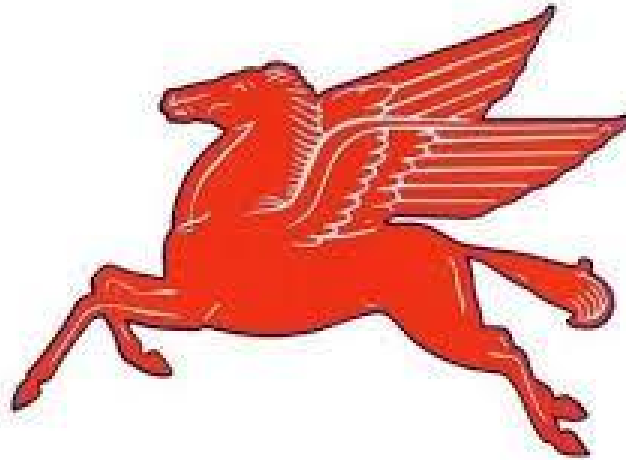


Curriculum Management System

PAULSBORO PUBLIC SCHOOLS



Kindergarten Science

UPDATED 2022

For adoption by all regular education programs as specified and for adoption or adaptation by all Special Education Programs in accordance with Board of Education Policy.

Board Approved: 2022

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Ms. Stacey DiMeo, Director of Special Services

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Mr. Matthew J. Browne, Principal, grades 3-6

Mr. Paul Morina, Principal, grades 7-12

Paulsboro Public Schools

Mission Statement

The mission of the Paulsboro School District is to work with students, parents, educators, and community to develop excellence in education while preparing each student to be viable and productive citizens in society. Our goal is to develop the unique potential of the whole student by creating a challenging and diverse learning climate that prepares students for the 21st Century and is rich in tradition and pride.

QUARTER 1 – Motion and Stability: Forces and Interactions

Big Idea: How do objects move?

Topic: Forces and Motion

<p>NJ Student Learning Standards: K-PS2-1. 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. K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or pull Science and Engineering Practices K-PS2-1 With guidance, plan and conduct an investigation in collaboration with peers. Disciplinary Core Ideas: PS2.A: Forces and Motion: Pushes and pulls can have different strengths and directions. (K-PS2-), (K-PS2-2). Pushing or pulling on an object can change the speed or direction of its motion (K-PS2-1), (K-PS2-2)</p>	GOAL	
	<p>SWBAT Develop an understanding of force and motion Plan and conduct an investigation and observe the effects of different strengths of pushes on the motion of an object Analyze and interpret data to answer questions about what happens when objects collide.</p>	
	Essential Questions Assessments	
	<p>1. How do objects move? 2. What happens to an object that is pushed or pulled? 3. What happens to an object that is pushed or pulled that have different</p>	<p>Formative Assessments: Page Keeley Probe Strategy: Draw You Thinking Strategies Talk About It Inquiry Activities Quick Check Three-Dimensional Thinking Questions</p>

<p>PS2.B: Types of Interactions: When objects touch or collide, they push on one another and can change motion. (K-PS2-1)</p> <p>PS3.C: Relationship Between Energy and Forces: A bigger push or pull makes things speed up or slow down more quickly. (secondary to K-PS2-1)</p> <p>Crosscutting Concepts:</p> <p>K-PS2-1: Cause and Effect: Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1)</p> <p>21st Century Life and Careers:</p> <p>Standard 9.4 Life Literacies and Key Skills: This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.</p> <p>Technology Standards:</p> <p>8.1.2.A.2 Create a document using a word processing application.</p> <p>8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual</p>	<p>strengths and directions?</p> <p>4. What causes objects to change direction and speed?</p> <p>5. What happens when objects touch or collide?</p> <p>6. How can we change an objects direction?</p>	<p>Summative Assessments:</p> <p>Lesson Reviews</p> <p>Lesson Checks</p> <p>Module Test TE page 47 (Go Online)</p> <p>Vocabulary Check</p> <p>STEM Module Project</p>
<p>Enduring Understanding Resources</p>		
	<p>1. Force and motion cause things to move.</p> <p>2. When an object is pushed or pulled it will move.</p> <p>3. Pushing or pulling on an object can change the speed or direction of its</p>	<p>Teachers Addition Kindergarten Unit 4</p> <p>Go ONLINE – Forces and Motion</p> <p>McGraw Hill Parent Letter Student Science Book</p> <p>Word Wall – collide, motion, pull, push</p>

environments (i.e. games, museums).

Companion Standards:

English Language Arts

RI.K.1 With prompting and support, ask and answer questions about key details in a text. (K-PS2-2)

W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-PS2-1)

SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-PS2-2)

Mathematics

MP.2 Reason abstractly and quantitatively.

K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of/less of” the attribute and describe the difference.

motion and can start or stop.

4. Pushing and pulling can have different strengths and directions, an object can change the speed and direction, when objects collide, they push one another, a bigger push makes objects speed up or slow down.

5. When objects touch or collide, they push on one another and change the motion. A bigger push or pull makes things speed up or slow down.

6. We can use different materials to experiment with, we can

Science Probes

Promethean

Board

STEM

Connections

Online Videos

Wooden Blocks,

plastic blocks,

marbles, paper

tubes, clay,

sandpaper, craft

sticks, scissors

yarn, masking

tape, crayons,

toy cars, bottles,

ball and play

area,

rope and play

area

Lesson

Reviews26

Vocabulary

Flash cards

Vocabulary

Checks

Online Videos

Science Songs

Interactive

Presentations

Queen of the Hill

Read Aloud

pages TE pages

4- 13

MODIFICATIONS: Follow Differentiate Instruction provided in each module.

Gifted and Talented

Learners:

Ask, is it easier to push or pull something heavy? Have students explain their answers. Have partners think about machines that move heavy objects. How do machines use force? Do they lift, push, pull, or a combination of those? Focus on adding depth and complexity in student understanding of design solutions for moving and /or changing the speed of an object.

Special Education Learners:

Ask for a volunteer to push a heavy object. Machine. Ask another student to push a light object. Discuss why one object was easier to push. View Kinesthetic Vocabulary Create Memory Makers

English Language Learners:

Make connections through pantomime, acting out, and prior experience. Provide Kinesthetic, tactile, auditory, written, and visual

develop a model, analyze, and interpret the data, and we can ask and answer questions about our design.

Pushes and Pulls
Read Aloud TE page 12
Inquiry Activities found under Go Online
When Objects Collide Read Aloud pages 14-23
Toys that Move Leveled Readers TE page 26
Carlo's Skateboard Leveled Readers TE page 32
Impact News found on Planning Instruction in Different Learning Environments Teacher Toolbox

modalities of multiple
exposure.
View Kinesthetic Vocabulary
Cognates
Language Building Resources

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QUARTER 1 – Motion and Stability: Forces and Interactions

Big Idea: Design a Way to Change an Objects Direction

Topic: STEAM Module Project -Engineering Challenge- Forces & Motion

NJ Student Learning

Standards:

K-PS2-1. 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.

K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or pull

Science and Engineering Practices

GOAL

SWBAT

Design a way to change an objects direction.
 Build a model using different materials.
 Ask and answers questions based on observations. Ask what problem we are going to solve and how can we solve the problem.

Essential Questions Assessments

<p>K-PS2-1 With guidance, plan and conduct an investigation in collaboration with peers.</p> <p>Disciplinary Core Ideas:</p> <p>PS2.A: Forces and Motion: Pushes and pulls can have different strengths and directions. (K-PS2-), (K-PS2-2).</p> <p>Pushing or pulling on an object can change the speed or direction of its motion (K-PS2-1), (K-PS2-2)</p> <p>PS2.B: Types of Interactions: When objects touch or collide, they push on one another and can change motion. (K-PS2-1)</p> <p>PS3.C: Relationship Between Energy and Forces: A bigger push or pull makes things speed up or slow down more quickly. (secondary to K-PS2-1)</p> <p>Crosscutting Concepts:</p> <p>K-PS2-1: Cause and Effect: Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1)</p> <p>21st Century Life and Careers: Standard 9.4 Life Literacies and Key Skills: This standard outline key literacies and technical skills such as critical</p>	<p>1. How can you change the direction of the object's movement?</p> <p>2. How do we know if the model we create will solve our problems?</p> <p>3. How can we solve problems?</p>	<p>Summative Assessment: Module Project Rubric (TE pag45)</p>
	<p>Enduring Understanding</p> <p>Resources</p>	
	<p>1. We can change the direction by drawing out different models.</p> <p>2. We test our ideas by</p>	<p>Materials: modeling clay, craft sticks, cardboard tubes, sandpaper,</p>

<p>thinking, global and cultural awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.</p> <p>Technology Standards:</p> <p>8.1.2.A.2 Create a document using a word processing application.</p> <p>8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).</p> <p>Companion Standards:</p> <p>English Language Arts</p> <p>RI.K.1 With prompting and support, ask and answer questions about key details in a text. (K-PS2-2)</p> <p>W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-PS2-1)</p> <p>SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-PS2-2)</p> <p>Mathematics</p>	<p>designing the model to see if the direction changes.</p> <p>3. Asking questions and observing help us to solve problems.</p>	<p>blocks, large marble, safety scissors.</p> <p>Interactive Presentation</p> <p>Module Project: Design a Way to Change an Object's Direction.</p> <p>Module Project Rubric TE: page 45</p>
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MP.2 Reason abstractly and quantitatively.

K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of/less of” the attribute and describe the difference.

MODIFICATIONS: Follow Differentiate Instruction provided in each module.

Gifted and Talented Learners:

Ask, is it easier to push or pull something heavy? Have students explain their answers. Have partners think about machines that move heavy objects. How do machines use force? Do they lift, push, pull, or a combination of those? Focus on adding depth and complexity in student understanding of design solutions for moving and /or changing the speed of an object.

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Special Education Learners:

Ask for a volunteer to push a heavy object. Machine. Ask another student to push a light object. Discuss why one object was easier to push.

View Kinesthetic Vocabulary
Create Memory Makers

English Language Learners:

Make connections through pantomime, acting out, and prior experience.

Provide Kinesthetic, tactile, auditory, written, and visual modalities of multiple exposure.

View Kinesthetic Vocabulary from
Cognates
Language Building Resources

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QUARTER 2 – The Sun and Earth’s Surface

Big Idea: What does the Sun do?

Topic: Energy

Standards:

NJ Student Learning

Standards:

GOAL

SWBAT

Investigate and make observations to determine the effect of sunlight on Earth’s surface.

K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.

K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.

Disciplinary Core Ideas:

PS3.B: Conservation of Energy and Energy Transfer – Sunlight warms Earth's surface. (K-PS3-1), (K-PS3-2)

K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

K-2-ETS1- 2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

Science and Engineering:

Measure and collect data for comparison.

Essential Questions Assessments

1. What effects does sunlight have on the Earth's surface?
2. Will objects melt in the sunlight?
3. How does sunlight and shade affect temperature during different times of the day?
4. How does the size of an object affect the amount of shade it makes?

Formative Assessments:
Page Keeley
Probe Strategy:
Draw You 3
Thinking Strategies
Kinesthetic Vocabulary
from pages VKV1-VKV2
Three-Dimensional Thinking Questions
Talk About It Inquiry Activities
Quick Checks
Summative Assessments:
Prior Knowledge Assessment
Lesson Reviews
Lesson Checks
Module Test-
The Sun and Earth's Surface

<p>K-PS3-1 Make observations (firsthand or from media) to collect data that can be used to make comparisons.</p> <p>K-PS3-2 Us</p>		<p>Vocabulary Check STEM- Module Project</p>
<p>21st Century Life and Careers: Standard 9.4 Life Literacies and Key Skills: This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.</p> <p>Technology Standards:</p> <p>8.1.2.A.2 Create a document using a word processing application.</p> <p>8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).</p> <p>Companion Standards:</p> <p>English Language Arts</p> <p>RI.K.1 With prompting and support, ask and answer questions about key details in a text.</p> <p>RL.K.2 Key Ideas and Details</p> <p>RL.K.7 Integration of Knowledge and Ideas</p>	<p>Enduring Understanding Resources</p> <ol style="list-style-type: none"> 1. Sunlight warms the Earth’s surface. 2. The sunlight melts many things. 3. The temperature goes down in the shade. 4. The bigger the item the more shade it makes. 	<p>Inspire Science Weather and the Sun-Unit 3 Inspire Science Literature Recommendations found in Module Planning Resources GO ONLINE- Universal Access in Course Planning Resources Word Wall Science Probes Science Read Aloud – <i>Tortoise Is Hot</i> TE page 74 Leveled Reader- <i>Melting Snow</i> TE page 78- 79 Leveled Reader – <i>The Sun Warms Earth</i> page 75</p>

<p>SL.K.1 Comprehension and Collaboration L.K.5.D Vocabulary Acquisition and Use Mathematics MP.2 Reason abstractly and quantitatively. K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of/less of” the attribute and describe the difference. MODIFICATIONS: Follow Differentiate Instruction provided in each module. Advanced Learner: Focus on adding depth and complexity in student understanding of design solutions for protecting oneself from the sun. Students with Disabilities: Gather and display photographs and drawings. Provide multiple means of representation.</p>		<p>Materials: 2 cups, water, 2 thermometers, Paper plates, plastic gloves, rocks, soil, sand, safety goggles, butter, ice cube, chocolate bar, ice cream, cheese, aluminum pan, eraser, pencil, paper clip, red crayon, sun-sensitive paper, plastic wrap, butcher paper, cardboard box, cardboard tubes, masking tape, UV beads. Teacher Toolbox Interactive Presentations Science and Engineering Handbook</p>
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Brainstorm Web

Sticky Notes

English Language Learners:

Activate Prior Knowledge related to the topic of the Sun and Earth's surface by utilizing charts and graphic organizers to display what students already know and are learning throughout the module.

Brainstorm Web

Sticky Notes

Bridging and Reading 3-2-1

Small Group Work

ONLINE- Language Building Resources

Cognates

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QUARTER 2 – The Sun and the Earth’s Surface

Big Idea: What does the Sun do?

Topic: STEM Module Project – Engineering Challenge- Energy

<p>Standards: NJ Student Learning Standards: K-PS3-1. Make observations to determine the effect of sunlight on Earth’s surface. K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area. Disciplinary Core Ideas: PS3.B: Conservation of Energy and Energy Transfer – Sunlight warms Earth’s surface. (K-PS3-1), (K-PS3-2) K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. K-2-ETS1- 2 Develop a simple sketch, drawing, or physical model to illustrate how the</p>	SWBAT	
	<p>Use observations to answer questions and solve problems. Answer the question: How can you stay safe from the sun? Create a structure that keeps UV beads from changing color.</p>	
	Essential Questions Assessments	
	<p>1. What type of structure will keep us safe from the sun? 2. How do we know that our structure is going to keep us safe.</p>	<p>Summative Assessments: Module Project Rubric Inspire Summative Assessment</p>

shape of an object helps it function as needed to solve a given problem.

K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each preforms.

Science and Engineering:

K-PS3-1 Make observations (firsthand or from media) to collect data that can be used to make comparisons.

K-PS3-2 Us

21st Century Life and Careers:

Standard 9.4 Life Literacies and Key Skills: This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.

Technology Standards:

8.1.2.A.2 Create a document using a word processing application.

8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual

Enduring Understanding Resources	
1. A structure that provides shade will help us stay safe from the sun. 2. The UV beads will not change color if the structure keeps us safe.	Unit 3 Inspire Science – Weather and Sun page 94-97 Inspire Science Literature Recommendations found in Module Planning Resources Materials: Butcher Paper, Tape, Cardboard Box with lid, Cardboard Tube UV beads, Scissors GO ONLINE- Universal Access in Course Planning Resources Promethean Board Module Project Rubric: Design a Structure to

environments (i.e. games, museums).

Companion Standards:

English Language Arts

RI.K.1 With prompting and support, ask and answer questions about key details in a text.

RL.K.2 Key Ideas and Details

RL.K.7 Integration of Knowledge and Ideas

SL.K.1 Comprehension and Collaboration

L.K.5.D Vocabulary Acquisition and Use

Mathematics

MP.2 Reason abstractly and quantitatively.

K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of/less of” the attribute and describe the difference.

MODIFICATIONS:

Follow Differentiate Instruction provided in each module.

Make Shade TE:
page
95

Advanced Learner:

Focus on adding depth and complexity in student understanding of design solutions for protecting oneself from the sun.

Students with Disabilities:

Gather and display photographs and drawings. Provide multiple means of representation.

Brainstorm Web

Sticky Notes

English Language Learners:

Activate Prior Knowledge related to the topic of the Sun and Earth's surface by utilizing charts and graphic organizers to display what students already know and are learning throughout the module.

Brainstorm Web

Sticky Notes

Bridging and Reading 3-2-1

Small Group Work

ON LINE- Language Building

Resources

Cognates

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**QUARTER 3– From Molecules to
Organisms: Structures and Processes**
**Big Idea: How do plants and animals live and grow
in different places?**
Topic: Plants and Animals

Standards: NJ Student Learning Standards K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive. K-ESS3.A Natural Resources 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. K-ESS3-1 Systems in the natural and designed world have parts that work together.	GOAL	
	SWBAT Use observations to describe patterns of what plants, animals, and humans need to survive.	
	Essential Questions Assessments	
	1. How can you tell if something is living? 2. What do plants, animals, and humans need to survive?	Formative Assessments: Three-Dimensional Thinking Questions Talk About It Inquiry Activities Quick Check

<p>Science and Engineering Practices: K-LS1-1 Analyzing and Interpreting Data Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. Disciplinary Core Ideas: LS1.C Organization for Matter and Energy Flow in Organisms All 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. (K-LS1-1)</p>		Page Keeley Science Probes Summative Assessments: Lesson Reviews McGraw-Hill Lesson Checks & Module Test Vocabulary Check STEM Module Project
<p>Crosscutting Concepts: K-LS1-1 Patterns in the natural and human designed world can be observed and used as evidence. K-LS1-1 Scientists look for patterns and order when making observations about the world. 21st Century Life and Careers: Standard 9.4 Life Literacies and Key Skills: This standard outline key literacies and technical skills such as critical thinking, global and cultural</p>	<p>Enduring Understanding Resources</p> <ol style="list-style-type: none"> 1. Living things interact with their environment. 2. Living things need water, air, food, shelter, and sleep. 	Inspire Science Living Things – Unit 1 Materials: photo cards, yarn, scissors, plastic gloves, gummy worms, earthworm, crayons, 2 plants, water, cubes, modeling clay, twigs, leaves, yarn, craft sticks, grass, newspaper, cotton balls, 2 sponges, 1 large cup,

awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.

Technology Standards:

8.1.2.A.2 Create a document using a word processing application.

8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

Companion Standards:

English Language Arts

W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).

Mathematics

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of/less of” the attribute and describe the difference.

MODIFICATIONS:

Advanced Learner

Focus on adding depth in student understanding of how using models can help us

wax paper, 2
foam plates,
shoebox,
construction
paper, sand,
pebbles,
plants, 2 animals,
animal food,
clear plastic tank.
Leveled Readers
*What People and
Animals Need*
Teacher Toolbox
STEM
Connections –
Go Online
Interactive
Presentations
Science and
Engineering
Handbook TE
page 5
Vocabulary
Cards

learn more about the world
around us.

Revisit investigations.

Module Wrap-Up

Leveled Readers

Students with Disabilities

Help students make a
connection to plants and
animal needs.

Provide multiple means of
expression.

Gather pictures of animals
and plants to identify.

Leveled Readers

Graphic organizers

Word Banks

English Language Learners

Illustrated Word Bank

T-Charts using pictures

Web Diagrams

Cognates

Language Building Resource -
Online

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QUARTER 3 – From Molecules to Organisms: Structures and Processes
Big Idea: How do plants and animals live and grow in different places?
Topic: STEM Module Project – Science Challenge-Habitats

Standards: NJ Student Learning Standards: K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive. K-ESS3.A Natural Resources Living things need water, air, and resources from the land, and they live in places that have the things they need.	GOAL
	SWBAT Use observations to answer questions and solve problems about animal habitats.
	Essential Questions Assessments

<p>Humans use natural resources for everything they do. K-ESS3-1 Systems in the natural and designed world have parts that work together. Science and Engineering Practices: K-LSI-1 Analyzing and Interpreting Data Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. Disciplinary Core Ideas: K-LSI-1 Organization for Matter and Energy Flow in Organisms All 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. Crosscutting Concepts: K-LSI-1 Patterns in the natural and human designed world can be observed and used as evidence. 21st Century Life and Careers: Standard 9.4 Life Literacies and Key Skills: This standard outline key literacies and technical skills such as critical</p>	<p>1. What do animals need to live and grow?</p>	<p>Summative Assessments: Module Project Rubric: Make a Habitat TE page 55 Module Test: Plants and Animals TE page 57</p>
	<p>Enduring Understanding Resources</p>	
	<p>1. Animals need food, water, air, and shelter to live and grow.</p>	<p>Inspire Science Living Things – Unit 1 Materials: photo cards, yarn, scissors, plastic gloves, gummy worms, earthworm, crayons, 2 plants, water, cubes, modeling clay, twigs, leaves, yarn, craft sticks, grass, newspaper, cotton balls, 2 sponges, 1 large cup,</p>

thinking, global and cultural awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.

Technology Standards:

8.1.2.A.2 Create a document using a word processing application.

8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).

Companion Standards:

English Language Arts

W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).

Mathematics

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of/less of” the attribute and describe the difference.

MODIFICATIONS:

Advanced Learner:

Focus on adding depth in student understanding of how using models can help us

wax paper, 2
foam plates,
shoebox,
construction
paper, sand,
pebbles,
plants, 2 animals,
animal food,
clear plastic tank.
Leveled Readers
*Where Do Animals
Live ?* page 47
Teacher Toolbox
Module Project
Rubric: Make a
Habitat

learn more about the world around us.

Revisit investigations.

Module Wrap-Up

Leveled Readers

Students with Disabilities:

Help students make a connection to plants and animal needs.

Provide multiple means of expression.

Gather pictures of animals and plants to identify.

Leveled Readers

Graphic organizers

Word Banks

English Language Learners:

Illustrated Word Bank

T-Charts using pictures

Web Diagrams

Cognates

Language Building Resource

– Online

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QUARTER 4 – Earth & Weather	
Big Idea: What is weather and how can weather and humans change the environment?	
Topic: Earth's Systems- Weather & The Environment	
Standards: NJ Student Learning Standards: K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time. K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans)	GOAL SWBAT: Make observations about weather and weather patterns, forecast weather, and learn about severe weather conditions and how to prepare for them. Analyze and interpret data to describe and measure weather patterns. Make predictions about weather.

can change the environment to meet their needs.

K-ESS3-3 Communicate solutions that will reduce the impact of climate change and humans on the land, water, air, and/or other living things in the local environment.

Science and Engineering

K-ESS3-2 Asking Questions and Defining Problems- Ask questions based on observations to find more information about the designed world.

K-ESS2-1 Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.

K-ESS2-2 Construct an argument with evidence to support a claim.

K-ESS3-1 Use a model to represent relationships in the natural world.

Disciplinary Core Ideas

ESS2.D Weather and Climate
Weather is the combinations of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to

Ask questions and obtain information on ways to prepare for and respond to severe weather.

Essential Questions Assessments

1. How do we measure and describe weather?
2. What tools help us to measure different types of weather?
3. Is the weather the same throughout the seasons?
4. How do we prepare for and stay safe during severe weather?
5. How do living things cause change to their environment.

Formative Assessments:
Three-Dimensional Thinking Questions
Talk About It Inquiry Activities
Quick Check
Page Keely Science Probes
Summative Assessments:
Lesson Reviews
McGraw-Hill Lesson Checks and Module Test
Vocabulary Check
STEM Module Project

describe and record the weather over time. (K-ESS2-1)
ESS2.E Biogeology
 Plants and animals can change their environment. (K-ESS2-2)
ESS3.A Natural Resources
 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.
ESS3.B Natural Hazards
 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.
ESS3.C Human Impacts on Earth Systems
 Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (secondary to K-ESS2-2)
ETS1.A Defining and Delimiting an Engineering Problem

Enduring Understanding Resources	
1. Weather is the combination of Sunlight, wind, snow, rain, and temperature. We can measure and describe weather over time.	Inspire Science-Weather and The Sun Unit 3 Read Aloud <i>Severe Weather</i> Module Project-Make a Forecast Promethean Board Materials: crayons, construction paper, crepe paper, chenille stems, glue, thermometer, windsock, rain gauge, paper hole-punch, craft stick
2. Thermometers, windsocks, rain gauge help us to observe the weather. Patterns also help us to observe the weather.	masking tape, markers, plastic jar, aluminum
3. Weather changes throughout the year, this can be	

<p>between the needs of different plants and animals (Including humans) and the places they live.</p> <p>K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.</p> <p>K-ESS3-3 Communicate solutions that will reduce the impact of climate change and humans on the land, water, air and/or other living things in the local environment.</p> <p>21st Century Life and Careers: Standard 9.4 Life Literacies and Key Skills: This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.</p> <p>Crosscutting Concepts: K-ESS3-2, K-ESS3-3 Cause and Effect: Events have causes that generate observable patterns.</p> <p>K-ESS2-1 Patterns: Patterns in the natural world can be observed, used to describe</p>	<p>and weather props.</p>	<p>hole-punch, craft stick masking tape, markers, plastic jar, aluminum foil, masking tape, plastic jar with metal lid, paper clips, pushpin, polystyrene foam, wool cloth, aluminum pan, sand, cup, water, plastic houses and trees, watering can, paper bag, oatmeal container, photo cards, safety scissors, magazines, poster board. Promethean Board Leveled Reader <i>Changing the Environment</i> Leveled Reader <i>When the Weather Changes</i></p>
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phenomena, and used as evidence.

K-ESS3-1 Systems and System Models: Systems in the natural and designed world have parts that work together.

K-ESS3-2 Interdependence of Science Engineering, and Technology: People encounter questions about the natural world every day.

K-ESS3-2 Influence of Engineering, Technology, and Science on Society and the Natural World: People depend on various technologies in their lives; human life would be very different without technology.

ELA Companion Standards:
RI.K.1 With prompting and support, ask and answer questions about key details in a text.

W.K.1 Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book.

Vocabulary
Cards
STEM
Connections –
Go Online
Interactive
Presentations
Science and
Engineering
Handbook

W.K.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

W.K.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).

SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

SL.K.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.

Math Companion Standards:

MP.2 Reason abstractly and quantitatively.

MP.4 Model with mathematics.

K.CC.A Know number names and count sequence.

K.MD.A.1 Describe measurable attributes of

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objects, such as length or weight. Describe several measurable attributes of a single object.

K.MD.B.3 Classify objects into given categories; count the number of objects in each category and sort the categories by count.

21st Century Life and Careers: Standard 9.4 Life Literacies and Key Skills: This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy that are critical for students to develop to live and work in an interconnected global economy.

MODIFICATIONS:

Advanced Learner:

Provide multiple means of representation.

Focus on adding depth and complexity for predicting and preparing for all types of weather.

Have students analyze weather forecasts from around the world.

Leveled Readers *When the Weather Changes*

Students with Disabilities:

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Prompt students to make connections between weather and their own experiences.
Create visual representations of the vocabulary.
Leveled Readers *When the Weather Changes*
English Language Learners:
Use language Building Resources located online.
Cognates
Create visual representation of the vocabulary.

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