



Weather and Sun

Draft Date 02-25-2026	Course (Draft) Kindergarten English Language Arts, Kindergarten Science	Duration 16 Day(s)	Grades K	Subjects English Language Arts, Science	Team Ashleigh Harbeck, Jill Koser
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Focus

Have you ever lost your jacket during the day or wondered why birds lay their eggs at certain times of the year? In this unit, we will explore the answers to these questions and more about storms and severe weather and how it affects our daily life. Kindergartners will learn about the characteristics of weather (wind, clouds, temperature, and precipitation) and how sunlight warms the Earth's surface.

Stage 1: Learning Goals

Established Goals	Transfer	
Standards	Long-Term Transfer Goals	
Pennsylvania Core Standards English Language Arts: K - Identify parts of a book (title, author) and parts of a text (beginning, end, details). (CC.1.2.K.E) - With prompting and support, ask and answer questions about unknown words in a text. (CC.1.2.K.F) - Answers questions to describe the relationship between illustrations and the text in which they appear. (CC.1.2.K.G)	What kinds of long-term, independent accomplishments are desired? Students will be able to independently use their learning to... - Make and use observations to analyze relationships and patterns in order to explain phenomena, develop models, and make predictions. (Communicator) (T1) - Participate in respectful discourse with peers, teachers, and experts in the field to share ideas, perspectives, and findings. (Collaborator, Communicator) (T2) - Reading Informational Text / Reading Literature: Read to gain knowledge, build critical thinking skills, and spark curiosity and interest. (T3)	
	Meaning	
	Understandings	Essential Questions
	What specifically do you want students to understand? What inferences should they make? Students will understand that... - Sunlight warms earth's surfaces. (U1) - Living things need water, air, and resources from the land, and they live in places that have the things they	What thought-provoking questions will foster inquiry, meaning making, and transfer? Students will keep considering... How does sunlight affect earth's surfaces? (3.2.K.C and 3.2.K.D) (Q1)

Pennsylvania Academic Standards

Science (2023): K Standards

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

Clarifying Statement: Examples of Earth's surface could include sand, soil, rocks, and water.

Assessment Boundary: Assessment of temperature is limited to relative measures such as warmer/cooler. (3.2.K.C)

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

Clarifying Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.

Assessment Boundary: N/A (3.2.K.D)

- Use and share observations of local weather conditions to describe patterns over time.

Clarifying Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could

need. Humans use natural resources for everything they do. (U2)

- 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. (U3)
- Plants and animals, including humans, can change their environment. (U4)
- 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. (U5)
- 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. (U6)
- Asking questions, making observations, and gathering information are helpful in thinking about problems. (U7)
- Effective readers can determine and analyze the meaning of words and phrases used by authors in text to enhance comprehension. (U8)
- Authors use a variety of features to help readers identify the organized text structure. (U9)

- What regulates weather and climate? (3.3.K.A) (Q2)
- How do living organisms alter Earth's processes and structures? (3.3.K.B) (Q3)
- How do natural hazards affect individuals and societies? (3.3.K.D) (Q4)
- How am I making meaning of unknown words to support my reading? (Q5)
- How does the way this information is organized help me understand the text? (Q6)

include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.

Assessment Boundary: Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler. (3.3.K.A)

- Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

Clarifying Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.

Assessment Boundary: N/A (3.3.K.B)

- Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

Clarifying Statement: Emphasis is on local forms of severe weather.

Assessment Boundary: N/A (3.3.K.D)

Profile of a CV Learner

- Communication: Students will be able to independently and confidently adapt their writing and speaking in relation to audience, task, and purpose, as well as

Acquisition of Knowledge & Skill

Knowledge

What facts and basic concepts should students know and be able to recall?
Students will know...

- The sun warms the earth. (K1)
- Sunlight is a form of energy. (K2)
- Blocking the sun reduces the sun's warming effect. (K3)
- How to collect and record daily weather conditions. (K4)
- Weather impacts our daily activities and changes throughout the year. (K5)
- Plants and animals can change the land and how it looks. (K6)
- Extreme weather exists. (K7)
- There are strategies I can use when I don't know what a word is in a text. (K8)
- Books have important parts that help me understand what I read. (K9)

Skills

What discrete skills and processes should students be able to use? Students can...

- I can observe how the sunlight impacts earth's surfaces. (S1)
- I can use tools and materials to create a structure to block the sun from warming Earth's surface. (S2)
- I can make observations to collect data that can be used to make comparisons and describe patterns in the natural world. (S3)
- I can explain how plants and animals can change the environment. (S4)
- I can ask questions about severe weather. (S5)
- I can ask questions about words I don't know in a book. (S6)
- I can find the title, author, and beginning, end, and details in a book. (S7)

practice active listening to understand other perspectives, viewpoints, and cultures. (PCVL.CM)

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Focus

In this unit, we will learn about pushes and pulls and how they affect the motion of objects. We will observe and investigate the effects of what happens when the strength or direction of those pushes and pulls are changed.

Stage 1: Learning Goals

Established Goals	Transfer	
Standards	Long-Term Transfer Goals	
Pennsylvania Core Standards English Language Arts: K ■ With prompting and support, identify the main idea and retell key details of text. (CC.1.2.K.A) ■ With prompting and support, identify basic similarities and differences between two texts (read or read aloud) on the same topic. (CC.1.2.K.I) Pennsylvania Academic Standards Science (2023): K Standards ■ Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push	What kinds of long-term, independent accomplishments are desired? Students will be able to independently use their learning to... ■ Weigh evidence and use scientific approaches to ask questions, investigate, and make informed decisions. (Innovative Problem Solver) (T1) ■ Make and use observations to analyze relationships and patterns in order to explain phenomena, develop models, and make predictions. (Communicator) (T2) ■ Reading Informational Text / Reading Literature: Read to gain knowledge, build critical thinking skills, and spark curiosity and interest. (T3)	
	Meaning	
	Understandings	Essential Questions
	What specifically do you want students to understand? What inferences should they make? Students will understand that... ■ A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions. (U1)	What thought-provoking questions will foster inquiry, meaning making, and transfer? Students will keep considering... ■ How can one predict an object's continued motion, changes in motion, or stability? (3.2.K.A) (Q1)

or a pull.

Clarifying Statement: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn.

Assessment Boundary: Assessment does not include friction as a mechanism for change in speed. (3.2.K.A)

- 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.

Clarifying Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.

Assessment Boundary: Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets. (3.2.K.B)

- Pushes and pulls can have different strengths and directions. (U2)
- Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (U3)
- When objects touch or collide, they push on one another and can change motion. (U4)
- A bigger push or pull makes things speed up or slow down more quickly. (U5)
- Effective readers identify key details of informational texts to determine main ideas. (U6)

- What underlying forces explain the variety of interactions observed? (3.2.K.B) (Q2)
- What details help me find the main idea? (Q3)

Acquisition of Knowledge & Skill

Knowledge

What facts and basic concepts should students know and be able to recall?
Students will know...

- Pushing and pulling are forces. (K1)
- Pushing moves things away from us and pulling moves thing towards us. (K2)
- Force makes an object move or stop moving. (K3)
- Engineering creates solutions to problems by designing ways to move objects from place to place. (K4)
- Objects colliding can change the motion of the object. (K5)
- Strength and direction of force affects the movement of the object. (K6)

Skills

What discrete skills and processes should students be able to use? Students can...

- I can plan and conduct an investigation in collaboration with peers. (S1)
- I can explain how force affects the movement of an object. (S2)
- I can explain if my tests of an object works as intended. (S3)
- I can use details to help me find the main idea. (S4)

Profile of a CV Learner

- Innovative Problem Solving: Students will be able to independently use their learning to approach new problems with curiosity and creativity while consistently seeking growth through self-reflection and a willingness to accept constructive feedback. (PCVL.IPS)

- The main idea is the most important point from the text/book. (K7)



Living Things

Draft Date 02-25-2026	Course (Draft) Kindergarten English Language Arts, Kindergarten Science	Duration 12 Day(s)	Grades K	Subjects English Language Arts, Science	Team Ashleigh Harbeck, Jill Koser
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Focus

Did you know animals and plants need certain things to survive? In this unit, we will use observations to understand the basic needs of animals. We will explore how animals need things to eat and a safe place to live, and also how animals can change their environments to meet those needs. We will also use observations to understand the basic needs of plants, such as water and sunlight. We will also observe young plants and the changes they undergo as they grow from seed to seedling.

Stage 1: Learning Goals

Established Goals	Transfer			
Standards	Long-Term Transfer Goals			
Pennsylvania Core Standards English Language Arts: K ■ With prompting and support, answer questions about key details in a text. (CC.1.2.K.B) ■ With prompting and support, make a connection between two individual, events, ideas, or pieces of information in a text. (CC.1.2.K.C)	What kinds of long-term, independent accomplishments are desired? Students will be able to independently use their learning to... ■ Approach science as a reliable and testable way of knowing and explaining the natural world and designed world. (Life-Long Learner) (T1) ■ Participate in respectful discourse with peers, teachers, and experts in the field to share ideas, perspectives, and findings. (Collaborator, Communicator) (T2) ■ Reading Informational Text / Reading Literature: Read to gain knowledge, build critical thinking skills, and spark curiosity and interest. (T3)			
	Meaning			
	<table> <tr> <th>Understandings</th><td></td></tr> <tr> <td> What specifically do you want students to understand? What inferences should they make? Students will understand that... ■ All animals need food in order to live and grow. They obtain their food from </td><td></td></tr> </table>	Understandings		What specifically do you want students to understand? What inferences should they make? Students will understand that... ■ All animals need food in order to live and grow. They obtain their food from
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Pennsylvania Academic Standards

Science (2023): K Standards

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

Clarifying Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.

Assessment Boundary: N/A (3.1.K.A)

- Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

Clarifying Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.

Assessment Boundary: N/A (3.3.K.B)

- Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

Clarifying Statement: Examples of relationships could include that deer eat

plants or from other animals. Plants need water and light to live and grow. (U1)

- Plants and animals can change their environment. (U2)
- 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. (U3)
- 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. (U4)
- Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (U5)
- Effective readers identify key details of informational texts to determine main ideas. (U6)

Essential Questions

What thought-provoking questions will foster inquiry, meaning making, and transfer? Students will keep considering...

- How do organisms obtain and use the matter and energy they need to live and grow? (3.1.K.A) (Q1)
- How do living organisms alter Earth's processes and structures? (3.3.K.B) (Q2)
- How do Earth's surface processes and human activities affect each other? (3.3.K.C) (Q3)
- How do humans depend on Earth's resources? (3.3.K.C) (Q4)
- How do humans change the planet? (3.3.K.E) (Q5)
- What details help me find the main idea? (Q6)
- What do I need to know to retell/ summarize this text? (Q7)

Acquisition of Knowledge & Skill

Knowledge

What facts and basic concepts should students know and be able to recall? Students will know...

- Living things need sunlight, food, and water to survive. (K1)
- Plants and animals can change the land and how it looks. (K2)

Skills

What discrete skills and processes should students be able to use? Students can...

- I can explain what living things need to survive. (S1)
- I can give examples of how plants and animals, including humans, change the environment to meet their needs. (S2)

buds and leaves, therefore, they usually live in forested areas; and, grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.

Assessment Boundary: N/A (3.3.K.C)

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

Clarifying Statement: Examples of human impact on the land could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.

Assessment Boundary: N/A (3.3.K.E)

Profile of a CV Learner

- Life-Long Learner: Students will be able to independently use their learning to analyze past and ongoing performance, adjust thinking processes to new contexts, and use information to make informed and conscientious decisions. (PCVL.LLL)

- Humans change the environment and it can negatively impact the air, water, or land, which can hurt plants and animals. (K3)
- Humans need nature, like trees and rivers, to live well, and nature needs humans to help protect it. (K4)
- Earth provides us with important things like water, air, and food that we need to live. (K5)
- It is important to take care of Earth's resources so we have what we need now and in the future. (K6)
- Details can help me find the main idea. (K7)

- I can show the relationship between the needs of living things and where they live. (S3)
- I can give examples of natural resources humans need to survive. (S4)
- I can give examples of how humans may impact the environment and possible solutions to negative impacts. (S5)
- I can name the details that help me find the main idea. (S6)