Science - First Grade				
Quarter 1				
Content/Resources	**Skills**	**Modifications**	**Vocabulary**	**Assessment**
Unit 1: Plant Classification and Characteristics **<u>Core Ideas For Knowing Science:</u>** **L1:** Organisms are organized on a cellular basis and have a finite life span. **L3:** Genetic information is passed down from one generation of organisms to another. **L4:** The unity and diversity of organisms, living and extinct, is the result of evolution. **E1:** The composition of the Earth and its atmosphere and the natural and human processes occurring within the shape of the Earth's surface and its climate. **<u>Core Ideas For Using Science:</u>** **U1:** Scientists explain phenomena using evidence obtained from observations and/or scientific investigations. Evidence may	**1.L4U1.10:** Develop a model to describe how plants are [classified into groups and subgroups] according to their similarities **1.L1U1.6:** Observe, describe, and predict life cycles of plants. **1.L3U1.9:** Obtain, evaluate, and communicate information to support and [evidence-based explanations] that plants produce offspring of the same kind, but offspring are generally not identical to each other or their parents.	**<u>Essential Questions:</u>** ● What is a plant? What are the parts of a plant? ● What is the life cycle of a plant? ● EL.1.S2.I.1 Determine the meaning of less frequently occurring words and phrases and general academic vocabulary ● EL.1.S6.I-2: Ask and answer questions about grade level topics **<u>Lesson Objectives</u>** ● I can identify the life cycles of a given group of plants. ● I can create a model of a life cycle for a given plant. ● I can differentiate between various kinds of plants that are similar, but not identical. (Ex: an apple tree and a lemon tree both have fruits, but they are not the same kind of plant.)	**<u>Inspire Lesson Vocabulary:</u>** flower fruit function leaf root seed stem structure inherit need pollen seedling survive **<u>Inspire Academic Vocabulary:</u>** data investigate model pattern prediction change environment	**<u>Module Test:</u>** Plant Structures and Functions Plant Parents and Their Offspring

lead to developing models and or theories to make sense of phenomena. As new evidence is discovered, models and theories can be revised. **<u>Resources</u>** **Concept Circle** **Vocabulary Spinner** **Vocabulary Menu** **Word Ladder** **Word Rater** **What's On My Head?** **Inspire Readers** *See end of map for resources		• I can research a plant and create an informative writing piece using text evidence to support my findings. (Ex: I know all about…	evidence observe	

Quarter 2				
Content/Resources	**Skills**	**Modifications**	**Vocabulary**	**Assessment**
Unit 2: Animal Classification and Characteristics **<u>Core Ideas For Knowing Science:</u>** **L.1:** Use materials to design a solution to a human problem by mimicking how animals use their external parts to help them survive, grow and meet their needs. **L.2.** Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. **L3:** Make observations to construct an evidence-based account that young animals are alike, but not exactly like their parents. **<u>Resources:</u>** **Concept Circle** **Vocabulary Spinner** **Vocabulary Menu**	**1.L4U1.10:** Develop a model to describe how animals are [classified into groups and subgroups] according to their similarities **1.L1U1.6:** Observe, describe, and predict life cycles of animals. **1.L3U1.9:** Obtain, evaluate, and communicate information to support and [evidence-based explanations] that animals produce offspring of the same kind, but offspring are generally not identical to each other or their parents.	**<u>Essential Questions:</u>** ● What are the different groups of animals? ● What are the life cycles of a given group of animals? ● How are offspring/babies similar and different from their parents? ● EL.1.S2.I.1 Determine the meaning of less frequently occurring words and phrases and general academic vocabulary ● EL.1.S6.I-2: Ask and answer questions about grade level topics **<u>Lesson Objectives</u>** ● I can classify animals into their groups based on the features (Ex: mammals, reptiles, amphibians, birds, fish) ● I can identify the life cycles of a given group of animals.	**<u>Inspire Lesson Vocabulary:</u>** amphibian behavior bird fish insect learn mammal protection reptile signal trait communicate energy pitch sound vibrate volume wave **<u>Inspire Academic Vocabulary:</u>** alike engineering	**<u>Module Test:</u>** Animal Parents and Their Offspring Animals and how they communicate **Engineering Challenge** Design protective gear for a sport based on our study of animals

Word Ladder **Word Rater** **What's On My Head?** **<u>Core Ideas For Using Science:</u>** **U1:** Scientists explain phenomena using evidence obtained from observations and/or scientific investigations. Evidence may lead to developing models and or theories to make sense of phenomena. As new evidence is discovered, models and theories can be revised. *See end of map for resources		• I can create a model of a life cycle for a given animal. • I can identify that not all offspring/babies are the same to each other or their parents. • I can compare the features of a parent with its offspring/babies. • I can differentiate between various kinds of animals that are similar, but not identical. (Ex: a robin and a penguin are both birds, but a penguin does not fly.) • I can research an animal and create an informative writing piece using text evidence to support my findings. (Ex: I know all about… • I can identify high/low sounds • I can determine what animals make different sounds and why • I can understand that sounds vibrate and things that vibrate make sound		**Stem Project** Design an Animal Sound Instrument

Quarter 3				
Content/Resources	**Skills**	**Modifications**	**Vocabulary**	**Assessment**
Unit 3: Light and Shadows **<u>Core Ideas for knowing Science:</u>** **P2:** Objects can affect other objects at a distance. **<u>Core Ideas for Using Science:</u>** **U1:** Scientists explain phenomena using evidence obtained from observations and or scientific investigations. Evidence may lead to developing models and or theories to make sense of phenomena. As new evidence is discovered, models and theories can be revised. *See end of map for resources **<u>Resources:</u>** **Discover the Phenomenon** Video-Light and Materials **Design a light message**	**1.P2U1.1:** Plan and carry out investigations demonstrating the effect of placing objects made with different materials in the path of a beam of light and predict how objects with similar properties will affect the beam of light.	**<u>Essential Question:</u>** ● What materials can a beam of light travel through? ● How do mirrors and prisms affect a beam of light? ● EL.1.S2.I.1 Determine the meaning of less frequently occurring words and phrases and general academic vocabulary ● EL.1.S6.I-2: Ask and answer questions about grade level topics **<u>Lesson Objectives:</u>** ● I can plan an investigation that explores how a beam of light travels through different materials.	**<u>Inspire Lesson Vocabulary:</u>** illuminate light material mirror opaque reflect shadow translucent transparent **<u>Inspire Academic Vocabulary:</u>** cause effect	**Module Test** **Design a light message** **STEM** What does a photographer do? How does light affect his/her job?

		• I can use previous investigations to draw conclusions of how different materials affect how light travels. • I can use materials to investigate if light can be redirected. (prisms and mirrors)		

Quarter 4				
Content/Resources	**Skills**	**Modifications**	**Vocabulary**	**Assessment**
Unit 4: Natural Resources Cause and Effect **Core Ideas for Knowing Science:** **E1:** The composition of the earth and its atmosphere and the natural human processes occurring within them shape the Earth's surface and its climate. **L4:** The unity and diversity of organisms, living and extinct, is the result of evolution.	**1.E1U1.5:** Obtain, evaluate, and communicate information about the properties of Earth materials {investigate} how humans use natural resources in everyday life. **1.L4U3.11:** Ask questions and explain how factors can cause species to go extinct.	**Essential Questions:** • What are natural resources? • How do we use natural resources in everyday life? • What causes plants and animals to go extinct? • What are the different habitats? • How do living things use their habitat to live?	**Inspire Lesson Vocabulary:** Earth fall horizon Moon Moon phases planet season spring star summer Sun	**Module Test:** Observe the Sky

L2: Organisms require a supply of energy and materials for which they often depend on, or compete with, other organisms. **<u>Resources:</u>** *Crosscutting Concepts Graphic Organizer *Science Probes: Strategies **<u>Core Ideas for Using Science</u>**: **U1:** Scientists explain phenomena using evidence obtained from observations and or scientific investigations. Evidence may lead to developing models and or theories to make sense of phenomena. As new evidence is discovered, models and theories can be revised. **U2:** The knowledge produced by science is used in engineering and technologies to solve problems to solve problems and/or create products. **U3:** Applications of science often have both positive and negative ethical, social,	**1.L2U1.8**: Construct an explanation describing how organisms obtain resources from the environment including materials that are used again by other organisms. **1.L2U2.7:** Develop and use models about how living things use resources to grow and survive	• EL.1.S2.I.1 Determine the meaning of less frequently occurring words and phrases and general academic vocabulary • EL.1.S6.I-2: Ask and answer questions about grade level topics **<u>Lesson Objectives</u>** • I can identify natural resources used to survive. • I can describe how living things use natural resources to survive.(soil, water, minerals, wood, air) • I can decide what natural resources was used to create different materials. (Ex: the chair we are sitting on is made of metal for the structure and plastic for the seat. Where does the metal	sunrise sunset winter **<u>Inspire Academic Vocabulary:</u>** pattern predict season	

economic and or political implications. *See end of map for resources		come from? Where does the plastic come from?) ● I can identify what extinction or going extinct means. ● I can describe the cause/effect of extinction. (Dinosaurs) ● I can identify how animals use their senses and body to find and use resources. ● I can create and explain a habitat that can sustain living things.		

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Content/Resources	**Skills**	**Modifications**	**Vocabulary**	**Assessment**
Unit: Forces of Friction **<u>Core Ideas for Knowing Science:</u>** **P3:** Changing the movement of an object requires a net force to be acting on it. **P4:** The total amount of energy in a closed system is always the same but it can be transferred from one energy store to another during an event. **<u>Core Ideas For Using Science:</u>**	**1.P3U1.3** Plan and carry out investigations which demonstrate how equal forces can balance objects and how unequal forces can push, pull, or twist objects, making them change their speed, direction or shape. **1.P4U2.4:** Design and evaluate ways to increase	**<u>Essential Questions:</u>** ● How can force change the motion or shape of an object? ● What impact do equal forces have on an object? ● What changes take place to make an object move? ● What is friction?	Forces Push Pull Unequal Balance Direction Movement Speed Shape Gravity Friction Surfaces	Scott Foresman Chapter Review, SE ,pp. 270-271

U1: Scientists explain phenomena using evidence obtained from observations and or scientific investigations. Evidence may lead to developing models and or theories to make sense of phenomena. As new evidence is discovered, models and theories can be revised. **U2:** The knowledge produced by science is used in engineering and technologies to solve problems and/or create products. **U3:** Applications of science often have both positive and negative ethical, social, economic, and/or political implications. *See end of map for resources	or reduce heat from friction between two objects.	• How can friction be reduced? **<u>Lesson Objectives:</u>** • I can use objects to show balance and motion. • I can differentiate between push or pull forces and identify that they are opposite forces. • I can predict and show how an object can move. • I can describe, classify, and communicate about the motion of objects, e.g. straight, zigzag, circular, curved, back and forth and back and slow. • I can investigate how gravity affects an object. • I can investigate how friction affects an object. • I can explain that friction is a force that causes an object to slow or stop.	Heat	

		• I can create friction between two objects. • I can create ways to reduce friction within a design E.G. sketches, drawings, or physical models. • I can compare, evaluate, and test different types of ways to reduce friction in a design. (E.G. smooth surface, water, lubricant)		

Inspire Resources:

Unit 1

Plants

- Three-Dimensional Assessment Guide: Plant Structures
- Vocabulary Flashcards
- Foldables
- Videos- Kayla: Landscape Architect
- Sienna: Nutritionist
- Science song - Structure and Function
- Science song- Patterns
- Leveled Reader: *Parts of a Plant*
- Leveled Reader: *How Plants Survive*
- Read Aloud - *Plant Parts Around the World*
- Read Aloud - *Which Way to Sprout?*

- Read Aloud - *How Plants Use Their Parts to Live and Grow*
- Impact News
- STEM Module Project: Build a Solar-Power Light Stand

Unit 2
Animals

- Discover the Phenomenon: Animal Parents and Their Offspring
- Three-Dimensional Assessment Guide: Animal Parents and Their Offspring
- Vocabulary Flashcards
- Foldables
- Video- How Animals Use Their Body Parts
- Video- Animal Communication
- Video- Animals Care for Their Young
- Science song - Structure and Function
- Science song- Patterns
- Leveled Reader: A World of Animals
- Read Aloud - Daisy's Duck/Families Are Similar, But Different
- Read Aloud - The Burrow/Animal Messages
- Impact News
- STEM Module Project: Design Protective Gear for a Sport

Unit 3
Light and Shadows

- Design a light message
- Discover the Phenomenon Video - Light and Materials
- Discover the Phenomenon Video - See Objects
- Discover the Phenomenon Video - Spotlights
- Discover the Phenomenon Video - Light and Materials
- Three-Dimensional Assessment Guide: Animal Parents and Their Offspring

- Vocabulary Flashcards
- Foldables
- Video- Light and Objects
- Video- Cave Exploration
- Science song -Cause and Effect
- Science song - Patterns
- Read Aloud- *Sounds*
- Read Aloud- *A Constant Friend: Light and Shadows*
- Read Aloud- *Mirror Land Mirrors and Light*
- Read Aloud- *Another Sun*
- Read Aloud- *Light and Shadows*
- Read Aloud- *Lights in the Sky*
- Leveled Reader - *Shadows*

Unit 4 Observe the Sky

- Discover the Phenomenon: Observe the Sky
- Three-Dimensional Assessment Guide: Observe the Sky
- Vocabulary Flashcards
- Foldables
- Videos- Haley: The Astronomer
- Video- Night Sky
- Video- Earth
- Video-Seasonal Patterns
- Video- The Sun and Stars
- Video- Haley the Astronomer
- Science song - Structure and Function
- Science song- Patterns
- Leveled Reader: Earth, Sun, Moon, and Stars
- Read Aloud - Another Sun/Lights in the Sky
- Read Aloud - The Other Half of the World/The Four Seasons

- Read Aloud (Closed Reading)- Telescopes and the Night Sky
- Impact News
- STEM Module Project: Seasonal Patterns