

# ALL ABOUT WEATHER!

Have you ever looked at clouds to see if they make any cool shapes? Have you ever wondered what's going on in a thunder cloud? Are all snowflakes really unique?

Clouds are a result of water vapor condensing into a visible form in the troposphere above us in the sky when coming in contact with condensation nuclei (example: smoke from your fire place at home) when there is a low pressure system moving through the area. The air must be too saturated to store any more water vapor causing it to convert to solid liquid causing the clouds to form. There are many different types of clouds like cirrus which are high wispy clouds, cumulus clouds which are the cotton ball looking clouds, or cumulonimbus clouds which are the extreme weather clouds associated with tornadoes, lightning, and hail.

Inside the thunderstorm clouds some pretty cool stuff is happening. These are typically tall clouds that can sometimes take an anvil shape because the jet stream cuts off the top part of the cloud and gives it that "flat" appearance. Why does being tall matter in this case? Good question! Due to size, this cloud can hold A LOT of rain in it making for some pretty spectacular (but short lived) rain episodes. Also, it allows for ionized water droplets to rub against each other causing static which leads to lightning.

During the winter here in Downeast Maine, we get plenty of snow. And yes, it is true that snowflakes have many unique iterations! In 1885, Wilson Bentley, in a small town not much bigger than Grand Lake Stream, called Jericho, Vermont started studying snowflakes. He was a meteorologist who photographed hundreds of them and began to detail their features proving how many different patterns snowflakes make. Due to humidity, temperatures, molecular structure, and a number of different factors (some of which haven't even been discovered by scientists yet!), snowflakes will form different geometric shapes at different sizes at different times.



## Make your own cloud craft!

1. Gather a sheet of paper, Elmer's Liquid School Glue, shaving cream, a cup, a popsicle stick, and coloring utensils.
2. Make a drawing of your favorite spot in nature on your piece of paper.
3. Mix together the shaving cream and glue in the cup with the popsicle stick until you get the consistency of cloud that you want for your picture.
4. Using the popsicle stick, smear your freshly made clouds in the sky of your picture.
5. Let dry. In about an hour you should have a lovely picture with puffy clouds on it!