

One-on-One Clouds

A Short Primer on Clouds

Try to be a rainbow in someone else's cloud.
- Maya Angelou



While clouds can catch our attention as we daydream, did you know that they are important to our very health and well-being? Clouds help regulate Earth's energy balance by reflecting and scattering solar radiation. Clouds are also needed for rain and snow, making them an essential part of the water cycle, watering the earth. Clouds also help redistribute extra heat from the equator toward the poles.

NEPHOLOGY

ne·phol·o·gy (nĕ-fōl'ə-jē)

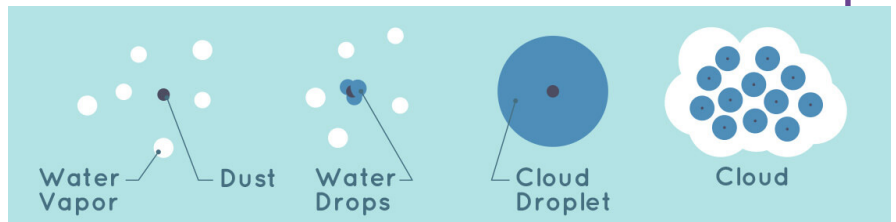
The branch of meteorology that deals with clouds!

Let's Discuss!

- *What do you already know about clouds?*
- *Did you ever look for shapes in the clouds?*
- *Read the quote at the top of the page, what does this mean to you?*

We're surrounded by clouds almost every day of our lives. That makes learning about clouds important.

Clouds are created when water vapor, an invisible gas, turns into liquid water droplets. These water droplets form on tiny particles, like dust, that are floating in the air which we observe as a cloud.



Clouds are given different names based on their shape and their height in the sky. Some clouds are puffy while others are grey and almost solid looking. Some clouds are near the ground, while others seem to soar. Let's take a look!

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A Short Primer on Clouds (continued)

Here is a look at some of the most common clouds:



Cumulus

On a sunny day, the sun's radiation heats the land, which in turn heats the air just above it. This warmed air rises and forms Cumulus clouds. These are the fair weather clouds that look like cotton balls.



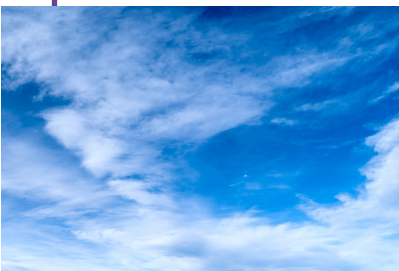
Cumulonimbus

When you notice Cumulus clouds getting larger and moving higher into the atmosphere, it's a sign that rain is on the way. Near the ground, Cumulonimbus are well defined, but higher up they start to look wispy at the edges. Cumulonimbus clouds are often flat-topped.



Cirrus

Cirrus clouds can mark the approach of a warm front, and rain. Cirrus form very high in the atmosphere. They are wispy, and are composed entirely of ice crystals falling through the atmosphere. When Cirrus begins to cover more of the sky, and gets lower and thicker, this means a warm front is approaching.



Stratus

Stratus is a low, continuous cloud sheet covering the sky. Stratus forms by gently rising air, or by a mild wind bringing moist air over cold land or sea. Stratus cloud is thin, so while conditions are gray and a drizzle is likely, they will not produce a heavy rain.

Modern weather forecasts rely on complex computers to forecast the weather, however, by keeping an eye on the skies above you, and knowing a little about clouds, you can make some predictions of your own.

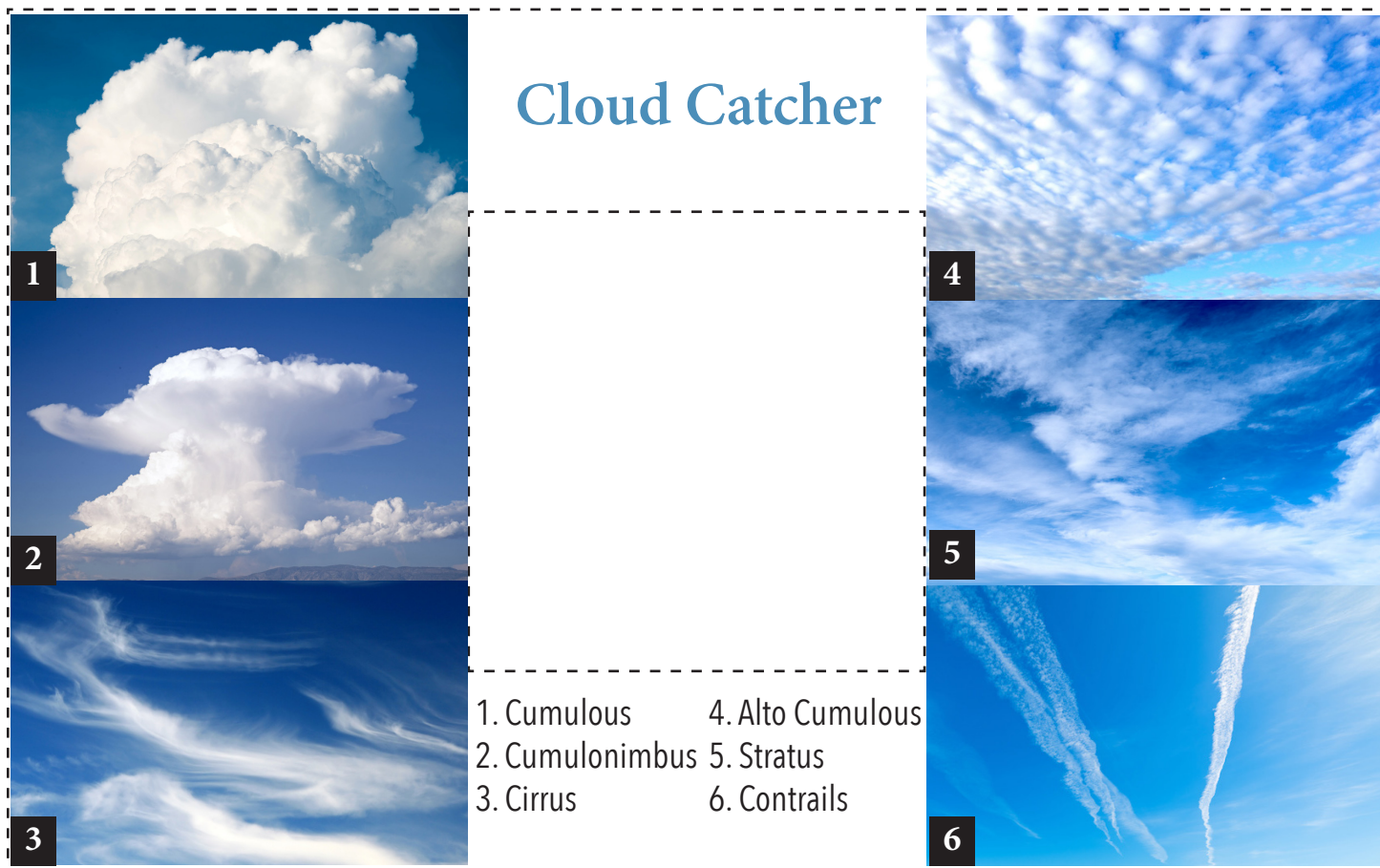
Make a Cloud Catcher

These can easily be printed out and assembled ahead of time to accompany the lesson on Clouds.

Supplies: Tongue depressors or popsicle sticks.
Heavy card stock.
Tape or glue.
Scissors or X-acto knife.

Directions: Print the image below on heavy card stock.
Cut along the dotted lines of the inner and outer rectangles.
Attach the “handle” to the back with glue or heavy tape.

To use: Hold the Cloud Catcher up to a window, and identify the clouds you see with the help of your guide. Can you predict the weather?



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Poetry Corner

To get the most enjoyment out of poetry, read the poem aloud, slowly. Read it more than once.

The Rainbow

by Christina Rossetti

Boats sail on the rivers,
And ships sail on the seas;
But clouds that sail across the sky
Are prettier far than these.

There are bridges on the rivers,
As pretty as you please;
But the bow that bridges heaven,
And overtops the trees,
And builds a road from earth to sky,
Is prettier far than these.



Christina Rossetti was born in 1830, in London, England, to a family of Italian artists and scholars. The youngest of the four Rossetti children, she was educated entirely at home. Young Christina was first educated by her mother through religious texts such as the Bible, and the writings of St. Augustine. When she learned to read, she favored works like *The Arabian Nights* and *Fairy Mythology*. Christina spoke English and Italian and read French, Latin, and German.

In 1862, at the age of 32, Rossetti published her first full collection of work entitled *Goblin Market and Other Poems*. Her work established her name as an important Victorian poet.