



Marietta City Schools 2023-2024 District Unit Planner

First Grade

Topic Title:

Unit #4 Weather Patterns and Effects

Unit Duration

3 weeks

Mastering content and skills through KNOWLEDGE-BUILDING (establishing the purpose of the unit):

What enduring understandings will students gain from this unit? Weather changes in predictable patterns that affect people and nature in a variety of ways.

GSE Standards

ELA

ELAGSE1RI1 Ask and answer questions about key details in a text.

ELAGSE1RI2 Identify the main topic and retell key details of a text.

ELAGSE1RI4 Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

ELAGSE1RI7 Use illustrations and details in a text to describe its key ideas.

ELAGSE1W1 Write opinion pieces in which they introduce the topic or the name of the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.

Science

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.
- d. Analyze data to identify seasonal patterns of change.

Essential Questions

Factual—

- What are the four seasons?
- How are rain and snow alike and different?
- Why is it hotter in summer and colder in winter?

Inferential—

- How does the weather affect choices we make during our day?
- What is the relationship between clouds, rain, and rainbows?

Critical Thinking-

- What state or country has the best weather?
- What is the best way to find out what the weather will be like on a given day?

Tier II Words- High Frequency Multiple Meaning

thermometer, weather, patterns, conditions

Tier III Words- Subject/ Content Related Words

rain gauge, wind vane, sleet, hail, snow

Assessments

Transfer of Integrated Skills:

- How Clouds Work from NewsELA
- Season Comparison Chart
 1. On a large piece of chart paper, prepare the following Seasons Comparison Chart:

	WINTER	SPRING	SUMMER	AUTUMN
MONTHS				
WEATHER PATTERNS				
CLOTHING				
SPECIAL ACTIVITIES				

2. Assign individuals, partners, or small groups to capture their learning from this unit in words and pictures.

Standards:

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- Have students answer the following question as a journal entry or as a Schoology Assignment.
 1. When something happens over and over again, it is called a cycle. Name the four seasons, in the order in which they occur in most of the United States. (The cycle of seasons is winter, spring, summer, and autumn.)
 2. Which season is the coldest? (Winter is the coldest season.) Which season is the hottest? (Summer is the hottest season.)
 3. What are some characteristics of, or ways to describe, autumn? (In the fall, the leaves are changing colors and falling off certain types of trees. It also starts to get a little colder outside.)
 4. What are some characteristics of, or ways to describe, spring? (In the spring, it starts to get warmer outside. New leaves start to grow on trees, flowers bloom, and new plants grow.)
 5. In the United States, during which months is the season of winter? (The season of winter occurs in December, January, and February.)
 6. What happens to rain when the temperature drops below the freezing point? (When the temperature drops below the freezing point, rain may turn into snow or ice.)

Standards:

ELAGSE1RI1 Ask and answer questions about key details in a text.

ELAGSE1RI2 Identify the main topic and retell key details of a text.
ELAGSE1RI7 Use illustrations and details in a text to describe its key ideas.

Content-Specific GSE/Skills:

- *S1E1 Science Summative Assessment*

Writing Task and Rubric:

Best Season

1. Have students plan and draft an opinion writing explaining which season is the best. Emphasize that their writing must include key terms from this unit in addition to their personal feelings.
2. Provide students with [Expository Paper](#) for them to draft their opinion and draw the elected official they chose and the [Opinion Checklist](#) to guide their work.
3. Use the [Opinion Writing Rubric](#) to score their final products.

Standards:
ELAGSE1W1 Write opinion pieces in which they introduce the topic or the name of the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.

Objective or Content	Learning Experiences	Differentiation Considerations
Daily Lessons for Text Comprehension	15-Day Plan: Weather Pattern and Effects	
Connected Structured Literacy Activities	<p>Fluency Strategy Use the pre-populated Fluency Grids to practice terminology related to this unit. Create new grids by substituting other terms as desired: <i>rain, wind, sleet, hail, snow, fog</i></p> <p>Vocabulary Strategy During daily reading activities and discussions, help children distinguish between shades of meaning among verbs and adjectives related to the weather patterns. For example:</p>	

	<p>Temperature <i>warm, hot, blazing</i></p> <p>Rainfall <i>sprinkle, rain, downpour</i></p>	
<p>Connected SS/Sci Experiences (omit this row if KBU does not contain SS or Sci connections)</p>	<p>Exploration I</p> <p>In this activity, students will be observing, measuring, recording and graphing weather information. This includes temperature, wind, precipitation, and cloud coverage. They will use their observations and graphs to choose appropriate activities for each type of weather.</p> <p>Note that this activity will take 20–30 minutes to set up on day 1, 5–10 minutes each day for the next week, and another 20 minutes for students to present their graphs.</p> <p>Estimated time to complete: 20–30 minutes to set up 1 week to observe the weather 20 minutes for class presentations</p> <p>Materials: Per pair:</p> <ul style="list-style-type: none"> • Poster Board • Markers • Ruler Per class: • Outside thermometer <p>Explain to students that they will be observing the weather conditions (temperature, precipitation, cloud coverage, wind) each day for a week and making a picture graph to show what they observed. Discuss with students the different types of weather. Work with students to devise picture symbols of each type of possible weather: sunny, cloudy, overcast, storm, light rain, snow, etc. Students can collect data and record it in their notebooks or in the Student Activity Sheet. They will then use the data to make a graph.</p> <p>Allow students to work in pairs to divide their posterboard into 7 (or 5, if you prefer to use weekdays) columns. Students should head each column with a day of the week they will observe the weather (for example, Monday through Friday). The first column should be today.</p>	

	<p>Have students observe the weather and guide them to use the picture symbols to record the weather they observed in the appropriate column. Then, pairs should write or draw two or three activities they plan to do or could do today in the column.</p> <p>Students should repeat Steps 4 and 5 each day until the graph is complete.</p> <p>At the end of the week, gather as a class and allow pairs to present their graphs and share the activities they recorded for each type of weather. Have students describe any patterns they found in their weather data.</p>																
	<p>Exploration II</p> <p>In this activity, students will collect, record, and compare information about the weather. Students will use the data they track in their Observation Notebooks to make predictions about the weather.</p> <p>Materials:</p> <ul style="list-style-type: none">• Observation Notebooks• Pencils• Thermometers• Glue or tape <p>Procedures: Tell students they will create a weather log to record and observe the change in temperatures during different times of the year. Divide students into pairs. Use the board or chart paper to model for students how to set up a weather log like the one below:</p> <table><tr><th>Date</th><th>Time</th><th>Predicted Temperature</th><th>Recorded Temperature</th><th>Weather Symbol</th></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table> <p>Instruct students to make their own log. Once they have completed it, ask them to glue it into their observation notebooks.</p> <p>Distribute a thermometer to each pair of students. If students are not familiar with how to use a thermometer, give a quick demonstration. Have students write the date and time in their logs. Then have</p>	Date	Time	Predicted Temperature	Recorded Temperature	Weather Symbol											
Date	Time	Predicted Temperature	Recorded Temperature	Weather Symbol													

	<p>each student make a prediction about the temperature outside. (You may need to provide some reference points for temperature, such as: Water boils at 100°C, the temperature of the room is 23° C, and water freezes at 0° C. Provide Fahrenheit equivalents as well.)</p> <p>Ask students what their reasoning was behind making their prediction. Then, have pairs go to a predetermined spot, such as a sunny windowsill or a safe outdoor location and record the temperature. Each student should record the temperature, and students should compare results. Tell students that if their results are very different, they should try to record the temperature again, to see if their results match more closely.</p> <p>Have students write the temperature in their observation notebooks. Then have students draw a weather symbol to represent the day's weather (e.g., sunny, cloudy, rainy, windy).</p> <p>Tell students that you will be returning to the weather log at regular intervals (once or twice per month until the end of the school year) to predict and log temperatures. Each time you return to the weather logs, ask students to explain their reasoning behind their predictions.</p> <p>Encourage students to think about seasonal weather patterns as they make their predictions throughout the year. Conclude by asking students to compare the temperatures they have collected and discuss findings as a class. Ask students to think about how the temperatures have changed since their last recording, and why.</p>	
	<p><i>Exploration III</i></p> <p>In this activity, students will make a mobile that displays appropriate choices for each season. They will develop an understanding of how the weather and the seasons influence the choices that people make when choosing clothing, transportation, and activities.</p> <p>Materials Per Student/Group:</p> <ul style="list-style-type: none"> • 4 paper or foam plates • single hole punch • scissors • yarn • crayons/markers • magazines or copy pictures of different clothing, transportation, and activities 	

	<p>To introduce the activity, provide time for students to look at their information and passage about the weather in each season and seasonal choices. Point out that during some seasons, we make similar choices about clothing, activities, and transportation. Lead a discussion about what types of clothing, activities, and transportation are appropriate for each of the four seasons.</p> <p>Part 1:</p> <p>Season Choice Mobile Procedure</p> <p>Determine if you will allow students to search through magazines and cut out pictures or if you will give them pictures copied from a copy machine. You should ensure that the students have an adequate amount of pictures of clothing, activities, and transportation choices for each season.</p> <ol style="list-style-type: none"> 1. Have students cut out pictures of different types of clothing, activities, and transportation. 2. Have students sort the pictures by the seasons for which they are appropriate. 3. Show students how to use the hole punch to place a hole in the top of each picture. 4. Have students write the name of a season on each paper or foam plate. There should be one plate per season. 5. Have students punch holes around the edges of the plates. There should be the same number of holes as the number of pictures for that season. 6. Show students how to cut a piece of yarn and tie it through the hole in the top of the picture. 7. Discuss how using different string lengths will add character to the mobile. 8. Show students how to tie the other end of the string through a hole in the paper plate. The pictures should be positioned so that when the plate is held you can see the name of the season with the pictures hanging down. 9. Have students continue by creating a mobile for all of the seasons. <p>Give students time to share their mobiles with classmates. Then hang the mobiles up in the room.</p>	
	<p>Exploration IV</p> <p>In this activity, students will model precipitation to explore how water flows down different slopes and different surfaces.</p> <p>Materials: Per pair or group:</p> <ul style="list-style-type: none"> • Watering can with sprinkler head or large cup with tiny holes in the bottom 	

	<ul style="list-style-type: none"> • Water • Measuring cup • 3 plastic cafeteria trays • Piece of waxed paper, about 8 cm x 16 cm • Piece of cloth, about 8 cm x 16 cm • Sponge, about 8 cm x 16 cm x 1 cm • 5 books of the same thickness <p>Divide students into pairs or small groups. Caution students to take care during this investigation and wipe up any spills immediately. Water spills can cause people to slip and fall.</p> <p>Encourage students to think about a recent heavy rain. Ask: Where did the rainwater go? Instruct students to look at their materials and think about how they might show what happens to rain. With the suggested materials, students can model how the type of surface or the slope of the surface on which the rain falls, affects what happens to the water. All groups may investigate both questions or, alternatively, groups may pair up with one group investigating each question.</p> <p>Students can model precipitation by using a watering can or large cup with tiny holes in the bottom. While the exact amounts of water that will “rain” are not critical, encourage them to use the same amount of water for all trials. Also, recommend students create a gentle rainfall that falls at the same rate for all trials. Discuss how their plans to achieve this consistency, and why it is important</p> <p>Students may wish to prop up plastic cafeteria trays on books to make different slopes. This will demonstrate the effect of slope on how water moves. To model the effect of the kind of surface on which rain falls, students could place a material in the center of each tray before having the simulated rain fall on this surface. To increase the effect, students may wish to prop up each tray on one book.</p> <p>Students can extend their investigation by increasing the rate of the rainfall.</p>	
	<p>Exploration V</p> <p>Materials:</p> <ul style="list-style-type: none"> • A straight-sided glass container, such as an olive jar • Pencils • Invisible tape 	

	<ul style="list-style-type: none"> • Rulers • 10-15 strips of paper measuring 6" x 1½". (You may wish to mark the strips in advance, in 1-cm. increments on one side and ¼-in. increments on the other side.) • Clear plastic wrap • Clock <p>Allow students to work in pairs. Model for students how to use a ruler to make marks on the edges of the strip of paper at each inch, half-inch, and quarter-inch on one side, and at each centimeter on the opposite side. Then tell students to mark their strips of paper to make a paper ruler. (Alternatively, you may wish to prepare and mark the strips of paper for students in advance.)</p> <p>Students should place the paper ruler face down on a smooth piece of clear plastic wrap, fold the plastic wrap completely over the paper, and seal it thoroughly with tape. Then have them tape the wrapped ruler on the inside edge of the glass container, with the marked side showing. The bottom of the ruler should be flush with the bottom of the glass jar.</p> <p>Have students put the rain gauge outside for one week to catch the rain. Guide them to use the paper ruler to measure each day's rainfall (if any). On a rainy day, you may ask the students to check the rainfall each hour and compare the different in rainfall rates. Be certain the students record the time as well as the amount of rainfall. Post the recorded rainfall totals in the classroom.</p> <p>You may wish to continue this activity for a period of several weeks and have students identify trends in rainfall, such as increased rainfall in early spring.</p> <p>Allow students to review and discuss the Essential Questions.</p> <p>How does the weather change over the course of one day?</p> <ul style="list-style-type: none"> • How does the weather in our area change from season to season? • How can we gather and record weather information? • What tools and information help us predict the weather? • What are weather patterns, and how do they change from season to season and from place to place? 	
Connected Tier 1 Unit		

Connected Writing Activities					
Additional Planning Resources					
MCS K-5 KBU Overview	KBU as a 15-day Plan (Template)	MCS Structured Literacy Repository	Berger Framework for Comprehension (Template)	The Writing Revolution (Templates)	
Additional Instructional Resources					
Suggested High Quality Complex Texts					
Suggested Experiential Resources					