



Marietta City Schools

District Unit Planner

Grade 1 Science

Theme

Unit 1 Plants, Animals, and Weather

Unit duration (Days)

24 weeks

Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?*

GSE Standards

S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals.

- a. Develop models to identify the parts of a plant—root, stem, leaf, and flower.
- b. Ask questions to compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter).
- c. Design a solution to ensure that a plant or animal has all of its needs met.

S1E1. Obtain, evaluate, and communicate weather data to identify weather patterns.

- a. Represent data in tables and/or graphs to identify and describe different types of weather and the characteristics of each type.
 - b. Ask questions to identify forms of precipitation such as rain, snow, sleet, and hailstones as either solid (ice) or liquid (water).
 - c. Plan and carry out investigations on current weather conditions by observing, measuring with simple weather instruments (thermometer, wind vane, rain gauge), and recording weather data (temperature, precipitation, sky conditions, and weather events) in a periodic journal, on a calendar, and graphically.
- Analyze data to identify seasonal patterns of change. (Clarification statement: Examples could include temperature, rainfall/snowfall, and changes to the environment.)

Unit Objectives:

Students will compare and contrast the basic needs of plants (air, water, light, and nutrients) and animals (air, water, food, and shelter).
Students will make a plan to help a plant and or animal meet its needs (providing water, shelter, light, food, etc.)
Students will choose a particular plant and observe how it changes through the seasons.
Students will observe how various animals and plants respond to seasonal changes.
Students will record their observations in a variety of formats.
Students will use simple weather instruments to collect weather data.
Students will compile weather data in a graph, on a calendar, and/or in a journal.

Unit Phenomena: Plants and animals change depending on seasons and weather conditions. [Time Lapse Film of Trees](#)

Watch this video several times. Ask students what they notice. Record on a chart.

Ask students what they are wondering. Record on the chart. Refer back to the chart throughout the unit for students to answer student generated questions.

Page Keeley Probes: [Click here for an introduction on Page Keeley Probes.](#) These probes are a perfect way to introduce a topic. They are intended to elicit student understanding about science concepts. Starting a unit or lesson with a probe will help you uncover misconceptions and see what students already know about a topic. Using a probe at the beginning of a lesson and then at the end of the lesson serves the purposes of pretesting and then formatively evaluating student thinking. Below is a list of probes from Page Keeley's book *Uncovering Student Ideas in Primary Science*, that are appropriate for this unit. This book has been purchased for your grade level by the Office of Academic Achievement and can be found in your media center. **Is It Made of Parts?/ Seeds in a Bag / Do They Need Air?**

Science & Engineering Practices: <ul style="list-style-type: none">• Asking questions and defining problems• Planning and carrying out investigations• Developing and using models• Analyzing and interpreting data• Constructing explanations and designing solutions	Disciplinary Core Ideas: <ul style="list-style-type: none">• Plants have different parts• Plants and animals grow and change• Basic needs of plants and animals• Interactions, energy, and dynamics• Cycles of matter and energy transfer in ecosystems• Ecosystem dynamics, functioning, and resilience• Roles of water in Earth's surface process• Weather and Climate	Crosscutting Concepts: <ul style="list-style-type: none">• Patterns• Cause and Effect• Systems and System Models
---	--	---

Misconceptions:

Plants and animals do not depend on each other.

All animals have the same characteristics.

There are no wild animals in the city.

"Mother Nature" controls the weather changes.

Raindrops are shaped like tears.

Snow isn't water.

The sun is light; a light bulb for the day and serves no other purpose.

Weather does not change that much.

Math/ELA Connections/STEM Connections

ELAGSE1RI10 With prompting and support, read informational texts appropriately complex for grade 1.

ELAGSE1W2 Write informative/ explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

ELAGSE1W7 Participate in shared research and writing projects (e.g., exploring a number of “how-to” books on a given topic and use them to write a sequence of instructions).

MGSE1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.

MGSE1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. (Iteration)

MGSE1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.

STEM:

Picture-Perfect STEM Lessons, K-2 – Chapter 18 – Flight of the Pollinator

Discovery Education Science Techbook Resources: *(You will need to be logged into Discovery Education using your Google credentials to access these resources)* You will find center activities on the **Engage** page of each Techbook unit.

[Basic Needs](#)

[Sky and Weather](#)

[Animals and People](#) [Kinds of Plants](#)

Hands-on Activities

[Inspecting Your Spot](#)

[Weather Log](#)

[Make a Thunderstorm Experiment](#)

[Use Bubbles to Observe Wind Lab](#)

[Make your own barometer II Hands-On Activity](#)

[Make a Thermometer Hands-On Activity](#)

Essential Questions

Factual—

What questions could we ask to identify forms of precipitation such as rain, snow, sleet, and hailstones as either solid (ice) or liquid (water)?

Describe the parts of the plant.

What is needed for plant growth?

What do animals need to survive?

Inferential—

What investigations can we complete to gather information on current weather conditions?

How would you describe the sky during the day and the sky during the night?

How does weather change over time?

Critical Thinking-

Which habitat is best suited for an animal that only eats plants?

Is the wind blowing - how do you know which direction the wind is blowing?

How can you tell if something is alive?

Tier II Words- High Frequency Multiple Meaning

food, shelter, air, water, light, rain, snow

Tier III Words- Subject/ Content Related Words

shadow, material, root, stem, leaf, flower, seed, nutrients, precipitation, hail, sleet, solid, liquid, gas, temperature, thermometer

Basic Needs Constructed Response

Sky and Weather Constructed Response

*Teachers can access the assessments via the grade level Schoology Course.

Objective or Content	Learning Experiences	Differentiation Considerations
<p>S1L1. Obtain, evaluate, and communicate information about the basic needs of plants and animals.</p> <p>S1E1. Obtain, evaluate, and communicate weather data to identify weather patterns.</p>	<p>Basic Needs of Plants and Animals, Weather and Seasons</p> <p>This is a year-long segment of students learning about plants, animals, and weather as they observe the changes through the seasons of the year.</p>	<p>Student Choice Performance Tasks Reflection and Goal Setting Learning Stations Choice Boards Formative Probes Science Journaling Multi-sensory activities Assistive Technology Flexible Grouping Multiple Means of Representation</p>
Recommended High Quality Complex Text By Lexile Band		
<p><i>Animal Homes</i> by National Geographic Kids</p> <p><i>Where do Polar Bears Live</i> by Sarah L. Thomson</p> <p><i>What Makes a Blizzard</i> by Kathleen Weidner Zoehfed</p> <p><i>Chloe Cloud, Bring me some Rain!</i> By Divya Mohan</p> <p><i>Clouds</i> by Anne Rockwell</p> <p><i>Weather</i> by National Geographic Readers</p> <p><i>What Do Plants Need to Survive?</i> By Emily Raij</p>		