



# What is Weather?

Today, let's go out and look at the weather

**If you had to describe to a friend on the phone in America what the weather was like here today, what would you say? How would you describe it?**



The science of weather is called meteorology. Meteorologists study the weather and try to predict it.

**If a meteorologist was with you today, what things would they look at to tell them what's going on with the weather?**

Here are three things they would look at:

## 1. Wind

**What wind is there today? How strong is it? What direction is it blowing?**

Wind is the result of air moving around in the atmosphere because of the rotation of the earth and differences in pressure caused by hot and cold air meeting. The larger the difference in temperature between the two areas of pressure, the faster the wind will blow.

## 2. Clouds

Clouds form from condensed water vapour - tiny drops of water, so small and light that they float in the air. Not all clouds are the same. There are three main types of clouds called cumulus, cirrus, and stratus.



**Cumulus** clouds are big puffy white clouds, like floating cotton. Sometimes they can turn into cumulonimbus or tall towering cumulus clouds. These clouds are thunderstorm clouds.



**Cirrus** clouds are high, thin clouds made of ice crystals. They generally mean good weather is on the way.



**Stratus** clouds are the low flat and large clouds that tend to cover the entire sky. They give us "overcast" days and can drop light rain called drizzle.

## 3. Precipitation (rain and snow)

**Is there any rain today?**

When water falls from clouds it's called precipitation. This can be rain, snow, sleet, or hail.

Rain forms from the water cycle. The sun heats up water on the Earth's surface. Water evaporates into vapour and travels into the atmosphere, where it cools and condenses forming clouds. Eventually water droplets in clouds become large and heavy enough that gravity pulls them back to the ground as rain.

When the temperature is below freezing, small ice crystals stick together to form snowflakes.

Hail generally gets formed in large thunderstorms where balls of ice get blown several times up into the cold atmosphere. Each time another layer of water on the ball of ice gets frozen making the ball larger until it finally falls to the ground.