euglena, paramecium, and amoeba) and fungi allow them to obtain energy and explore their environment.
  - 6.L.5A.2: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Protist Kingdom is one of the most diverse groups and includes organisms that have characteristics similar to but are not classified as plants, animals, or fungi. These microorganisms live in moist environments and vary in how they obtain energy and move. The Fungi Kingdom consists of organisms that do not make their own food (heterotrophs) but obtain their nutrition through external absorption. Fungi can be grouped by their growth habit or fruiting structure and respond to changes in the environmental stimuli similar to plants. Analyze and interpret data to describe how fungi respond to external stimuli (including temperature, light, touch, water, and gravity).

- 6.L.4B.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data related to the diversity of animals to support claims that all animals (vertebrates and invertebrates) share common characteristics.
- 6.L.5B.1: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how the internal structures of vascular and nonvascular plants transport food and water.
- 6.L.5A.1: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Protist Kingdom is one of the most diverse groups and includes organisms that have characteristics similar to but are not classified as plants, animals, or fungi. These microorganisms live in moist environments and vary in how they obtain energy and move. The Fungi Kingdom consists of organisms that do not make their own food (heterotrophs) but obtain their nutrition through external absorption. Fungi can be grouped by their growth habit or fruiting structure and respond to changes in the environmental stimuli similar to plants. Analyze and interpret data from observations to compare how the structures of protists (including euglena, paramecium, and amoeba) and fungi allow them to obtain energy and explore their environment.
- 6.L.5A.2: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Protist Kingdom is one of the most diverse groups and includes organisms that have characteristics similar to but are not classified as plants, animals, or fungi. These microorganisms live in moist environments and vary in how they obtain energy and move. The Fungi Kingdom consists of organisms that do not make their own food (heterotrophs) but obtain their nutrition through external absorption. Fungi can be grouped by their growth habit or fruiting structure and respond to changes in the environmental stimuli similar to plants. Analyze and interpret data to describe how fungi respond to external stimuli (including temperature, light, touch, water, and gravity).

- **CLASSIFICATION OF LIVING THINGS**
  - 6.L.4A.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that

differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Develop and use models to classify organisms based on the current hierarchical taxonomic structure (including the kingdoms of protists, plants, fungi, and animals).

- 6.L.4A.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Develop and use models to classify organisms based on the current hierarchical taxonomic structure (including the kingdoms of protists, plants, fungi, and animals).
- 6.L.4B.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data related to the diversity of animals to support claims that all animals (vertebrates and invertebrates) share common characteristics.
- 6.S.1A.8.3: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to develop models,
- 6.L.4A.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Develop and use models to classify organisms based on the current hierarchical taxonomic structure (including the kingdoms of protists, plants, fungi, and animals).

- 6.L.4B.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data related to the diversity of animals to support claims that all animals (vertebrates and invertebrates) share common characteristics.

Unit 10: Cells

- **CELL NUTRITION AND TRANSPORT**
  - 6.L.4A.1.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms obtain and use resources for energy,
  - 6.S.1A.8.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to explain or describe phenomena,
  - 6.L.5A.1: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Protist Kingdom is one of the most diverse groups and includes organisms that have characteristics similar to but are not classified as plants, animals, or fungi. These microorganisms live in moist environments and vary in how they obtain energy and move. The Fungi Kingdom consists of organisms that do not make their own food (heterotrophs) but obtain their nutrition through external absorption. Fungi can be grouped by their growth habit or fruiting structure and respond to changes in the environmental stimuli similar to plants. Analyze and interpret data from observations to compare how the structures of protists (including euglena, paramecium, and amoeba) and fungi allow them to obtain energy and explore their environment.
- **CELL GROWTH AND REPRODUCTION**
  - 6.L.4A.1.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that

differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms reproduce, and

- 6.L.4A.1.4: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms grow and develop.

Unit 11: Reproduction and Development

- **PATTERNS OF REPRODUCTION**
  - 6.L.4A.1.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms reproduce, and
  - 6.L.4A.1.4: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms grow and develop.
  - 6.L.4A.1.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have

developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms reproduce, and

- 6.L.5B.3: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Develop and use models to compare structural adaptations and processes that flowering plants use for defense, survival and reproduction.

- **LIFE CYCLES**
  - 6.L.4A.1.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms reproduce, and
  - 6.L.4A.1.4: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms grow and develop.

Unit 12: Adaptations

- **ORGANS AND ORGAN SYSTEMS**
  - 6.L.4A.1.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms obtain and use resources for energy,

- 6.L.4B.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Obtain and communicate information to explain how the structural adaptations and processes of animals allow for defense, movement, or resource obtainment.
- 6.L.5B.1: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how the internal structures of vascular and nonvascular plants transport food and water.
- 6.L.5B.2: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data to explain how the processes of photosynthesis, respiration, and transpiration work together to meet the needs of plants.
- 6.L.5B.3: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Develop and use models to compare structural adaptations and processes that flowering plants use for defense, survival and reproduction.
- 6.L.4A.1.1: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms obtain and use resources for energy,

- 6.L.5B.1: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how the internal structures of vascular and nonvascular plants transport food and water.
- 6.L.5B.2: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data to explain how the processes of photosynthesis, respiration, and transpiration work together to meet the needs of plants.

- **SPECIALIZED CELLS AND TISSUES**

- 6.L.5B.1: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how the internal structures of vascular and nonvascular plants transport food and water.
- 6.L.5B.1: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how the internal structures of vascular and nonvascular plants transport food and water.
- 6.L.5B.2: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data to explain how the processes of photosynthesis, respiration, and transpiration work together to meet the needs of plants.

- 6.L.5B.3: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Develop and use models to compare structural adaptations and processes that flowering plants use for defense, survival and reproduction.

- **NATURAL SELECTION**
  - 6.L.4B.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Obtain and communicate information to explain how the structural adaptations and processes of animals allow for defense, movement, or resource obtainment.
  - 6.L.4B.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how animal responses (including hibernation, migration, grouping, and courtship) to environmental stimuli allow them to survive and reproduce.
  - 6.S.1A.6.1: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using primary or secondary scientific evidence and models,
  - 6.S.1A.6.4: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Construct explanations of phenomena using data communicated in graphs, tables, or diagrams.

- 6.S.1A.8.2: Science and Engineering Practices The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content. The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers. Obtain and evaluate scientific information to explain or describe phenomena,

Unit 13: Response to Stimuli

- **ANIMAL BEHAVIOR**
  - 6.L.4A.1.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms respond to stimuli,
  - 6.L.4B.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Obtain and communicate information to explain how the structural adaptations and processes of animals allow for defense, movement, or resource obtainment.
  - 6.L.4B.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how animal responses (including hibernation, migration, grouping, and courtship) to environmental stimuli allow them to survive and reproduce.
  - 6.L.4B.4: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in

changing environments. Obtain and communicate information to compare and classify innate and learned behaviors in animals.

- 6.L.4A.1.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms respond to stimuli,
- 6.L.4B.5: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data to compare how endothermic and ectothermic animals respond to changes in environmental temperature.
- 6.L.4B.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Obtain and communicate information to explain how the structural adaptations and processes of animals allow for defense, movement, or resource obtainment.
- 6.L.4B.3: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. The Animal Kingdom includes a diversity of organisms that have many characteristics in common. Classification of animals is based on structures that function in growth, reproduction, and survival. Animals have both structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Construct explanations of how animal responses (including hibernation, migration, grouping, and courtship) to environmental stimuli allow them to survive and reproduce.

- **PLANT RESPONSES**
  - 6.L.4A.1.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living.

All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms respond to stimuli,

- 6.L.5B.2: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data to explain how the processes of photosynthesis, respiration, and transpiration work together to meet the needs of plants.
- 6.L.5B.4: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Plan and conduct controlled scientific investigations to determine how changes in environmental factors (such as air, water, light, minerals, or space) affect the growth and development of a flowering plant.
- 6.L.5B.5: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data to describe how plants respond to external stimuli (including temperature, light, touch, water, and gravity).
- 6.L.5B.3: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Develop and use models to compare structural adaptations and processes that flowering plants use for defense, survival and reproduction.
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their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Plan and conduct controlled scientific investigations to determine how changes in environmental factors (such as air, water, light, minerals, or space) affect the growth and development of a flowering plant.

- 6.L.5B.5: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data to describe how plants respond to external stimuli (including temperature, light, touch, water, and gravity).
- 6.L.4A.1.2: Life Science: Diversity of Life Classification and Animals The student will demonstrate an understanding of how scientists classify organisms and how the structures, processes, behaviors, and adaptations of animals allow them to survive. Life is the quality that differentiates living things (organisms) from nonliving objects or those that were once living. All organisms are made up of cells, need food and water, a way to dispose of waste, and an environment in which they can live. Because of the diversity of life on Earth, scientists have developed a way to organize groups of organisms according to their characteristic traits, making it easier to identify and study them. Obtain and communicate information to support claims that living organisms respond to stimuli,
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- 6.L.5B.4: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Plan and conduct controlled scientific investigations to determine how changes in environmental factors (such as air, water, light, minerals, or space) affect the growth and development of a flowering plant.

- 6.L.5B.5: Life Science: Diversity of Life Protists, Fungi and Plants The student will demonstrate an understanding of the structures, processes, and responses that allow protists, fungi, and plants to survive and reproduce. The Plant Kingdom consists of organisms that primarily make their own food (autotrophs) and are commonly classified based on internal structures that function in the transport of food and water. Plants have structural and behavioral adaptations that increase the chances of reproduction and survival in changing environments. Analyze and interpret data to describe how plants respond to external stimuli (including temperature, light, touch, water, and gravity).