

ASSESSMENT

Student Assessment Questions/Vocabulary and Answer Key

1 Vocabulary

Temperature

How hot or cold an environment is measured to be.

Wind

Air moving naturally, horizontally at any speed across the ground.

Velocity

Measurement of speed of travel.

Anemometer

A tool to measure wind speed.

Weather Forecast

To tell ahead of time elements coming in the atmosphere or environment.

2 Cloud Types

Cirrus Clouds

Thin white clouds full of ice particles, found before rain or snow.

Cumulus Clouds

Fluffy, white, and round. Found on nice days.

Cumulonimbus Clouds

Full vertical thunderheads that produce lightning.

Stratus Clouds

Low hanging layers of gray. Fog-producing if low enough.

Nimbostratus Clouds

Dark, present on full days of rain or snow.

TEACHERS

GUIDE



ANEMOMETER
ITEM # 6577-00

ENERGY - MEASURING DEVICES

- How do meteorologists measure wind speed?
- What factors help people forecast the weather?

Measure the impact of wind with this handheld anemometer. Constructed of sturdy plastic, four cups can respond to wind if held, or holes in the handle allow for attaching to a post in open area.



Materials

- 5 anemometers
- outdoor thermometer
- handout of vocabulary and five kinds of clouds
- charts to track elements for 1 week

Goals & Objectives

Students will:

- learn to read various weather instruments.
- practice using atmospheric conditions to predict upcoming weather.
- explain the way an anemometer's design allows it to offer information.

ASSESSMENT

- 1 Points can be given for the completed handout, and the chart of weather for the week.
- 2 An A on what is the equivalent of a quiz grade can be added to students' grades whose forecasts prove accurate.
- 3 Students may be ready to create a flow chart to explain the way an anemometer's design allows it to offer information.

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ACTIVITIES

- 1 Ask students to look outside and predict what the weather will be in two days.
- 2 Discuss how weathermen come up with forecasts.
- 3 Define the words on the handout.
- 4 Teach students how to use the anemometers. (This is easiest to view in small groups, approximately 5 anemometers per class.)
- 5 Assign one student per group to hold the apparatus. (S)He should hold it about shoulder height, or about 4 feet off the ground, while standing in an open area. Place an obvious stripe of correction fluid or marker on one cup.
- 6 Students will also observe the type of clouds present and chart that. Students can get online to check what the weather forecast was two days prior, and chart that.
- 7 Repeat steps 4-6 for the next 4 days of class. Students should rotate jobs within their groups.

Note

It is always best to **DO** an experiment ahead of time to be able to best present it to the class.



Ask two students of each group to count how many times that this cup makes a rotation in one minute. A fourth student in the group should notate the count. This activity should be repeated twice more. Then the scribe can calculate the average of the three readings, divide by 10. This is an approximate mile-per-hour reading.

Once the anemometer reading is done, students will also read an outdoor thermometer for daily temperature, and chart that.

- 8 Using the charted information of the last day, and the previous weather forecasts, students should write their forecast for the next 48 hours.

S T U D E N T
H A N D O U T

Student Name: _____

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Velocity

Anemometer

Weather Forecast

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