

WEATHER Box

Objectives

Students will learn the following:

- > Understand basic information about weather and climates
- > Learn about weather fronts and cloud formation
- > Hands-on activities (cloud reading, DIY barometer, lightning experiment, etc.)
- > National Park Spotlight
- > Empathy around air pollution

Materials

The materials included in the box are:

- > Cloud identification cards
- > Emergency blanket
- > Backpack rain cover
- > Neck warmer
- > Wide rim sunhat
- > Activity supplies (straw, balloons, rubber band)

Discussion

You may want to use the following as a discussion guide with your child:

- > Think of one place in the country that has different weather from your hometown. How do you think it is different from yours? What would kids in that place wear?
- > Why is it helpful to understand different types of clouds?
- > When is it important to know what type of weather to expect?
- > What are two interesting facts you learned about dressing in hot or cold weather?

Evaluation

Test your child's newfound knowledge with the following questions:

- > What is the difference between weather and climate?
- > How do clouds form?
- > What is the difference between high and low pressure air?
- > How does the water cycle work?
- > How do you calculate the distance from a thunderstorm?
- > What is the most important thing to do during lightning?
- > What are some of the uses of your emergency blanket?
- > Why is it important to layer in cold weather?

Vocabulary*

*provided by the Merriam-Webster Dictionary

Air Pressure – The weight per unit of area of a column of air that reaches to the top of the atmosphere. CONTEXT: Areas of high air pressure, or high-pressure systems, usually have clear skies, while areas of low air pressure, or low-pressure systems, usually have clouds.

Atmosphere – The layer of air that surrounds Earth. CONTEXT: Our weather takes place in the lower part of the atmosphere.

Front – A narrow zone of transition between air masses that differ in temperature or humidity. CONTEXT: Most changes in the weather occur along fronts.

Humidity – A measure of the amount of moisture in the air in the form of invisible water vapor. CONTEXT: Humidity is important for making weather forecasts, because it can help scientists predict precipitation.

Meteorologist – A scientist who studies the weather. CONTEXT: Meteorologists use different types of forecasting methods to predict the weather.

Precipitation – Moisture that falls from clouds in the form of rain, snow, sleet, or hail. CONTEXT: Without rain or other forms of precipitation, the ground becomes dry, and crops cannot grow.

Weather – The state of the atmosphere at any given time in a particular place. CONTEXT: The three main factors of weather are humidity, air pressure, and temperature.

Wind – The movement of air, which tends to move from a high-pressure area to a low-pressure area. CONTEXT: Winds are named for the direction from which they blow, so an easterly wind blows from the east.
