

Weather Watchers

GENERAL INFORMATION

OBJECTIVES

Students will identify the current weather conditions by measuring temperature, precipitation, and cloud cover.

QUESTIONS

What is weather? What are the four seasons and what type of weather does each season usually have? What types of clothing would you wear when it is cold outside? Hot? Raining? How do plants and animals react to the different seasons? What is temperature and how can it be measured? How can rain be measured? What are clouds and how do they change?

VOCABULARY

Weather, temperature, thermometer, wind, clouds, seasons, summer, spring, fall, winter

ACTIVITY MATERIALS

Thermometers, pinwheels, 2 rain gauges (1 for demo), thermometer diagram, data sheets, pencils, clip boards

METHODS

INTRODUCTION

Gather the students together and have them sit on the ground. Ask: **Can someone tell me what weather is** (what the air is like outside, hot, cold, raining, snowing, windy, etc.)? **Is the weather outside always the same** (no, the weather changes all the time)? Explain that when the air outside changes, so does the weather. It can be warmer or cooler from one day to the next. Or one day it may rain and the next day it may not. Ask: **If I want to know how hot or cold the air is outside, what is this called** (it is called temperature)? Explain that temperature is measured using a thermometer. Show the thermometer diagram and have one or two student volunteers to help demonstrate. As you adjust the red paper, have the students read the temperature to the group. Ask: **The temperature is usually warmer in the day and cooler at night. Why is this? What is outside during the day and not at night** (it is cooler at night because the sun is not out to keep the Earth nice and warm)? Explain that temperature is not the only thing that can change from day to day. Sometimes the air seems to be moving faster than other times. Ask: **What is moving air called** (wind)? Explain that sometimes a lot of wind can be dangerous, such as during a storm. Tell them that another thing that can change is the amount of rain we get. Ask: **Why do you think it is important for**

Teacher's Corner

Grade Level(s)

Kindergarten & 1st

Learning Expectation(s)

GLE 0007

-Inq.1: Observe the world of familiar objects using the senses and tools.

-Inq.3: Explain the data from an investigation.

-8.2: Collect daily weather data at different times of the year.

-10.1: Identify the sun as the source of heat and light.

GLE 0107

-Inq.1: Observe the world of familiar objects using the senses and tools.

-Inq.3: Explain the data from an investigation.

-8.1: Gather and interpret daily weather data.

-10.1: Investigate the effect of the sun on land, water, and air.

Weather Watchers

INTRODUCTION (cont.)

us to get enough rain (for plants to grow, water to drink, etc.)? Show the students the rain gauge and explain how rain can be measured using it.

ACTIVITY

Divide the group into four teams. Pass out the data sheets, clip boards, and pencils. Explain that the students are going to make observations and use instruments to determine today's weather. Demonstrate how the students are to use the different instruments at the stations. Send each group to a station and give them five minutes at each station to make observations and record their findings.

Station 1: Students will use pinwheels to see how windy it is outside.

Station 2: Students will take temperature measurements in both sunny and shaded areas.

Station 3: Students will use a rain gauge that has been set out the day before to catch any rain overnight. If it has not rained, this is another observation that students should make.

Station 4: Students will use their observational skills to determine the current sky conditions, such as cloudy, overcast, foggy, sunny, raining, etc.

After rotating the stations, bring the whole group together again. Allow each team of students to present their weather report to the group. Ask the whole group: **Will the weather conditions always be like this?** Explain that there are four seasons, or times of year, that get different amounts of sun and have different types of weather. Ask: **What are the four seasons** (spring, summer, fall, and winter)? **How will the temperature be different in the summer and winter** (cold in the winter and hot in the summer)? Explain that animals have to use different adaptations to survive during the different seasons. Some animals are not even seen during the winter but they are during the summer. Ask: **Can you name some of these animals** (snakes, frogs, lizards, some insects, etc.)? Invite the students to guess where these animals go when it is cold outside and how they can survive the winter. Explain the idea of hibernation and torpor (lower heart rate and breathing).

DISCUSSION

Review the following points: What is weather? How can weather be measured? Why is it important to know what the weather is going to be? To whom is this information important? How do you think the temperature, wind, and amount of rain would be different if there were a storm? What if it were snowing around the holidays? How does the weather change?

BRINGING IT TO THE CLASSROOM

Collect clothing and accessories to represent the different seasons. Start a discussion about the seasons. Break the class up into four groups and assign each group a season. Have them select the appropriate clothing for their season.

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- Reference material, vocabulary, and definitions from: Harcourt Science: Grade 1. (2003). Unit D: Earth Science. Harcourt School Publishers: Orlando