

		K	1	2	3	4	5
TRIMESTER 1	Project	Designing a Severe Weather Bag	Designing an Animal Sanctuary	Record & Observe Life Cycle of Butterfly	Design & Build a Cart that can stop at a specific location	Create a model of energy transfer or transformation	Create a model showing the cycling of matter in an ecosystem
	Theme	Weather	Plant & Animal Survival	Organisms & Their Habitat	Investigating Forces	Energy Transfer	Energy & Matter in Ecosystems
TRIMESTER 2	Project	Designing a Mini Golf Course	Building a Communication Device	Repurpose/ Design Something New	Research & Create a Presentation on an Endangered Animal	Analyzing the Structure & Function of a Living Thing Research	Investigating Chemical Reactions
	Theme	Pushes & Pulls	Exploring Light & Sound	Properties of Matter	Habitats & Change	Structure & Functions of Living Things	Investigating Matter
TRIMESTER 3	Project	Creating a Model for an Animal, Plant, or Person to live in	Creating a Model showing how the Sun impacts the moon	Record & Create a Travel Journal Based on National Park Virtual Visits	Design a solution to stop hail damage	Model a tool or concept that will reduce the impact of a natural disaster.	Carbon Footprint Research Project
	Theme	Needs of Plants & Animals	Sun, Moon & Stars	Exploring Land & Water	Weather & Climate	Processes That Shape Earth	Solar System & Our Place In IT
		Life Science		Phsycial Science		Earth & Space Science	



Unit 1: Overview

Topics & Vocabulary Terms	Weather and climate: temperature, sunlight, seasons, severe weather (blizzard, hurricane, tornado), weather patterns, air temperature, meteorologist, weather forecasting. Scientific practices: observe, predict, describe, model, compare/contrast, design, investigate, communicate.
Projects & Artifacts	Severe Weather Go-Bag: Students choose 10 essential items for a weather emergency backpack and explain their choices
Resources	Core Knowledge: Weather [Teacher Guide & Student Reader] STEELS Routine Demonstration Materials: Ice cubes, cups, sand/soil, foil, fabric, thermometer props, clothing for acting out temperature changes

Unit 2: Overview

Topics & Vocabulary Terms	Pushes and Pulls: Push, pull, force, motion, direction, gravity, contact, collision, start, stop, slow, turn, bounce, cause, effect, magnetic, invisible, pole, strength, at rest, faster, problem/solution
Projects & Artifacts	Mini Golf Project: Students design, model, and build miniature golf holes using classroom materials, testing both push and pull mechanics on different surfaces.
Resources	Core Knowledge: Pushes & Pulls [Teacher Guide & Student Reader] STEELS Routine Demonstration Materials: balls, blocks (basswood & particle board), magnets, magnetic marbles, ping pong balls, legos, tape, foam balls, golf putters

Unit 3: Overview

Topics & Vocabulary Terms	Needs of Plants and Animals: Plants, animals, living things, shelter, food, water, air, nature, environment, pattern, desert, forest, prairie, grassland, community garden, den, nest, shelter, wants, needs, demolish, plant parts (leaf, stem, root), animal groups, food chains, omnivore, herbivore, carnivore.
Projects & Artifacts	Living Environment Model: Students choose an animal, plant, or person and create an environment with food, water, shelter sources included.
Resources	Core Knowledge: Needs of Plants & Animals [Teacher Guide & Student Reader] STEELS Routine Hands-on Materials: carrots, construction paper, animal cards, assorted art supplies for projects

Unit 1: Weather

STAGE 1 | DESIRED RESULTS

<p>3.3.K.A Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.</p> <p>3.3.K.D Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.</p> <p>3.2.K.C Make observations to determine the effect of sunlight on Earth's surface</p>	Transfer	
	<i>Weather conditions vary.</i>	
	Meaning	
	<p>Big Ideas:</p> <ul style="list-style-type: none"> Weather and climate are shaped by complex interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. Natural processes can cause sudden or gradual changes to Earth's systems, some of which may adversely affect humans. Human activities in agriculture, industry, and everyday life has an impact on the land, rivers, ocean, and air. 	<p>Essential Questions:</p> <ul style="list-style-type: none"> How do living things use natural resources? What regulates weather and climate? How does severe weather impact individuals and societies?
	Acquisition	
	<p>Knowledge:</p> <ul style="list-style-type: none"> Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. 	<p>Skills:</p> <ul style="list-style-type: none"> I can make observations (firsthand or from media) to collect data that can be used to make comparisons. I can use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. I can use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. I can ask questions based on observations to find more information about the designed world.

	<ul style="list-style-type: none">• Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.• Sunlight warms Earth's surface.	<ul style="list-style-type: none">• I can read grade appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.
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Unit 2: Pushes & Pulls

STAGE 1 | DESIRED RESULTS

Forces and Interactions

3.2.K.A Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.

Types of Interactions

3.2.K.B Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.

3.2.K.D Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.

Transfer

Pushes and pulls help us understand how objects move, speed up, slow down, change direction.

Meaning

Big Ideas:

- A change in motion of interacting objects can be explained and predicted by forces.
- All forces between objects, regardless of size or direction, arise from only a few types of interactions
- Energy can be modeled as either motions of particles or as being stored in force fields.
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Essential Questions:

- How can one predict an object's continued motion, changes in motion, or stability?
- What underlying forces explain the variety of interactions observed?
- What is energy?

Acquisition

Knowledge:

- I can understand that pushes and pulls can have different strengths and directions.
- I can understand that Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.
- I know when objects touch or collide, they push on one another and can change motion.

Skills:

- I can analyze data from tests of an object or tool to determine if it works as intended.
- I can plan and conduct an investigation in collaboration with peers
- I can make observations (firsthand or from the media) to collect data that can be used to make comparisons.
- I can use tools and materials provided to design and build a device that solves

	<ul style="list-style-type: none">• I know that sunlight warms Earth's surface.	<p>a specific problem or a solution to a specific problem.</p> <ul style="list-style-type: none">• I can design Simple tests to gather evidence to support or refute student ideas about causes.• I can determine that events have causes that generate observable patterns.
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Unit 3: Needs of Plants & Animals

STAGE 1 | DESIRED RESULTS

Organization for Matter and Energy Flow in Organisms

3.1.K.A Use observations to describe patterns of what plants and animals (including humans) need to survive.

Earth's Systems

3.3.K.B Plants and animals can change their environment.

Earth and Human Activity

3.3.K.C Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.

Transfer

Both plants and animals need different things to live and grow.

Meaning

Big Ideas:

- The structures, functions, and behaviors of organisms allow them to obtain, use, transport, and remove the matter and energy needed to sustain them.

Essential Questions:

- How do organisms obtain and use the matter and energy they need to live and grow?

Acquisition

Knowledge:

- I can understand that animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.
- I can understand that Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.
- Systems in the natural and designed world have parts that work together

Skills:

- I can use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.
- I can identify patterns in the natural and human designed world can be observed and used as evidence
- I can use a model to represent relationships in the natural world.