

Weather Watchers

Become a meteorologist (a person who studies weather) right in your own home! Weather has influenced daily life since the beginning of time, and people have always tried to explain why weather happens. In this Patch Program, you will explore the ancient mythology of weather, learn how to predict weather with clouds, and become a citizen scientist by recording rainfall.

How to earn the Weather Watchers patch the Girl Scout way:

Steps:

1. **Discover**—Predict the weather with clouds.
2. **Connect**—Explore weather around the world.
3. **Take Action**—Measure rainfall.

Materials Needed:

In order to complete this patch, you'll need:

- Resources (You can either go online with an adult, ask a professional, or visit your public library.)
- Cloud observer: construction paper, tissue paper or cotton balls, scissors, glue, a notebook to use as a weather journal, tape, and a pencil.
- Rain catcher: empty two-liter plastic bottle, scissors, an adult, a ruler, a permanent marker, your weather journal, a pencil, a couple of handfuls of clean gravel, pebbles, or marbles, and rainy weather!

Step 1

Predict the weather with clouds.

Learn about the different types of clouds you might see in the sky. What do different clouds tell us about the upcoming weather?

With the help of an adult, research different clouds in the sky. Recreate the various types of clouds by gluing white tissue paper or cotton balls onto a blue piece of paper. Label each type of cloud and hang them near a window.

Each time you look outside, see what types of clouds are in the sky. Turn a notebook into a weather diary by writing down your observations. (Don't forget to write the date and time!) What types of clouds have you seen? Based on the clouds, what do you predict the weather will be like? Did your predictions come true?

Step 2

Explore weather around the world.

Complete one of the following:

- Learn about weather around the world. How has weather influenced cultures in different countries? How has it influenced traditional clothing? How has it affected where people live? How has it changed what people eat?
- People have created folk tales to explain natural events before we knew the science of weather. With the help of an adult, go online or visit the library, and find ancient mythologies related to weather. What weather events were the storytellers trying to explain?
- Ancient mythology had gods and goddesses of weather and seasons. Learn how their stories were used to explain the weather.

Step 3

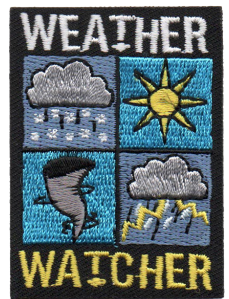
Measure rainfall.

Build a rain catcher that will help you measure and record the rainfall at your home.

- Using an empty, two-liter, plastic bottle, ask an adult to help you cut off the bottle 3/4 of the way towards the top (so the bottom is bigger). Don't throw the top away, we will use this later!
- In the bottle, add small rocks, gravel, and/or marbles to make an even layer. Add water to fill in all the gaps. Where the water has covered the rocks is your baseline. With a permanent marker, draw a line and mark this as 0. Using a ruler, draw lines for every 1/4 of an inch and label the inches on your bottle.
- Turn your cut-off top upside down, and rest it inside your bottle so it acts as a funnel to catch the rain. You may need duct tape to secure it.
- Place your bottle outside (not under any cover like a tree or roof), and wait for it to rain. Check daily to make sure water hasn't evaporated and is still at the 0 mark so your rain readings are accurate.
- When it rains, record how much rain fell in your weather journal. How does the current rain compare to your area's average monthly rain? When it snows, how does the snow measure differently before and after it melts?
- There are places where everyday citizens can report the rain in their area. With the help of an adult, check out the websites where people from all over the world can report on the rainfall in their area.
- All age levels of Girl Scouts have the Citizen Scientist Journey. Look at the requirements and see how this activity can help you get started on your journey!

All done? CONGRATULATIONS!

You've completed all the necessary steps to earn the Weather Watcher patch.



After completing the activities from each step, visit or call a Girl Scouts Western Pennsylvania retail shop at 800-248-3355 to purchase your patch.* A patch may be worn on the back of a vest, sash or tunic.

*Patch shown may be substituted with similar patch, based on availability.