



# 5-Minute Refresher: WEATHER DATA

**SIEMENS** | Foundation

 **Discovery**  
EDUCATION™

# Weather Data– Key Ideas

- A barometer measures air pressure.
- A thermometer measures temperature.
- An anemometer measures wind speed.
- A rain gauge measures precipitation.
- Satellites and radar imaging help meteorologists see weather on a large scale.
- A weather map can show the movement of weather patterns over time and allow forecasting the weather.

# Weather Data—Learning Objectives for Grades K-3

- Weather is a combination of sunlight, wind, snow or rain, and temperature.
- Scientists measure these conditions to describe and record the weather to identify patterns.
- Many tools help scientists measure weather conditions.

# Weather Data—Learning Objectives for Grades 4-6

- Weather is the variation of the atmosphere's condition on a local scale.
- Scientists record these patterns to make predictions.
- Weather and climate are influenced by interactions in the biosphere and hydrosphere.

# Weather Data – Prior Knowledge K-2

- Students should be able to make observations about weather conditions using their senses.
- Most students have observed weather conditions outside and are familiar with changing seasons if applicable.
- Students should be able to list different types of weather (sunny, cloudy, raining, snowing).

# Weather Data – Prior Knowledge 4-6

- Students should be able to explain that weather is a combination of sunlight, wind, snow or rain, and temperature. These can all be measured to identify weather patterns.
- Students should be able to measure temperature, but will not have much background knowledge on barometers, anemometers, and rain gauges. It would help students to view the FUN-damental [Under the Weather](#) to review the basics about weather and how its reported. It would also help if students:
  - Have viewed weather reports in newspapers or television.
  - Read a thermometer.

# Weather Data – Common Misconceptions

- Weather maps predict weather.
  - **Reality:** Weather maps are a tool that meteorologists use to display their predictions and forecasts. Scientists like meteorologists use different types of data to forecast the weather.
- Weather forecasting is a skill that can be learned and mastered perfectly.
  - **Reality:** Weather is constantly changing and there is a high degree of uncertainty in weather data. Each situation requires a different set of forecasting methods.

# Weather Data – Additional Information

Meteorologists observe and analyze the weather to make predictions. You can build a weather station consisting of actual and simplified versions of real weather equipment. To learn more check out the hands-on activity **Watching Weather** at the following link:

[http://siemensscienceday.discoveryeducation.com/activities/watching\\_weather.cfm](http://siemensscienceday.discoveryeducation.com/activities/watching_weather.cfm)