



Circular base (paper plate, plastic lid, cardboard cut into a circle), small piece of cardboard, white paper, markers (or crayons), craft supplies to represent weather (paint, colored paper, yarn, cotton balls, etc.), paper clips, glue, tape, scissors.

: Cut a piece of white paper the same size as your circular base. Divide into four equal sections.

Decorate each section of the circle to represent sun, rain, clouds, and snow. You can use whatever craft materials you have. Be creative! Let dry completely, then glue to your circular base.

Cut an arrow shape from cardboard and decorate.

Poke a small hole in the center of the arrow, and another hole in the center of the wheel. Unbend one end of a paper

Earth's atmosphere is a jacket of gases that surround our planet. It keeps us warm, gives us oxygen to breathe, protects us from the sun's radiation, and helps to form weather patterns and climate. These are all important to life on Earth!

*The Earth's atmosphere. Image: NASA.*

Weather is the combination of sunlight, wind, snow or rain, and temperature in one place at one time. These factors are constantly changing, so weather is changing all the time. Some places experience similar weather all year long, such as the cold temperatures in Antarctica. Other regions experience different weather conditions through the year. In interior Alaska, the weather ranges from hot and dry in summer to cold and snowy in winter.

*Left: Fairbanks in summer. Diego Delso, Wikimedia Commons.*

*Right: Fairbanks in winter. Joseph N. Hall, Wikimedia Commons.*

Weather is an important part of our lives. People often look outside to see what the weather is. Observing weather can give us clues that help us dress for the day, plan activities, or prepare for a storm. Scientists measure and study the weather and identify patterns over time. These patterns help them predict the weather.

Climate is a pattern of weather that occurs over a long time. Scientists have observed that Earth is getting warmer. As the climate continues to warm, the intensity and amount of rainfall during storms is expected to increase. Droughts and heat waves will also become more intense. This will have big impacts on the health of Earth's plants and animals.