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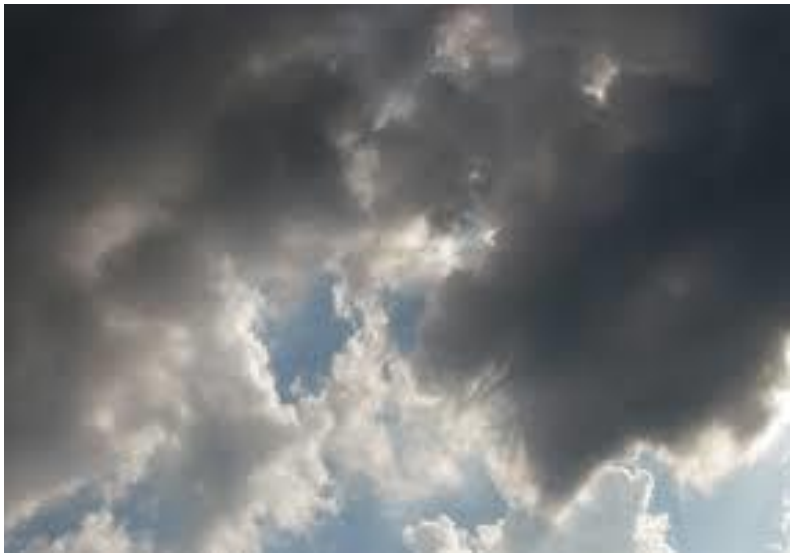
What Do Clouds Tell Us About Weather?

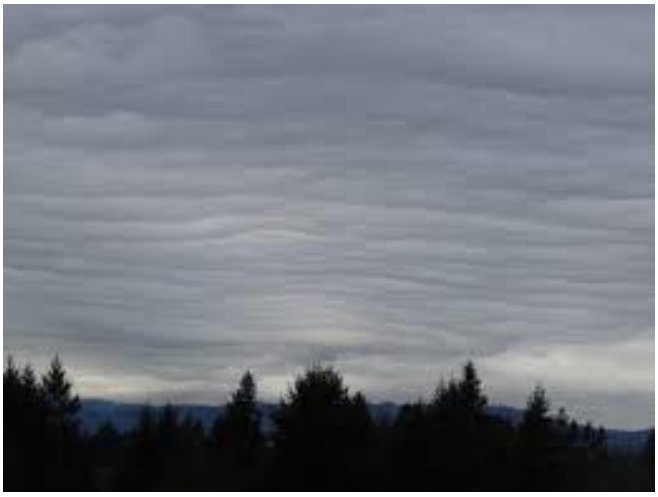
Scientists called **meteorologists** study weather and clouds using many kinds of instruments, but you can predict some weather just by observing clouds. Did you know that those clouds you see in the sky are really billions of water droplets or frozen water crystals? When water evaporates, that liquid water becomes gas, or **water vapor**. It is lighter than water, so it rises. When it cools off, it turns back into water in the form of very tiny drops of water. When there are lots of droplets in one place, they make a cloud. Another interesting fact is that clouds are really not white. It's the reflection of the sun that makes them look white. Those gray clouds you see are packed with water or ice, so they don't reflect as much light.

Have you ever looked at a cloud and decided it looked like an elephant or a sheep? Those big fluffy clouds are called **cumulus clouds**. We usually see these cottony clouds on days when the weather is good, or **fair**, and you want to be outside. Notice that they are low to the ground. The word "cumulus" comes from a word that means "piled," and if you look at the way these clouds are shaped, you can see why.



In certain conditions, cumulus clouds can become thunder clouds. Then they are gray and full of rain. When these clouds get really tall, they are called **cumulonimbus clouds**, and they can forecast heavy rain, hail, snow, thunderstorms, tornadoes, , or even hurricanes. The **nimbus** part of their name means "dark." These clouds sometimes have a flat top that "points" to the direction from which the storm is coming. When the wind is blowing up where they are, they can move at 30 to 40 miles per hour.

Stratus clouds always mean either rain or snow. Sometimes the **precipitation** is a light mist or drizzle. "Stratus" means "layer," and these clouds often look like a blanket covering the sky.



Stratus clouds are grayish because they are so full of water or ice crystals. When they are very low or are touching the ground, we call them **fog**.

Cirrus clouds are the very high, thin clouds that look like streaks in the sky. These clouds are made up of ice. Their name comes from the word meaning "curl of hair" or "fringe." All clouds can be blown by the wind, but these clouds travel very fast, as much as 150 miles per hour! Have you ever seen clouds move into the wind? That is because the wind blowing the clouds is high up on their level, in an area called the **troposphere**. The wind in the troposphere may be blowing in a different direction than the wind on the ground. When you see cirrus clouds, look for a change in the weather in the next 24 hours. By watching which way these clouds are moving, you can also tell from which direction the new weather is coming.

These types of clouds are the easiest to recognize, but there are many other types of clouds that are combinations of these. Each type of cloud is formed in a different way, depending on what is happening in the troposphere. The troposphere is where all weather is created. Now that you know what these three kinds of clouds are, you can impress your friends by doing your own weather forecasting!