

Weather Trackers

Students will learn about the tools used in measuring weather, make observations about the weather using their outdoor weather station and analyze data to draw conclusions .



Outdoor Wonders and Learning™

Explore

Supplemental Reading

Grades K-2:

How Artists See the Weather

By Colleen Carroll

Grades 3-5:

The Kids Book of Weather Forecasting

By Mark Breen and Kathleen Friestad

Grade Levels:

K, 1, 2, 3, 4, 5

Curriculum Correlation:

NCSCS – Science

K.E.1.1, K.E.1.2, K.E.1.3

2.E.1.2, 2.E.1.3, 2.E.1.4

5.E.1.1, 5.E.1.2

NCSCS – Mathematics

K.MD.1, 1.MD.4, 2.MD.10, 3.MD.3, 5.MD.2

Materials:

Weather journals, clipboards/cardboard to

write on, pencils, weather instruments

Duration:

Introduction is 45 minutes; periodic visits to weather station for 15 minutes throughout the year; 45 min– 1 hour for concluding day.

Location:

Classroom and Outdoor Area with either a Flowering Dogwood tree or a Red Maple tree for observation.

Procedure:

Introduction (Day One)

1. If weather permits, this entire lesson can be taught outdoors. Encourage students to lay down and stare at the sky while you ask them the following questions. (If students are uncomfortable laying in grass you can provide blankets or have them lay on a paved surface). Keep them silent during this time, just thinking about the answers. When you are ready, have them sit up and share their thoughts with the class.

Questions:

* Focus on this experience you are having with weather. What do you notice? (Feel, see, smell, hear)

* What do you wonder/What questions do you have?

* What do you know about the characteristics of weather conditions? How would you measure these things?

2. Students can be grouped into weather teams or the entire class can be one team. Have them come up with a weather name for their team, such as “The Hurricane Hunters”. If they really get into it, they can come up with a special handshake or cheer. Then distribute their Weather Journals.

3. Go over the first page of the weather journal together. To amp up their enthusiasm, they can create their own weather team symbol. Encourage them to use their keen sense of observation when describing the site location.

4. Tour your weather instruments. Have students gather around and ask them to explain the tools and how to use them. Fill in information as needed. In addition to recording the weather, the younger students will be looking at the dogwood tree to see where it is in its yearly growth cycle. The older students will be observing cloud conditions and wind speed, both of which have reference charts within their Weather Journals.

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Weather Station Observation Days

When setting up additional observations, try to schedule them at the same time of the day. Other than this, there is a lot of flexibility in how to arrange your weather station visits. One option is to visit within a 2-week span and see how the weather changes day to day. Alternatively, you could visit weekly or monthly to get a larger scope of how weather changes over time.

Final Day

Their final day of the project can be combined with their last day of observation or stand alone. Students will draw line graphs that track the changes in temperature and precipitation, and answer the questions that follow. Alternatively, students could draw these as large-scale graphs outside, using sidewalk chalk on a paved surface. Questions could then be answered as a group discussion. For the older students, the back of their weather journal is a place for them to write about their new understanding of their local weather.

Extensions:

K-2nd Grade:

1. Use the computer interactive “Dress The Bear” to prepare the character for the weather.
<http://static.lawrencehallofscience.org/kidsite/portfolio/whats-the-weather/>
2. Students can use their own weather instruments (thermometer, rain gauge and breath to show humidity) and demonstrate how they can use them outside.

Grades 3-5:

1. Over the course of a week or more, compare the weather data received from your school grounds with the weather data from a location with a different latitude or hemisphere such as Anchorage, Alaska or Sao Paulo, Brazil using the website <https://www.wunderground.com/>
2. Use NOAA’s Climate Data Online (<https://www.ncdc.noaa.gov/cdo-web/datasets>) to track monthly or yearly weather patterns from weather stations within the area and compare it to the data you collected.
3. Become a global weather watcher by joining the GLOBE program (for more information go to www.globe.gov)

Learning Targets:

1. List and describe tools used to measure weather.
2. Predict weather conditions tomorrow based on weather conditions today.
3. Compare and contrast weather conditions from different days of observation.