

RESOURCE LIBRARY  
ACTIVITY : 40 MINS

## Create a Weather Map

Students draw pictures that symbolize different types of weather and then use information about today's weather to make their own state weather map.

### GRADES

2, 3

### SUBJECTS

*Earth Science, Geography, Physical Geography*

### CONTENTS

2 Links, 1 PDF

## OVERVIEW

Students draw pictures that symbolize different types of weather and then use information about today's weather to make their own state weather map.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/create-weather-map/>

## DIRECTIONS

### 1. Talk about the temperature and weather today.

Have a whole-class discussion. Ask:

- What's the weather like today?
- What's the temperature like?
- How do the clothes we wear change based on the weather and temperature?

Talk about a weather forecast for students' town or city. Ask: *In what jobs would it be helpful to know the weather forecast?* Students may name jobs such as builders, farmers, park managers, zookeepers, police officers, gardeners, teachers, lifeguards, and sports coaches. Tell students they will learn how people find out about the weather not just outside their window, but also in places farther away. They will explore a weather map and create one for their state or region.

## **2. Have students discuss the usefulness of a weather map.**

Explain that people use maps for a lot of reasons, for example, to find their way from one place to another or even to find a treasure. People also use maps to find out about the weather in different places today or in the future. Ask: *Why would looking at a weather map give you more information than just listening to someone tell you what the weather would be for a certain day?* (Maps show weather and temperatures in different places, the movements of storms, and areas with more rain or snow than others.)

## **3. Mark today's temperatures on a map.**

Display for students the NG Education MapMaker 1-page map of the United States. Use the dropdown menu to get a 1-page map for your state. Distribute one outline map to each student. Then project the online Weather Channel map from the provided link. Select the region where your state is and "current temperatures" to show temperature using both colors and numbers. Help students locate their hometown and mark it on their map, along with a few other landmarks such as the capital city and bodies of water. Explore with students how the numbers and colors on the projected weather map show temperature. Allow students to ask questions about the weather map and the meanings of the different symbols. Look for examples where the weather or temperature in one area is different from another area's. Have students write the temperatures in several locations on their map. If needed, create a data table on the board that students can use to add temperatures to their map.

## **4. Have students draw different types of weather.**

Next, chose the "current weather" layer for the map. Guide students to notice the colors on the map that show light rain, heavy rain, or snow. You can also show students cloud cover with the "visible satellite" layer. Check for understanding. Ask: *How is weather different from temperature?* Ask students to think about other ways to show the weather on a map. Give

each student a Two-Column Chart and crayons or markers. Ask: *What pictures would you draw to show what the weather looks like?* Have students write the words below in the left column. In the right column have them draw a picture that symbolizes each type of weather. Urge them to draw a simple picture, because they may need to draw it again several times, depending on the weather.

- sunshine
- clouds
- light rain
- heavy rain
- snow
- thunderstorms

Explain that they have now created a map key for their weather map.

#### **5. Have students add symbols to their weather maps.**

Have students draw symbols on their map, using the information about today's weather and the symbols for the different types of weather from their map key. Have students compare their maps and display them in the classroom. Have students describe how the symbols on the map might be different for different seasons: fall, winter, spring, and summer. Ask: *Which symbols might you use more in winter? In summer?*

## Modification

Depending on the season, you may choose to use a weather map from another day to show a greater variety of types of weather.

## Modification

Have students work in small groups to create a larger "tabletop" state map using the [U.S. State MapMaker Kits](#). These more detailed maps will enable students to look for correlations between weather patterns and physical features such as mountain ranges, plains, coastal areas, and more.

## Tip

Help younger students build spatial understanding by having them verbalize positional cues (near, far from, next to, between, etc.) to talk about the places and landforms where different weather is taking place.

## Modification

If students can access computers in small groups, you can have them create the weather maps by dragging and dropping symbols and labels onto the [MapMaker 1-Page Maps](#).

## Tip

In Step 2, show students examples of different types of paper and online maps and talk about how they are used. You can also show maps from the [National Geographic MapMaker Interactive](#).

## Modification

Use the [New England MapMaker Kit](#) to create a weather map of the region, since states with small land area may have little variation in their weather patterns.

## Tip

Your local news source may have a print version of a weather map showing different uses of color bands, symbols, numbers, and also data for different cities and towns in your state or region. You can have small groups of students reference printed versions of these as they make their own map and key.

## Informal Assessment

Ask students for names of places where their grandparents, aunts, uncles, or cousins live. Download 1-page maps from those places and have students create a weather map for one of those places using the same procedure they used for their state map. Check the maps for alignment with current weather and correct use of a map key and symbols. Students can then share the maps they created with their relatives.

## Extending the Learning

- Assign students a state and have each student create a weather map for that state. You can have students create a wall-sized U.S. weather map using the [National Geographic MapMaker Kit MegaMap of the U.S.](#)
- Have students discover relationships between landforms and climate. Using the [National Geographic Mapmaker Interactive](#), students can look at landforms on the Nat Geo map base layer and also the layers under Physical Systems-Climate theme. Help them to locate areas of greater precipitation along the coasts and in mountainous areas. Alternatively, students can use their 1-page maps and mark the landforms, looking for relationships there.
- Have students write stories where the weather is important to the characters and what happens to them. Students might write about activities they do with family or friends when it's sunny, raining, or snowing.

## OBJECTIVES

# Subjects & Disciplines

Earth Science

Geography

- [Physical Geography](#)

# Learning Objectives

Students will:

- explain the ways in which a weather map shows weather and temperature
- illustrate symbols for specific types of weather
- create a local weather map using symbols and current weather information

# Teaching Approach

- Learning-for-use

# Teaching Methods

- Discussions
- Hands-on learning
- Visual instruction

# Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
  - Remembering
  - Understanding
- Geographic Skills
  - Organizing Geographic Information

## National Standards, Principles, and Practices

### NATIONAL GEOGRAPHY STANDARDS

- Standard 1:

How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

- Standard 7:

The physical processes that shape the patterns of Earth's surface

### NATIONAL SCIENCE EDUCATION STANDARDS

- (K-4) Standard D-3:

Changes in earth and sky

### COMMON CORE STATE STANDARDS FOR ENGLISH LANGUAGE ARTS & LITERACY

- Reading Standards for Informational Text K-5:

Craft and Structure, RI.1.6

- Reading Standards for Informational Text K-5:

Craft and Structure, RI.2.5

- Reading Standards for Informational Text K-5:

Integration of Knowledge and Ideas, RI.3.7

- Reading Standards for Informational Text K-5:

Integration of Knowledge and Ideas, RI.4.7

## Preparation

### What You'll Need

#### MATERIALS YOU PROVIDE

- Crayons
- Drawing paper
- Markers
- (optional) State weather maps from the local newspaper

#### REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, Projector

#### PHYSICAL SPACE

- Classroom

#### GROUPING

- Large-group instruction
- Small-group instruction

## BACKGROUND & VOCABULARY

### Background Information

Weather is important to people everywhere. People read weather maps showing temperature and precipitation to understand and plan for how the weather may affect their daily lives. Up-to-date weather information from satellites is available through Internet sites and enables users to see projections for weather patterns from local to global scales. Learning to describe weather and to see patterns of weather on maps can help students build understanding of geography near and far from home.

### Prior Knowledge

# Recommended Prior Activities

- None

## Vocabulary

<b>Term</b>	<b>Part of Speech</b>	<b>Definition</b>
<b>forecast</b>	<i>verb</i>	to predict, especially the weather.
<b>map skills</b>	<i>noun</i>	skills for reading and interpreting maps, from learning basic map conventions to analyzing and comprehending maps to address higher-order goals.
<b>temperature</b>	<i>noun</i>	degree of hotness or coldness measured by a thermometer with a numerical scale.
<b>weather</b>	<i>noun</i>	state of the atmosphere, including temperature, atmospheric pressure, wind, humidity, precipitation, and cloudiness.
<b>weather map</b>	<i>noun</i>	representation of data on the condition of a specific area's atmosphere.

