Unit II: Weather Watching

Content Area: **Science**
Course(s): **Science 2**
Time Period: **November**
Length: **Nov 12 - Jan 25**
Status: **Published**

Enduring Understandings

Earth's weather and climate system are the result of complex interactions between land, ocean, ice and atmosphere.

Clouds and fog are made of tiny droplets of water and at times, tiny particles of ice.

Rain, snow, and other forms of precipitation come from clouds; not all clouds produce precipitation

Earth has four annual seasons, each with its typical weather patterns, depending upon location on the globe.

Weather changes from day to day and week to week.

Different features of weather are measured using tools including thermometers, wind scales, and rain gauges.

Essential Questions

How do changes in one part of an Earth system affect other parts of the system?

How are clouds formed?

What type of clouds would you want to see if you were planning a picnic? Why?

How do we use our senses to observe and experience the weather?

Why should we record and organize information about our weather?

How does our weather change and affect the way we live?

Content

Literature Connections

Cloud Dance

Thomas Locker. Silver Whistle, 2000.

Cloudy with a Chance of Meatballs

Judi Barrett. Bt Bound, 1999.

Discovering El Niño: How Fable and Fact Together Help Explain the Weather Patricia Seibert. Millbrook Press, 1999.

A Drop of Water: A Book of Science and Wonder
Walter Wick. Scholastic Trade, 1997.

Exploring the Sky by Day

Terence Dickinson. Bt Bound, 1999.

Flash, Crash, Rumble, and Roll

Franklyn M. Branley. HaperCollins Juvenile Books, 1999.

How's the Weather? A Look at Weather and How It Changes
Melvin and Gilda Berger. Bt Bound, 1999.

Hurricane

David Wiesner. Houghton Mifflin Company, 1992.

Janice VanCleave's Weather: Mind Boggling Experiments You Can Turn into Science Fair Projects
Janice Pratt VanCleave. John Wiley & Sons, 1995.

Lightning

Seymour Simon. Mulberry Books, 1999.

The Magic School Bus Inside a Hurricane

Joanna Cole. Scholastic Trade, 1996.

Tornado Alert

Franklyn M. Branley. HarperCollins Children's Books, 1988.

Tornadoes

Seymour Simon. HarperCollins Juvenile Books, 2001.

Water Dance

Thomas Locker. Voyager Books, 2002.

Weather

Seymour Simon. HarperCollins, 2000.

What Will the Weather Be?

Lynda DeWitt. HarperCollins, 2002.

Additional Resources

- Earth Science Enterprise: For Kids Only http://kids.earth.nasa.gov
- Franklin Institute Ben Franklin Page http://www.fi.edu/franklin
- Franklin Institute Weather Page http://www.fi.edu/weather/owc.html
- GOES Weather Satellites http://rsd.gsfc.nasa.gov/goes/text/ goesfaq.html
- Make a Weather Station http://www.miamisci.org/hurricane/weatherstation.html
- National Weather Service http://www.nws.noaa.gov
- Play the Wild Weather Adventure game.

http://spaceplace.nasa.gov/

en/kids/goes/wwa/index.shtml

- Cloud in a Bottle Demonstration

http://chemistry.about.com/

Participate in GLOBE's Do you know that Clouds Have Names?

Vocabulary

atmosphere, axis,

barometer, blizzard, cloud, condense,

evaporate, forecast, front, hurricane,

lightning, meteorologist, orbit, precipitation,

rain gauge, season, temperature,

thermometer, thunder, thunderstorm,

tornado, water cycle, water vapor, weather,

weather map, weather satellite, wind, wind vane.

Skills

Distinguish between hot and cold by comparing the relative temperatures of some familiar places and or things.

Measure and compare indoor and outdoor air temperatures.

Discover facts about weather and seasons.

Measure & record changes in air temperature and discover the role of the Sun heating the Earth.

Use a thermometer to measure and compare differences in water temperature.

Understand different types of severe weather.

Discuss the function of a table of contents, headings, and a glossary.

Interpret photographs and graphics— diagrams and illustrations—to answer questions.

Observe and classify clouds.

Learn how clouds form.

Discover that clouds can be used to predict weather.

Discover where rain comes from.

Discuss how a rain gauge is used to measure rainfall.

Discover how snow forms and the characteristics of real snowflakes.

Complete a KWL chart using facts about weather and seasons.

Discuss the water cycle.

Collect data using classroom-developed weather instruments.

Compare the data collected from the classroom instruments to real-time weather data collected using professional instrumentation

Learn about and discuss a variety of weather instruments.

Assessments

Formative: Other Evidence: Performance: Lab Assignment
No Standards Assessed

Formative: Other Evidence: Performance: Skill Demonstration
No Standards Assessed

Formative: Other Evidence: Oral: Discussion
No Standards Assessed

Formative: Other Evidence: Other: Teacher Observation
No Standards Assessed

Summative: Transfer Tasks: Test: Common

Standards