

The following instructional plan is part of a GaDOE collection of Unit Frameworks, Performance Tasks, examples of Student Work, and Teacher Commentary. Many more GaDOE approved instructional plans are available by using the Search Standards feature located on GeorgiaStandards.Org.

Georgia Performance Standards Framework

Unit One Organizer:

7 weeks

Weather and Seasons

1st Grade

OVERVIEW: In this unit students will:

- Identify the basic patterns of weather
- Use simple instruments to measure temperature, wind, and precipitation
- Observe sky conditions for each season
- Collect weather data for each season
- Create a weather journal
- Illustrate the different types of clothing required for each season
- Explain weather findings through pictographs and bar graphs
- Make observations about weather
- Investigate weather events such as thunderstorms, tornadoes, and hurricanes
- Compare and contrast variation in weather by seasons

(In order to compare and contrast seasonal weather variations, teachers may wish to break apart this unit and teach it in increments as the seasons change.)

STANDARDS ADDRESSED IN THIS UNIT

Focus Standards:

S1E1 Students will observe, measure, and communicate weather data to see patterns in weather and climate.

- a. Identify different types of weather and the characteristics of each type.
- b. Investigate weather 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 or on a calendar seasonally.
- c. Correlate weather data (temperature, precipitation, sky conditions, and weather events) to seasonal changes.

STANDARDS ADDRESSED IN THIS UNIT

Supporting Standards:

S1CS1. Students will be aware of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.

- a. Raise questions about the world around them and be willing to seek answers to some of the questions by making careful observations and measurements and trying to figure things out.

S1CS2. Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

- a. Use whole numbers in ordering, counting, identifying, measuring, and describing things and experiences.

S1CS3. Students will use tools and instruments for observing, measuring, and manipulating objects in scientific activities.

- a. Use ordinary hand tools and instruments to construct, measure, and look at objects.
- b. Make something that can actually be used to perform a task, using paper, cardboard, wood, plastic, metal, or existing objects.
- c. Identify and practice accepted safety procedures in manipulating science materials and equipment.

S1CS4. Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.

- a. Use a model—such as a toy or a picture—to describe a feature of the primary thing.
- b. Describe changes in the size, weight, color, or movement of things, and note which of their other qualities remain the same during a specific change.

S1CS5. Students will communicate scientific ideas and activities clearly.

- a. Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.
- b. Draw pictures (grade level appropriate) that correctly portray features of the thing being described.
- c. Use simple pictographs and bar graphs to communicate data.

ELA1R1c. Demonstrates an understanding that punctuation and capitalization are used in all written sentences.

ELA1R6. Reads and listens to a variety of texts for information and pleasure.

ELA1W1j. Begins to use common rules of spelling.

ELA1LSV1c. Respond appropriately to orally presented questions.

ELA1R5a. Reads and listens to a variety of texts and uses new words in oral and written language.

ELA1LSV1a. Follows three-part oral directions.

ELA1LSV1b. Recalls information presented orally.
ELA1LSV1f. Uses complete sentences when speaking.
ELA1LSV1d. Increases vocabulary to reflect a growing range of interests and knowledge.
ELA1W1k. Begins to use variety of resources (picture dictionaries, the Internet, and books) and strategies to gather information to write about a topic.
ELA1LSV1e. Communicates effectively when relating experiences and retelling stories read, heard, or viewed.
ELA1R6m. Recognizes and uses graphic features and graphic organizers to understand text.
ELA1SV1: The student uses oral and visual strategies to communicate.
ELA1W1a. Writes texts of length appropriate to address a topic and tell a story.
ELA1LSV1d.-e. Increases vocabulary & Communicates effectively.
ELA2LSV1d. Listens to and views a variety of media.

ENDURING UNDERSTANDINGS

- Weather is the condition of the outside air each day.
- The basic patterns of weather include: temperature, wind, precipitation, and sky conditions (sunny, cloudy, etc.)
- Temperature is the measurement of cold or hot.
- Using simple weather instruments can enrich one's understanding of weather.
- A thermometer is used to measure temperature.
- Wind is observed using a wind vane.
- Wind is air that is moving.
- A rain gauge can help measure precipitation.
- Precipitation is water that falls from the clouds. (rain, freezing rain, snow, sleet, and hail)
- There are weather events such as thunderstorms, tornadoes, and hurricanes.
- A thunderstorm is a combination of strong winds and heavy rain accompanied by thunder and lightning.
- A tornado is a violent wind that looks like a funnel-shaped cloud; its spinning winds touch the ground.
- Hurricanes are storms that have very strong winds.
- There are four seasons in a year: Winter, Spring, Summer, and Fall
- Weather changes occur during different seasons.
- Weather affects the way you dress.
- A journal can help document weather at different times of the year.

ESSENTIAL QUESTIONS:	
<ul style="list-style-type: none"> • How can weather be described? • How does weather impact me and my community? • Why are the different types of weather, and what are their characteristics? • How do we measure weather? • How do you record weather data? • How would you illustrate the four seasons? • How would you build a simple weather instrument? • What information can I get from using a simple weather instrument? (thermometer, wind vane, or rain gauge) • Is weather always the same? Why or why not? • How does weather affect our daily activities? 	
MISCONCEPTIONS	PROPER CONCEPTIONS
<ol style="list-style-type: none"> 1. “Mother Nature” controls the weather changes. 2. Rain drops are shaped like tears. 3. Snow isn’t water. 4. The sun is light; a light bulb for the day and serves no other purpose. 5. Weather does not change that much. 	<ol style="list-style-type: none"> 1. Weather is caused by humidity, temperature, and air pressure. 2. Rain drops are really flat, doughnut, like shaped. 3. Snow is a form of precipitation that falls from the clouds, it forms when water freezes inside the clouds. 4. The sun provides light and heat that is needed to sustain the earth. 5. Weather changes everyday and throughout the seasons.

CONCEPTS:	KNOW AND DO	LANGUAGE	EVIDENCE OF LEARNING
<p>There are different types of weather.</p>	<ul style="list-style-type: none"> • Identify the basic types of weather and describe the characteristics of each type. • Illustrations of each type of weather compiled to create a “Weather Book.” The top of each page will name the weather that the student is illustrating. 	<p>Temperature Wind Precipitation Weather events-thunderstorms, tornadoes, and hurricanes.</p>	<ul style="list-style-type: none"> • Science Journal Entries • “Weather Book” will be created by each student. • “Fall Detective” Collection • Hurricane Poster • Thunderstorm Recipes • Weather Mobile
<p>Weather can be communicated to others by observing and collecting data.</p>	<ul style="list-style-type: none"> • Observe weather by using simple weather instruments to record data. • Students will document daily weather (year-long activity) in a Science Journal. • A monthly weather class chart will be used to document the different types of sky conditions. This chart will be used to compare the seasons. This chart will list: <ul style="list-style-type: none"> ➤ Daily: <ul style="list-style-type: none"> • Temperature: Use a 	<p>Thermometer Wind vane Rain gauge Temperature Precipitation Weather events Rainbow Sky conditions- sunny, cloudy, etc.</p>	<ul style="list-style-type: none"> • Science Journal entries. • Monthly Weather Class Chart.

	<p>thermometer to determine the temperature</p> <ul style="list-style-type: none"> • Rain gauge measurement: the class will make a rain gauge to use daily. • Sky conditions (sunny, cloudy, etc.) <p>➤ Monthly</p> <ul style="list-style-type: none"> • Class Tree observation. Students will use the digital cameral and paste the picture on the chart. • Shadow Measurement. Students will measure the shadow of a permanent object outside and see the difference among the shadows season by season. <ul style="list-style-type: none"> • Perform an experiment using a wind vane. Used to determine which direction the wind is blowing. 		
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<p>The four seasons have distinct weather patterns.</p> <p>The different seasons affect the way we live in our world.</p>	<ul style="list-style-type: none"> • Examine data collected to compare and contrast the differences in weather among the seasons. • Students will use a graphic organizer to compare the seasons. • The class chart, which is collecting data on weather, will be used to examine the patterns in each season. • Sort clothing in baskets labeled by each season. • Word web for each season with activities that students can do during that season. 	<p>Winter Spring Summer Fall Season</p>	<ul style="list-style-type: none"> • Science Journal entries. • Correct clothing sort according to seasons. • Correct word web. • “Spring Observations” • Venn Diagram • Summer Clothing Books • Seasons Flip Book • Paper Plate Illustration
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EVIDENCE OF LEARNING:

Culminating Activity: GRASPS activity

Vote for the Best Season

GRASPS

Goal: Students will observe data collected from the unit of study to justify one season as “The Best.”

Students will work in small cooperative groups, charged with the task of influencing others to vote for the season the group is presenting. Students will relate what they have learned throughout this unit and convince others, with supporting details, that the season they are presenting is the best.

Role: “Season Expert”- Each child will become an “expert” for a particular season.

Audience: The 1st grade class and one other class. Kindergarten or any other class that may be paired-up with the class, for example, a fifth grade book buddy class or 4th grade class (4th grade classes are collecting data year-round).

Scenario: The students will be divided into four groups, representing each season: winter, spring, summer, and fall. Each group will work cooperatively to provide the most information about the season they are representing. Each group will present their season and try to explain why it is the best. A vote will be taken at the end of all presentations.

Product: A persuasive presentation accompanied by props. A three-panel display board for each season will be needed for each group.

Each group must include:

1. The types of weather that was seen during the particular season. The students must create a pictograph or bar graph to communicate the scientific data collected during those months of the school year. The students will communicate the type of weather that occurred the most and least.
2. The type of weather that occurred most often will be illustrated in a large picture on the three-panel display board.
3. The group will build/present at least two simple weather instruments that were used during the season to measure weather. A description of each instrument will need to be included as well.
4. Weather events such as: thunderstorms, tornadoes, and hurricanes must be illustrated in the “Weather Book.”

5. The group will illustrate on the three-panel board the types of clothing that is worn during the season they are presenting. The students in each group will also wear the types of clothing for their season during the presentation.
6. The group will also create three top reasons that their season is the best. These reasons need to be convincing in order to persuade the group to vote for the best season.

***This GRASPS activity can be completed in class throughout the unit.

Standards: Assessed by [Season Expert Rubric](#)

GENERAL TIMELINE, BALANCED ASSESSMENT PLAN, TASKS

← GENERAL TIMELINE →							
Intro / Pre Assess	Fall	Winter	Spring	Summer	GRASPS Development	Post Assess	Reteach or Extend
1 Lesson	1.5 weeks	1.5 weeks	1.5 weeks	1 week or less	1.5 Weeks	1 Lesson	2-4 Lessons

BALANCED ASSESSMENT PLAN FOR ORGANIZATION			
Informal Observations	Selected Response	Constructed Response	Performance Assessment
<ul style="list-style-type: none"> • Teacher Observations • Conferencing with class or individual student. 	<ul style="list-style-type: none"> • Pre-Assessment • Post-Assessment 	<ul style="list-style-type: none"> • “We Want to Know More!” 	<ul style="list-style-type: none"> • Poster • Science Journal • GRASP Activity • Venn Diagram • “Fall Detective” Collections • Cloud Formations with Shaving Cream • “Weather Book” • “Spring Observations” • Summer Clothing Book • Thunderstorm Recipe • Hurricane Poster • Season Clothing Sort • Flip-Book • Weather Mobile • Seasonal Changes Chart • Paper Plate Illustration

TASKS

The following collection of tasks represents the level of depth, rigor and complexity expected of all students to demonstrate evidence of learning.

Lesson:	Introduction to Weather and Seasons
(1 day)	
Description:	<p>A. Introduce Standard: S1E1 Students will observe, measure, and communicate weather data to see patterns in weather and climate. List the following words on the word wall: temperature, wind, precipitations, weather events, thunderstorms, tornadoes, hurricanes, thermometer, wind vane, rain gauge, rainbow, sunny, cloudy, winter, spring, summer, fall, and season.</p> <p>B. Use KWL chart. Write what the students already know about the standard under the “K.” Write what the students want to know/learn under the “W.” Under the “L” write what the students learned about the standard after the lessons are complete.</p> <p>C. Hook and Attention Getter – Take students on a “Weather Walk.” Tell students that they are going to walk outside and observe what they see about the weather. Have students bring paper attached to a clip board and a pencil. Allow students to write down observations or draw pictures about things they see outside. Ask questions like:</p> <ul style="list-style-type: none"> ➤ What type of weather do you see? ➤ How would you describe the sky? <p>Return back to class and have students share what they observed outside about the weather. Ask students if they might know what season it is.</p> <p>D. Pre-Assessment</p> <p>E. Tell students that they will learn about the four seasons: fall, winter, spring, and summer throughout the year. Explorations about different types of weather will be studied throughout the seasons.</p>
Assessment:	Selected Response-Pre-Assessment, Informal Assessment-Conferencing with class.
Suggestions/Resources:	<ul style="list-style-type: none"> • Record and Post KWL chart on butcher paper, poster board, etc. Use sticky notes to add student knowledge and understanding under “Learned” column. • Gather weather and seasons books to read to students throughout the unit.

Lesson:	Fall: Weather Observations & Temperature
Description:	Days 1 and 2: A. Review standard and science word wall words. B. Fall video segment www.unitedstreaming.com keyword search: The Four Seasons. Select the Fall segment (2:52 minutes). C. Read books to students about fall and weather. Place books in reading center, so that students can explore the books on their own. D. Tell students that they will be making observations and collecting data about weather throughout the school year. This will be done through student journals and monthly weather charts (see attached weather chart . Technology connection: a picture of the monthly weather chart can be downloaded to the class website. <ul style="list-style-type: none">➤ Allow students to go outside and explore how to make observations about the weather. Ask students if they can see shadows. If it is sunny, students should be able to notice shadows. In order to find out if it is windy, bring out several streamers and let students explore wind movement. Does the streamer move on its own? Is it raining?➤ Have students record the weather after returning from outside and draw a picture of what they observed. Have students write one sentence about what they illustrated.➤ On the monthly weather chart, record the temperature. Use www.weather.com to find out the temperature. Make sure that students understand that they will soon be reading a thermometer on their own to record the temperature. Use the web site until the students are ready to read a thermometer and record the data.➤ Show students a thermometer. Explain why we use it. Locate a place to put the thermometer, so that the temperature can be measured each day. Allow students to experiment with a small thermometer. Give students thermometer and have them place it in a cup of warm water, cold water, and in their hand. Have students record results. E. Begin to create a “Weather Book.” This book will illustrate each type of weather. Students will begin by illustrating a fall tree.

- F. Our Class Tree. This activity will last year-round. The class will choose one tree on the school property. Starting in September, the whole class will visit the tree. A digital picture should be taken and the students should write/draw what the tree looks like. The class should visit the tree once a month and describe the changes. The digital pictures and class descriptions should be displayed in the classroom year-round. This will help the students see the patterns in weather and how nature changes during each season.
- G. Shadow Measurement. Students will measure the shadow of a permanent object outside and see the difference among the shadows season by season. The measurement should be written on the Monthly Weather Chart.

Look at the [Weather Chart Suggestions Sheet](#).

Assessment:	Informal Assessment: Teacher observation and Oral Questioning after film – Refer to KWL chart from first lesson.
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Suggestions/Resources:

Lesson:	Fall: Making Observations & Precipitation
Description:	Days 3 and 4: A. Review standard, science word wall words, and tree illustrations from day one and two. B. Create a word web about fall. Have students give examples of what it looks like outside, what types of clothing someone might wear, etc. C. The class will create a rain gauge. The following web site explains how to make a rain gauge: http://www.ecokids.ca/pub/eco_info/topics/climate/weather/page4.cfm D. Begin to collect data about precipitation using the rain gauge. E. Discuss precipitation in all forms: rain, freezing rain, snow, sleet, and hail. ➤ Book Suggestion: <u>Rain</u> by Robert Kalan F. Have students write in their science journal about the weather and record the findings on the monthly weather chart.
Assessment:	Informal Assessment: Teacher observation
Suggestions/Resources:	<ul style="list-style-type: none">• Students should write about precipitation in their science journal. Have students illustrate each type of precipitation discussed.• Have students complete this activity for homework: You are going to become a “Fall Detective.” In order to learn about the season fall, you must collect clues. When you get home look in your yard for things that remind you of the season fall. Bring your items to school in a zip-lock bag to share with the other students tomorrow.

Lesson:	Fall: “Fall Detective” Collections
Description:	<p>Days 5 and 6:</p> <p>A. Review standard and science word wall words.</p> <p>B. Have students describe the items they found while being a “Fall Detective.” (Homework assignment from day 3)</p> <ul style="list-style-type: none"> ➤ Create a space on the classroom wall where you can write FALL and begin to post the items that the students make in class. Have students hang their “detective” findings in this area. ➤ After each student has shared their “detective” items, allow students to name words that would be used in fall. Post the words on sticky notes/index cards in the FALL area. (examples: yellow, brown, falling leaves, orange, etc.) <p>C. Have students write in their science journal about the weather and record the findings on the monthly weather chart.</p>
Assessment:	<ul style="list-style-type: none"> ● Informal Assessment: Teacher observation ● Performance Assessment: “Fall Detective” collections
Suggestions/Resources:	<ul style="list-style-type: none"> ● Start a “Leaf Collection.” Have students bring in leaves of all shapes and sizes. Put these in the science center. Students can sort them during center time. ● Have students bring in fall pictures, cut out from magazines. Students can create books using the pictures in the science center. Have students glue the pictures onto paper and describe the fall weather changes. Students can staple the pages together to create a book.

Lesson:	Fall: Wind Exploration
Description:	<p>Day 7:</p> <ul style="list-style-type: none"> A. Review standard and science word wall words. B. Discuss the patterns that the students notice about the weather. Have students share journal entries. C. Read books about fall and weather and discuss with students. <ul style="list-style-type: none"> ➤ Book suggestion: <u>Wind</u> by Ron Bacon D. Allow students to go outside and blow bubbles. Have students make predictions about why their bubbles are going a particular direction. Allow enough time for students to explore wind direction and strength. E. Make a class wind vane. The following web site shows a simple way to create one: http://sln.fi.edu/tfi/units/energy/vane.html. This site also explains background information about a wind vane. F. Explore wind direction using the wind vane. G. Have students write in their science journal about the weather and record the findings on the monthly weather chart.
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and conferencing with students.
Suggestions/Resources:	<ul style="list-style-type: none"> • Discuss the changes in fall, such as, the amount of sunlight is decreasing. Birds are noticing the changes and are getting ready to migrate. Have students look for birds during recess and other times to spark students' interest about the migration process and birds. • Allow students to bring in kites. Students can use the kites to explore wind on a windy day and on a day with no wind. • Have students create a chain to tell everything they know about fall. Use strips of construction paper (about 3 inches x 12 inches) to write one fact about fall. Give students at least 5 strips each.

Lesson:	Winter Weather
Description:	<p>Days 1 and 2:</p> <p>A. Review standard and science word wall words.</p> <p>B. Winter video segment www.unitedstreaming.com keyword search: The Four Seasons. Select the Winter segment (2:51 minutes).</p> <p>C. Read the book: <u>The Snowy Day</u> by Ezra Jack Keats</p> <p>D. Show students pictures of winter weather. Include pictures that show what animals may do during the winter months. Have students describe what they see.</p> <p>E. As a class, create a word web that describes winter. Ask students what they like to do in the winter, what the trees look like, what they wear, etc.</p> <p>F. Continue to draw illustrations in the “Weather Book” that was created in the first part of the unit. Have students illustrate a picture of a tree in winter. Also, ask students to write about the types of clothing they have to wear in the winter and why.</p> <p>G. Create a space in the classroom (preferably near the fall collections) dedicated to winter. Allow students to post their findings and collections throughout the unit for winter. This will help students notice the different patterns in the seasons.</p> <p>H. Remember to continue to record weather daily in science journals and monthly weather chart.</p>
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation. • Performance assessment: “Weather Book” illustration.
Suggestions/Resources:	<ul style="list-style-type: none"> • Read books to students about winter and weather. Place books in reading center, so that students can explore the books on their own. • During winter, many books show snow as a major indicator winter has arrived. In many areas of Georgia, it does not snow during the winter months (or is at least very rare). There are activities that can be done to simulate snow or allow students to pretend like they can do similar snow activities, such as, making a snowman.

➤ Marshmallow Snowman

1. Give each students 3 stale marshmallows, toothpicks, yarn or ribbon scraps, and a tube of icing (one tube per table)
2. Let students push the toothpick half-way into one marshmallow.
3. Next, push one marshmallow over the other half of the toothpick. Then place another toothpick half-way into the two marshmallows. Then, place the 3rd marshmallow on top.
4. Have students draw a face and buttons on the snowman with a fine-tipped marker or use the tube of icing.
5. Glue scraps of ribbon, yarn, or tube of icing for the snowman's hat and scarf.
6. Use another toothpick to break in half and stick in each side of the snowman for arms.
7. Students can then write a story about their snowman.

Lesson: Winter: Frost and Snow Explorations

Description: Days 3 and 4:

- A. Review standard and science word wall words.
- B. Discuss winter weather. Read books to students about winter.
- C. Have students work together in small groups to explore frost.
 - To spark interest, ask students what happens when it is a cold winter day. Allow students to share their thoughts. Ask if students ever notice frost on windows in the morning. Ask if students know why that happens. Tell students that they will work in a small group to perform this experiment. They must follow all of the instructions on their own.
 - Give each group:
 1. one metal can (a soup can without a label)
 2. one spoon
 3. rock salt or table salt (each group will need about 4 tablespoons of salt)
 4. tablespoon measurement
 5. crushed ice
 - Tell each group to follow the [Frost Task Card](#).
 - Students will fill the metal can half-way with crushed ice, place about 4 tablespoons of salt into the can, and mix well. Then the group will list predictions of what they think will happen. The can should begin to develop a layer of frost around the outside.
 - Once the experiment is over, have students write about the experiment in their science journals.
 - The salt melts the ice, which in turn makes the salt/ice mixture cooler and below freezing. This allows the moisture from the air to collect on the outside of the can to freeze, thus creating frost.

D. Make Our Own Snow

- Students will be working in small groups to perform activity.
- Give each group:
 1. one gallon sized bag of crushed ice (Note to teacher: Vary the amounts of ice you put in each bag.)
 2. one hand towel
- Allow students to fold the towel over the bag of ice. Students will then use their hands to gently push on the towel to soften the crushed ice further. This will make snow!

E. After each group has made their “snow,” ask students what they could use to measure how much snow they have. Discuss with students. Explain that they will use the rain gauge to measure the amount of snow they have. Students must realize that they must allow their snow to melt before taking a measurement. Students should record their results and share with the class. The class can record results using a bar graph to compare the results from each group.

F. Remember to continue to record weather daily in science journals and monthly weather chart.

Assessment:

- Informal Assessment: Teacher observation and conferencing with groups.
- Performance Assessment: Science Journal Entry.

Suggestions/Resources:

- Have students write a story about winter weather. The story must include how weather affects what people wear and the types of activities they do outside.
- Invite a weather person (meteorologist) to come to the classroom to discuss how they measure precipitation.

Lesson:	Winter: Exploring Clouds
Description:	<p>Days 5 and 6:</p> <p>A. Review standard and science word wall words.</p> <p>B. Take students outside to observe clouds. Discuss outside what the students notice about the clouds. Explain to students that there are several types of clouds. The major types of clouds are: Cumulus, Cirrus, Stratus, and Cumulonimbus.</p> <p style="padding-left: 40px;">➤ Read <u>The Cloud Book</u> by Tomie De Paola</p> <p>C. The class can make a model cloud.</p> <p style="padding-left: 40px;">➤ Materials needed: plastic bottle (2 liter soda bottle), plastic plate, ice cubes.</p> <p style="padding-left: 40px;">➤ The teacher can fill the plastic bottle with hot (not boiling) water. Let the water sit for 5 minutes.</p> <p style="padding-left: 40px;">➤ Pour out most of the water, leaving only ¼ of the water in the bottle.</p> <p style="padding-left: 40px;">➤ Place ice cubes on the plastic plate and then place the plate on the open top of the bottle. (Once the warm air inside the bottle meets the cold air, a small cloud forms)</p> <p>Lesson adapted from Newbridge Science Tools-16, Project</p> <p>D. Have students imagine that shaving cream can be used to make clouds.</p> <p style="padding-left: 40px;">➤ Give each student a squirt of shaving cream on top of their desk. Have students make the four major types of clouds. Remind students of the characteristics of each cloud to help guide them.</p> <p>Lesson Adapted from Scholastic.com- "What are Clouds Made of?"</p> <p>E. Continue to draw illustrations in the "Weather Book" that was created in the first part of the unit. Have students illustrate a picture of each type of cloud: Cumulus, Cirrus, Stratus, and Cumulonimbus. Challenge students to write down the characteristics of each one under the illustration.</p> <p>F. Remember to continue to record weather daily in science journals and monthly weather chart.</p>
Assessment:	<p>Informal Assessment: Teacher observation.</p> <p>Performance Assessment: Cloud Formations with Shaving Cream.</p>
Suggestions/Resources:	Have students write in their science journal about the cloud experiments. Let students illustrate their understanding of clouds.

Lesson:	Winter
Description:	<p>Day 7:</p> <p>A. Review standard and science word wall words.</p> <p>B. Compare the seasons fall and winter.</p> <ul style="list-style-type: none"> ➤ Have students work in small groups. ➤ Give each group: <ul style="list-style-type: none"> ▪ 2 hula-hoops to create a Venn Diagram on the floor ▪ Pictures of fall and winter ▪ White paper ▪ Crayons ➤ Have students sort the pictures into the Venn Diagram according to the season. ➤ Students must draw pictures to place inside the Venn Diagram that fall and winter have in common. ➤ Allow time for students to share their responses. <p>C. Remember to continue to record weather daily in science journals and monthly weather chart.</p> <p>D. Allow students to add to the KWL chart created at the beginning of the unit about the standard.</p>
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and conferencing with groups.
Suggestions/Resources:	<ul style="list-style-type: none"> • Create a winter wonderland display. Use cotton balls to simulate “snow.” Have students illustrate a winter wonderland scene, gluing down cotton balls for snow. Students can glue on small branches from outside to create tree trunks and branches.

Lesson:	Spring Observations
Description:	<p>Days 1 and 2:</p> <p>A. Review standard and science word wall words.</p> <p>B. Spring video segment www.unitedstreaming.com keyword search: The Four Seasons. Select the Spring segment (1:52 minutes).</p> <p>C. Read books to students about spring and weather. Make sure to place the books in the reading center for students to explore later.</p> <p>D. Take students on a “Spring Expedition.” This allows students to go outside and make observations about the new things they see during the spring months. Allow students to bring small magnifying glasses with them to look at plants and trees closely. Students can bring along a clipboard with paper attached and a pencil to record findings. Have students draw pictures or write sentences about things they see. The teacher should ask questions during the expedition to spark students’ interest about their surroundings.</p> <p>E. After the expedition, return to the classroom to share findings. The classroom should already display collections from fall and winter. Add a new section for spring. Allow students to discuss their findings and post on the wall under spring.</p> <p>F. Create a word web about spring to be posted on the spring area on the wall. Have students describe the things they wear during spring, activities they do, foods they may eat, etc.</p> <p>G. Continue to draw illustrations in the “Weather Book” that was created in the first part of the unit. Have students illustrate a tree during the spring. Have students write a sentence about the new things that will happen during the spring.</p> <p>H. Remember to continue to record weather daily in science journals and monthly weather chart.</p>
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and Oral Questioning.
Suggestions/Resources:	<ul style="list-style-type: none"> • Discuss the Class Tree. Ask students to tell why the tree looks different now. Have students write responses in their science journal.

Lesson:	Spring: Rain
Description:	Days 3 and 4: <ul style="list-style-type: none">A. Review standard and science word wall words.B. Read a book about rain.C. Make rain (don't tell students that they are making rain)<ul style="list-style-type: none">➤ Have students sit in a circle. Divide the class into three groups-rubbing hands, snapping fingers, and clapping hands.➤ Turn off the lights and start with one group rubbing hands. Add the next group, snapping fingers. Finally, have the last group clap hands. Reverse the order to stop each group.➤ Discuss with the class what they think the sounds they made represented in nature. Talk about the responses. Tell students that they made rain!D. Continue to collect findings using the rain gauge. Discuss with students if they notice any difference between this season and the other two seasons studied.E. Rain Experiment<ul style="list-style-type: none">➤ Materials Needed:<ol style="list-style-type: none">1. glass jar (mayonnaise jar)2. plastic plate3. ice cubes4. hot water➤ The teacher can pour hot water in the jar (about ½ of the jar should be filled). Place the plastic plate on top of the jar. Wait 5 minutes. Next, put about 5 ice cubes on top of the plate.➤ The warm moisture inside of the jar meets the cold plate to form water droplets.F. Continue to draw illustrations in the "Weather Book" that was created in the first part of the unit. Have students illustrate a picture of rain. Ask students to list the types of clothing that kids wear when it is raining.G. Place students in small groups. Each group will be responsible for Completing the "Spring Observations" chart. Students will go outside and work on the chart as a group. The students will share their results with the class. (See attachment for Spring Observations chart)H. Remember to continue to record weather daily in science journals and monthly weather chart.

Assessment:

- Informal Assessment: Teacher observation.
- Performance Assessment: “Spring Observations” Chart

Suggestions/Resources:

- Have students work with a partner to estimate how many raindrops it would take to fill the top of a soda bottle. Students will list predictions. Students will use an eyedropper to simulate one drop of “rain.” One student will count and record the results, while the other student drops the “rain.” The students will need to compare the predictions to the actual results and share findings.
- Create a “Rain Picture.” Students will illustrate a spring day on a white sheet of construction paper using water-based markers. After the illustration is complete, take it outside and leave in the rain for about 1 minute (if it is not raining, use a water sprayer). Use a paper towel to gently blot the illustration. Allow illustrations to dry completely.

Lesson:	Spring: Rainbows
Description:	Day 5: A. Review standard and science word wall words. B. Read a book about rainbows. C. Ask students: <ul style="list-style-type: none">➤ What is a rainbow?➤ What colors are in a rainbow?➤ What makes one appear?➤ Do you see them all the time? Discuss questions with students and chart their responses on the board. D. Make a rainbow <ul style="list-style-type: none">➤ Divide students into small groups.➤ Give each group:<ol style="list-style-type: none">1. bowl2. small mirror3. white piece of paper4. water5. Clipboard with paper attached6. Pencil7. Rainbow Task Cards➤ Take students outside on a very sunny day to do this experiment. Have students follow the directions to complete the experiment. Allow students time to explore rainbow making.➤ Discuss findings and explain what causes a rainbow to form. E. Continue to draw illustrations in the “Weather Book” that was created in the first part of the unit. Have students illustrate a picture of a rainbow. Allow students to list all of the colors that are in the rainbow. F. Remember to continue to record weather daily in science journals and monthly weather chart.
Assessment:	<ul style="list-style-type: none">• Informal Assessment: Teacher observation.

- Suggestions/Resources:**
- Have students write in their science journals about the rainbow experiment.
 - Students can illustrate a rainbow using watercolors.
 - Try making a rainbow when the sun is not out. Allow students to list predictions and perform experiment.
 - Create a Rainbow Watcher's Chart. Allow students to record the day, time, and the weather that was happening for each rainbow they spot. Allow students to make observations during weekends and afternoons. Once the student gets to school, they can record the findings on the chart.

Lesson:	Spring: Tornadoes and Thunderstorms
Description:	Days 6 and 7: A. Review standard and science word wall words. B. Read books about tornadoes. C. Ask students questions: <ul style="list-style-type: none">➤ What do you think a tornado is?➤ How is it formed?➤ What kind of affect does a tornado have on your community? D. Tornadoes and Thunderstorm video segment www.unitedstreaming.com keyword search: Investigating Weather. Select the Thunderstorms, Tornadoes, Hurricanes, Typhoons, and Cyclones segment (2:49 minutes). E. Discuss with students the responses and lead the class to the NOAA website, search for: tornados (http://www.nws.noaa.gov). Allow students to see pictures of tornadoes and ask questions. Explain that although tornadoes can happen at any time, the southern states have peak tornado season during the spring months: March –May (information obtain by the NOAA's The National Weather Service). F. Tornado Exploration <ul style="list-style-type: none">➤ Invite students to come up with ways to make a tornado. Show students the following supplies: glass jar (mayonnaise jar), vinegar, water, food coloring, glitter, and clear liquid soap. List suggestions on board.➤ Place students in small groups.➤ Give each group:<ol style="list-style-type: none">1. glass jar2. vinegar3. water4. food coloring5. glitter6. clear liquid soap7. teaspoon measurement8. Tornado Task Card

- Allow groups to follow instructions and experiment with making the tornado. Each group should record their findings in their science journal.
- Discuss findings with the class and discuss any differences between predictions recorded earlier.

G. Thunderstorm Recipe

Have students use books and book-marked Internet sites that help students learn about thunderstorms to make a recipe for thunderstorms. Students should work together to list the types of weather present to make a thunderstorm. The recipe can be mounted on a poster board and students can draw illustrations around it. Student's recipes should include: thunderstorms are created when there is a combination of strong winds and heavy rain accompanied by thunder and lightning.

H. Continue to draw illustrations in the "Weather Book" that was created in the first part of the unit. Have students illustrate a picture of a tornado and another picture of a thunderstorm.

I. Remember to continue to record weather daily in science journals and monthly weather chart.

Assessment:

- Informal Assessment: Teacher observation.
- Performance Assessment: Thunderstorm Recipe.

Suggestions/Resources:

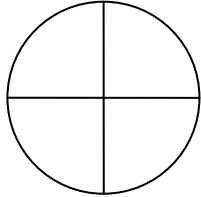
- Allow each student to make their own tornado to take home.
- Have students write in their science journals about tornado experiment.

Lesson:	Spring: We Want to Know More!
Description:	<p>Day 8:</p> <p>A. Review standard and science word wall words.</p> <p>B. Ask students what they know about spring. Record their responses on the board. Allow students to pick a partner. Each pair of students must think of a question they want answered about spring. The question will be recorded on the “We Want to Know More!” sheet. The pairs will predict what the answer to the question will be and record their response. A plan among the pairs will be developed to see how their question will be answered. Students will make observations and record results. The original question should be answered and new questions may arise from the new discovery.</p> <p>C. Remember to continue to record weather daily in science journals and monthly weather chart.</p> <p>D. Allow students to add to the KWL chart created at the beginning of the unit about the standard.</p>
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation. • Constructed Response: “We Want to Know More!” Responses
Suggestions/Resources:	<ul style="list-style-type: none"> • Students can record findings in their science journals. • Compare the three seasons: Fall, Winter, and Spring using a Venn Diagram with 3 circles.

Lesson:	Summer
Description:	<p>Days 1 and 2:</p> <p>A. Review standard and science word wall words.</p> <p>B. Summer video segment www.unitedstreaming.com keyword search: Magical Mother Nature: The Four Seasons. Select the Summer segment (2:00 minutes).</p> <p>C. Read books about summer and weather.</p> <p>D. Create a word web for summer to be displayed in the classroom. Have students give responses about the weather, clothing, things they see outside, etc. Create a space on the classroom wall where you can write summer and begin to post the items that the students make in class.</p> <p>E. Continue to draw illustrations in the “Weather Book” that was created in the first part of the unit. Have students illustrate a picture of a summer tree.</p> <p>F. Have students work in small groups to make summer clothing books. Students can look through clothing catalogs and magazines to find appropriate clothing for the summer season. Allow students to write at least 3 sentences about the pictures they selected. Have students make a book that is at least 3 pages in length.</p> <p>G. Remember to continue to record weather daily in science journals and monthly weather chart.</p>
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and Oral Questioning. • Performance Assessment: Summer Clothing Book
Suggestions/Resources:	<ul style="list-style-type: none"> • Have students create a flag with summer as the title. Have students illustrate or write words to describe summer. (examples on flag: picture of sun, most hours of day light, picture of kids playing outside, follows spring, etc)

Lesson:	Summer: Cool Color
Description:	<p>Day 3:</p> <p>A. Review standard and science word wall words.</p> <p>B. Ask students about the types of clothing they wear in the summer. Students can share their summer clothing books. Ask students why they wear those particular types of clothing. It is hot; the outside activities require certain types of clothing, etc.</p> <p>C. Tell students that a clothing company has asked you what color would keep kids the coolest during the hot summer months. They are interested in making many t-shirts the color that will keep kids cool. So, we need your help to investigate in order to find a “Cool Clothing Color.”</p> <ul style="list-style-type: none"> ➤ Allow students to form small groups. ➤ Give each group: <ol style="list-style-type: none"> 1. an assortment of color construction paper 2. a thermometer ➤ Tell students that each group must predict what color of paper will keep the coolest temperature. The color that keeps the coolest temperature will be used to make a t-shirt. ➤ Each group will select only one color of construction paper and fold it around the thermometer. (Teacher note: try to have different colors for each group, so that the students can compare results.) ➤ The group will tape it to a window and check it after 15 minutes. ➤ Once time is up, the temperatures will be recorded and findings should be displayed using a bar graph to compare all groups. ➤ Discuss what the temperatures mean and determine the “Cool Clothing Color.” Question students findings: How could we do this experiment another way? Why do you think that color keeps you cool? Do you have suggestions about other colors not tried? ➤ Students can record experiment findings in their science journal. <p>D. Remember to continue to record weather daily in science journals and monthly weather chart.</p>
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and Oral Questioning. • Performance Assessment: Science Journal Entry.
Suggestions/Resources:	<ul style="list-style-type: none"> • Students can create a collage with outside materials to illustrate the summer season.

Lesson:	Summer: Hurricanes
Description:	<p>Days 4 and 5:</p> <ul style="list-style-type: none"> A. Review standard and science word wall words. B. Read books to students about hurricanes. (Suggested reading: Hurricanes by Joseph K. Brennan) C. Create a word web with the class about hurricanes. D. Ask Questions: What are the characteristics of a hurricane? Where do hurricanes come from? Why do you think hurricane season is during the summer and fall months? Can hurricanes affect the way we live? What weather tools would you use track a hurricane? Do hurricanes always follow the same path? Can the hurricane change directions? E. Put students in small groups. Tell students that they are going to make a poster describing a hurricane. These posters will be placed around the school to help keep other students informed about hurricanes. The group must use books, book-marked Internet sites, and other resources to help create an informative poster. The poster must also include a safety checklist for hurricane preparation. F. Continue to draw illustrations in the “Weather Book” that was created in the first part of the unit. Have students illustrate a picture of a hurricane. G. Remember to continue to record weather daily in science journals and monthly weather chart. H. Allow students to add to the KWL chart created at the beginning of the unit about the standard.
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and Oral Questioning. • Performance Assessment: Hurricane Poster
Suggestions/Resources:	<ul style="list-style-type: none"> • Track a hurricane. • Create a PowerPoint presentation about hurricanes. Each group could be responsible for making one page, using the ideas from their poster.

Lesson:	GRASPS: Weather Awareness- Clothing Sort
Description:	<p>Days 1 and 2:</p> <p>A. Review standard and science word wall words.</p> <p>B. Students will sort all different types of clothing by season. Students must be able to examine the different patterns in the weather according to each season.</p> <ul style="list-style-type: none">➤ Provide the students with four baskets labeled: Fall, Winter, Spring, Summer and a large laundry basket full of all types of clothing.➤ Allow students to compete for the fastest sorting time in small groups. <p>C. Students will then use a paper plate to illustrate what they would wear each season. Draw lines to make four sections on the plate. Have students write one season in each section. See illustration below:</p> <div style="text-align: center;"></div>
Assessment:	<ul style="list-style-type: none">• Informal Assessment: Teacher observation and Oral Questioning.• Performance Assessment: Season Clothing Sort and Paper Plate Illustration.
Suggestions/Resources:	<ul style="list-style-type: none">• Students should write in their science journals about the clothes sorting activity.

Lesson:	GRASPS: Weather Observations for Particular Season
Description:	<p>Days 3 and 4:</p> <p>A. Review standard and science word wall words.</p> <p>B. Explain the GRASPS activity and rubric to students. Answer any questions. Students should be placed in their small group for the GRASPS activity. There should be four groups: Fall, Winter, Spring, and Summer.</p> <p>C. According to the season assigned, students will choose to make a pictograph or bar graph to communicate the types of weather that was present during those months. Students will use the monthly class charts to collect the data. Students must communicate the type of weather that occurred the most and least.</p> <p>D. On the group's three-paneled display board, students should place their weather data and illustrate which weather occurred the most.</p>
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and conferencing.
Suggestions/Resources:	<ul style="list-style-type: none"> • Allow student plenty of time so that the GRASPS activity is truly a student product, rather than a parent product.

Lesson:	GRASPS: Weather Tools
Description:	<p>Days 5 and 6:</p> <p>A. Review standard and science word wall words.</p> <p>B. Small groups should continue their GRASPS activity.</p> <p>C. Groups should decide which two simple weather tools they want to make and discuss during the presentation. The group will build the simple weather tools and create descriptions of each and place on the three-paneled display board.</p> <p>D. Have group write the name of the season in middle of the three-paneled display board.</p>
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and conferencing.
Suggestions/Resources:	<ul style="list-style-type: none"> • Allow student plenty of time so that the GRASPS activity is truly a student product, rather than a parent product.

Lesson:	GRASPS: Weather Events and Clothing
Description:	Day 7: <ul style="list-style-type: none"> A. Review standard and science word wall words. B. Small groups should continue their GRASPS activity. C. Small groups must make sure they have their “Weather Books” complete and place on the three-paneled display board. D. Small groups must illustrate the types of clothing that are worn during that particular season. E. Each small group should create three reasons why their season is the best. These reasons should be written and placed on the three-paneled display board.
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation and conferencing.
Suggestions/Resources:	<ul style="list-style-type: none"> • Allow student plenty of time so that the GRASPS activity is truly a student product, rather than a parent product.

Lesson:	GRASPS: Presentation Day
Description:	Day 8: <ul style="list-style-type: none"> A. Small groups will present their GRASPS activity
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation. • Performance Assessment: GRASPS Activity
Suggestions/Resources:	<ul style="list-style-type: none"> • Allow students to vote for the best season.

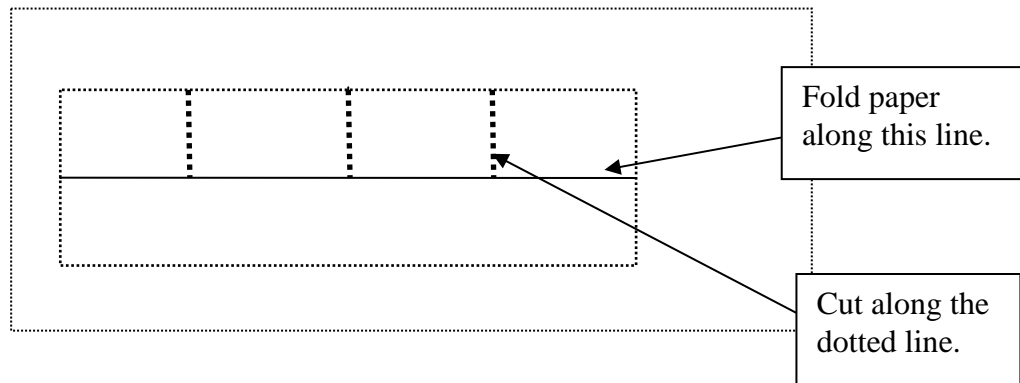
Post Assess	
Lesson:	Post-Assessment
Description:	<ul style="list-style-type: none"> A. Review KWL chart from the start of the unit. Allow students to add to the “L”- learned column. B. Teacher should ask essential questions. C. Teacher should ensure that the enduring understandings are met by all students through the use of questioning, one-on-one conferencing, science journal entries, performance assessments, and the post-assessment.
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher observation, Oral Questioning, and Conferencing. • Performance Assessment: Science Journal and GRASPS activity • Constructed Response: Post-Assessment
Suggestions/Resources:	

TASKS – Re-teaching

The following collection of tasks represent the level of depth, rigor and complexity expected of all students to demonstrate evidence of learning. Re-teaching provides additional concrete opportunities for students who have shown limited progress in learning and understanding.

Lesson: Weather Patterns

Description: A. Based on the results from the assessment and teacher observations, students can create a flip-book to illustrate what students know about weather patterns during each season.



Once the flaps are folded down, have the students write:

1st Flap: Fall

- Under the flap, students should illustrate a picture that would represent the season fall.

2nd Flap: Winter

- Under the flap, students should illustrate a picture that would represent winter.

3rd Flap: Spring

- Illustrate a picture that would represent spring.

4th Flap: Summer

- Illustrate a picture that would represent summer.

Assessment:	<ul style="list-style-type: none"> • Performance Assessment: Flip-Book
Suggestions/Resources:	<ul style="list-style-type: none"> • Have students use books and other resources to help complete activity.

Lesson:	Weather Recap
Description:	A. Based on the results from the assessment and teacher observations, students can create a weather mobile. The weather mobile should have attachments which describe the following weather events: thunderstorms, tornadoes, and hurricanes.
Assessment:	<ul style="list-style-type: none"> • Performance Assessment: Weather Mobile.
Suggestions/Resources:	<ul style="list-style-type: none"> • Have students use books and other resources to help complete activity.

TASKS – Enrichment

The following collection of tasks represent the level of depth, rigor and complexity expected of all students to demonstrate evidence of learning. Enrichment provides additional opportunities for students who have mastery in learning and understanding.

Lesson:	Seasonal Changes
Description:	A. Students should be aware that animals are affected by the seasonal changes in Georgia. B. Have students create a list that names plants and animals in Georgia and how the weather affects them throughout the seasonal changes. Students should illustrate and organize the changes in a chart format.
Assessment:	<ul style="list-style-type: none"> • Performance Assessment: Seasonal Changes Chart
Suggestions/Resources:	<ul style="list-style-type: none"> • Allow students to work in pairs. • Have students use books and other resources to help complete activity.

Lesson:	Weather Events
Description:	A. Students will play a game using a weather cube. The teacher can use a large dice and tape the following weather words on each side: thermometer, precipitation, wind, thunderstorm, tornado, and hurricane. B. Have students take turns rolling the cube. The weather word that rolls on top must be described by that person, using as much detail as possible.
Assessment:	<ul style="list-style-type: none"> • Informal Assessment: Teacher Observation.
Suggestions/Resources:	

TEACHER RESOURCES

Weather Watcher Website:

http://www.ecokids.ca/pub/eco_info/topics/climate/weather/page2.cfm#down

Seasons:

<http://www.astro.uiuc.edu/projects/data/Seasons/seasons.html>

Winter online puzzle:

<http://www.wildwildweather.com/jigsaw/index.html>

Clouds

<http://www.weatherwizkids.com/cloud.htm>

Used to Identify Clouds

<http://teacher.scholastic.com/lessonrepro/lessonplans/profbooks/cloudsmade.pdf>

Make Lightning

http://www.yesmag.bc.ca/projects/lightning_pan.html

Thunderstorms:

<http://www.wxdude.com/page5.html>

<http://www.fema.gov/kids/thunder.htm>

Precipitation:

<http://www.wxdude.com/page3.html>

Hurricanes:

<http://www.wxdude.com/summer2.html>

<http://www.wxdude.com/page19.html>Rainbows:

<http://www.wxdude.com/Rainbows.html>

Partners in Ecology
www.modern-woodmen.org

Making a Rain Gauge
http://www.ecokids.ca/pub/eco_info/topics/climate/weather/page4.cfm

Making a Wind Vane
<http://sln.fi.edu/tfi/units/energy/vane.html>

Weather: Changes and Measurement. 100% Educational Videos
(1999). Retrieved May 15, 2007, from
unitedstreaming: <http://www.unitedstreaming.com/>

Four Seasons, The. 100% Educational Videos
(2003). Retrieved June 23, 2007, from
unitedstreaming: <http://www.unitedstreaming.com/>

Magical Mother Nature: The Four Seasons. Rainbow Educational Media
(2004). Retrieved June 24, 2007, from
unitedstreaming: <http://www.unitedstreaming.com/>

Snowman Puzzle
<http://www.billybear4kids.com/jigsaw-puzzles/animated/online/LetItSnow.html>

Design a Snowflake
<http://snowflakes.barkleyus.com/>

Real Snowflakes Under a Microscope
<http://www.snowflakebentley.com/snowflakes.htm>

Build a Snowman

<http://www.northcanton.sparcc.org/%7Eptk1nc/frosty2001/flash/buildsnowman.htm>

http://www.benjerry.com/fun_stuff/online/virtual_snowman/

<http://www.castlearcana.com/christmas/snowman/index.html>

Winter Storms

http://teacher.scholastic.com/activities/wwatch/winter_storms/index.htm

Weather Classroom

<http://www.erh.noaa.gov/er/lwx/wesh/index.htm>

Investigating Weather. United Learning

(1995). Retrieved June 23, 2007, from

unitedstreaming: <http://www.unitedstreaming.com/>

Interactive Weather Map

<http://www.weather.gov/view/largemap.php>

Tornados

<http://www.nws.noaa.gov/om/brochures/tornado.shtml>

Weather

<http://www.weatherwizkids.com/>

Suggested Literature:

Beginning to Learn About Summer by Richard L. Allington, PH.D. and Kathleen Krull

Beginning to Learn About Winter by Richard L. Allington, PH.D. and Kathleen Krull

Hurricane! by Julies Archer

50 Words About Weather by David and Patricia Armentrout

Wind by Ron Bacon

Cloudy With a Chance of Meatballs by Judi Barrett

Hurricanes by Joseph K. Brennan

Magic School Bus: Inside a Hurricane by Joanna Cole

Catch the Wind! All About Kites by Gail Gibbons

Weather Mania by Michael A. DiSpezio

Weather Forecasting by Gail Gibbons

Weather Words and What They Mean by Gail Gibbons

Rain by Robert Kalan

The Snowy Day by Ezra Jack Keats

Science in Our World: Weather by Brian Knapp

Simple Weather Experiments with Everyday Materials by Muriel Mandell

I Can Be a Weather Forecaster by Claire Martin

The Cloud Book by Tomie De Paola

Changing Seasons by Henry Pluckrose

What Will the Weather Be Like Today? by Paul Rogers

Spring by Steven Schnur

Weather Experiments by Vera Webster

Season Expert Rubric

Name: _____ Season the Student is Presenting: _____ Date: _____

CATEGORY	3	2	1	Points Earned
Presentation of Season on Board	The season is displayed in the middle of the three-panel board. The weather that occurs most often is illustrated. Writing and illustrations are neat, accurate and add to the audience's understanding of the topic.	The season is displayed on the three-panel board. The weather that occurs most often is illustrated. Writing and illustrations are accurate and add to the audience's understanding of the topic.	The season is not displayed. Writing and illustrations are not accurate OR do not add to the audience's understanding of the topic.	
Content of Presentation	Covers season in-depth with details and examples. Subject knowledge is excellent.	Includes essential knowledge about the season. Subject knowledge appears to be good.	Content is minimal OR there are several factual errors.	
Simple Weather Instruments	The group has at least two simple weather instruments on display. Appropriate materials were selected and creatively modified in ways that made them even better. Each instrument had a written description.	The group has at least one simple weather instrument on display. Appropriate materials were selected. The instrument had a written description.	No simple weather instruments were on display. Inappropriate materials were selected and contributed to a product that performed poorly. There was no written description for the weather instruments.	
Science Notebook	There was a science notebook from each student in the group that illustrated: thunderstorms, tornados, hurricanes, and more weather events.	There was a science notebook from all but one student in the group that illustrated: thunderstorms, tornados, hurricanes.	There was no science notebooks present.	

Appropriate Clothing for Season	The three-panel board had illustrations of appropriate types of clothing to wear during the season and the group members were dress according to the season as well.	The three-panel board had illustrations of appropriate types of clothing to wear during the season and the group members were not dress according to the season as well.	The three-panel board did not have illustrations of clothing and students were not dressed according to the season.	
Top Reason to Receive Vote	There are at least 3 reasons why the season is the best.	There are at least 2 reasons why the season is the best.	There is at least one reason why the season is the best.	
Collaboration with Peers	Almost always listens to, shares with, and supports the efforts of others in the group. Tries to keep people working well together.	Usually listens to, shares with, and supports the efforts of others in the group. Does not cause "waves" in the group.	Rarely listens to, shares with, and supports the efforts of others in the group. Often is not a good team member.	
Comments/Total Score				

Weather Chart Suggestions

Daily:

- Teachers: Try to spend about 10 minutes each morning collecting/observing the weather. As the students become more capable of recording weather, give jobs to students that hold them accountable for data collection.
1. Temperature
 2. Sky Conditions (sunny, cloudy, rainy, foggy, snowy, windy)
 3. Precipitation (none, rain, snow); use the rain gauge to record findings, if there is precipitation to measure.

Monthly:

1. Take a digital picture of the class tree.
2. Measure the shadow of a permanent object on the school grounds (flag pole, street sign, etc.).

Group Task Cards

Tornado Directions

1. Fill the glass jar with water, about $\frac{3}{4}$ full.
2. Put 1 teaspoon of vinegar in the jar.
3. Put 1 teaspoon of soap in the jar.
4. Put in 10 drops of food coloring.
5. Put in 1 teaspoon of glitter into the jar.
6. Put the lid on tight and shake the jar.
7. Try to make a tornado!

Tornado Directions

1. Fill the glass jar with water, about $\frac{3}{4}$ full.
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We Want to Know More!

Question

Prediction

Plan

Observations

Results and Answer to Question

New Questions

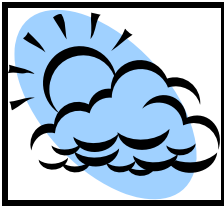
Name: _____ Date: _____

Weather and Seasons: Pre-Assessment

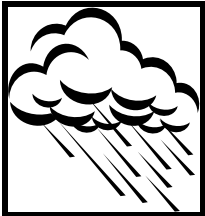
Draw a line to match the picture to the words that describe the weather.



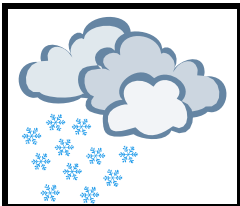
Wet and cold



Sunny



Windy



Heavy rainfall

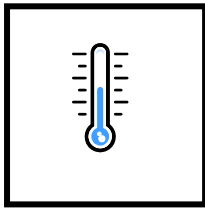


Cloudy

Directions: Match the weather instrument to the word that tells what each instrument measures.



temperature



rainfall



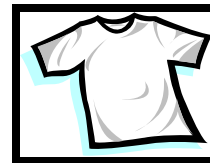
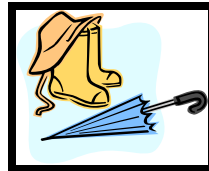
wind direction

Name: _____ Date: _____

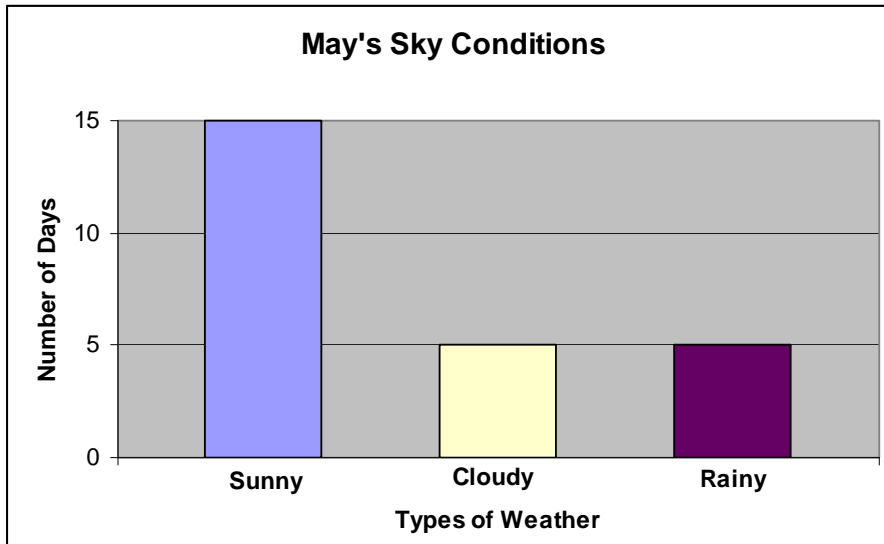
Weather and Seasons: Post-Assessment

Directions: Cut out the pictures of things you may use during the different types of weather. Glue two items in each box that matches the weather.

Rainy	Sunny	Cold



Use the graph to answer the questions.



Circle the correct answer.

1. What type of weather did the month of May have the most of?
a. cloudy b. sunny c. rainy
2. How many days were rainy in May?
a. 3 b. 8 c. 5

3. Pretend you are a meteorologist. You need to measure the temperature outside. What type of weather instrument would you use?

a. rain gauge b. thermometer c. wind vane

4. If you wanted to know what direction the wind was blowing what weather instrument would you use?

a. rain gauge b. thermometer c. wind vane

5. Circle the **four seasons**:

summer fall sunny spring

holiday cold winter cloudy

6. Circle all of the words that would describe a **tornado**.

sunny rain small spinning winds

violent wind funnel-shaped cloud do not cause damage

Spring Observations

Group Member Names: _____ Date: _____

Things We See in the Spring	Things We Hear in the Spring

Rainbow Task Cards

Rainbow Directions

1. Fill the bowl with water.
2. Place mirror in the bowl. Lean the mirror against one side.
3. Use the white piece of paper to find the rainbow.

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Frost Task Cards

Frost Experiment Directions

1. Fill metal can half-way with crushed ice.
2. Put 4 teaspoons of salt into the can.
3. Use the spoon to mix the ice and salt together.

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