

Let's Learn About Clouds...



Presentation by Marie @ thehomeschooldaily.com

What is a cloud?

A cloud is a large collection of very tiny droplets of water or ice crystals.



How do Clouds form?

Clouds form when water vapor in the air becomes liquid water or ice crystals.

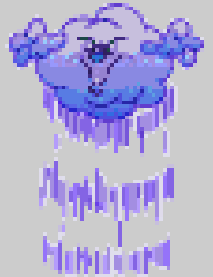
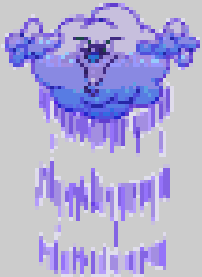
Why are clouds white?

Clouds are white because they reflect the light of the sun. Light is made up of colors of the rainbow and when you add them all together you get white. Clouds reflect all the colors the exact same amount so they look white.



Why do clouds turn gray?

Clouds are made up of tiny water droplets or ice crystals, usually a mixture of both. The water and ice scatter all light, making clouds appear white. *If the clouds get thick enough or high enough all the light above does not make it through,* hence the gray or dark look.





Why do clouds float?

A cloud is made up of liquid water droplets. A cloud forms when air is heated by the sun. As it rises, it slowly cools and the water vapor condenses, forming a cloud. As long as the cloud and the air that its made of is warmer than the outside air around it, it floats!



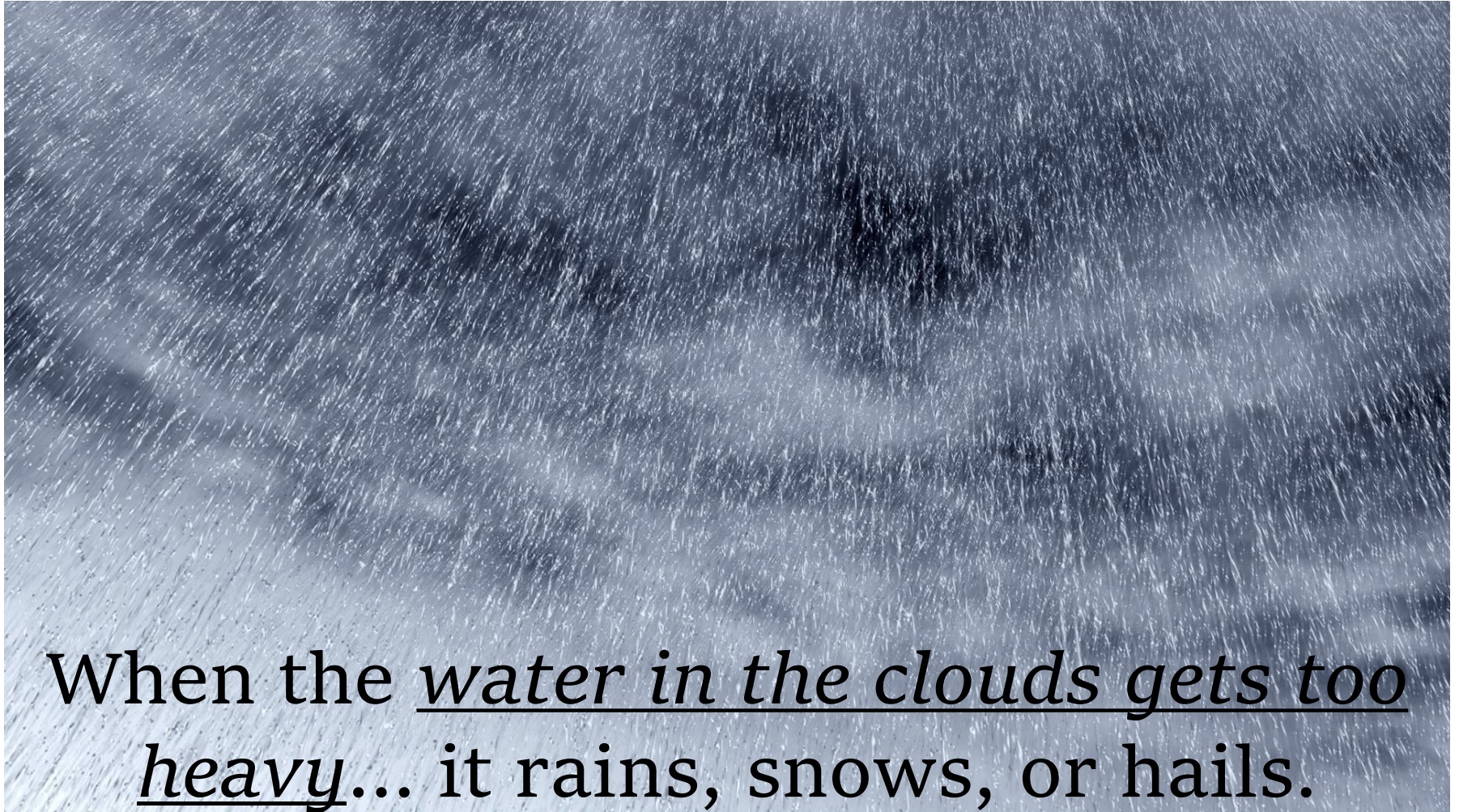
How do clouds move?

Clouds move with the wind. High cirrus clouds are pushed along by the jet stream, sometimes traveling at more than 100 miles-per-hour. When clouds are part of a thunderstorm they usually travel at 30 to 40 mph.

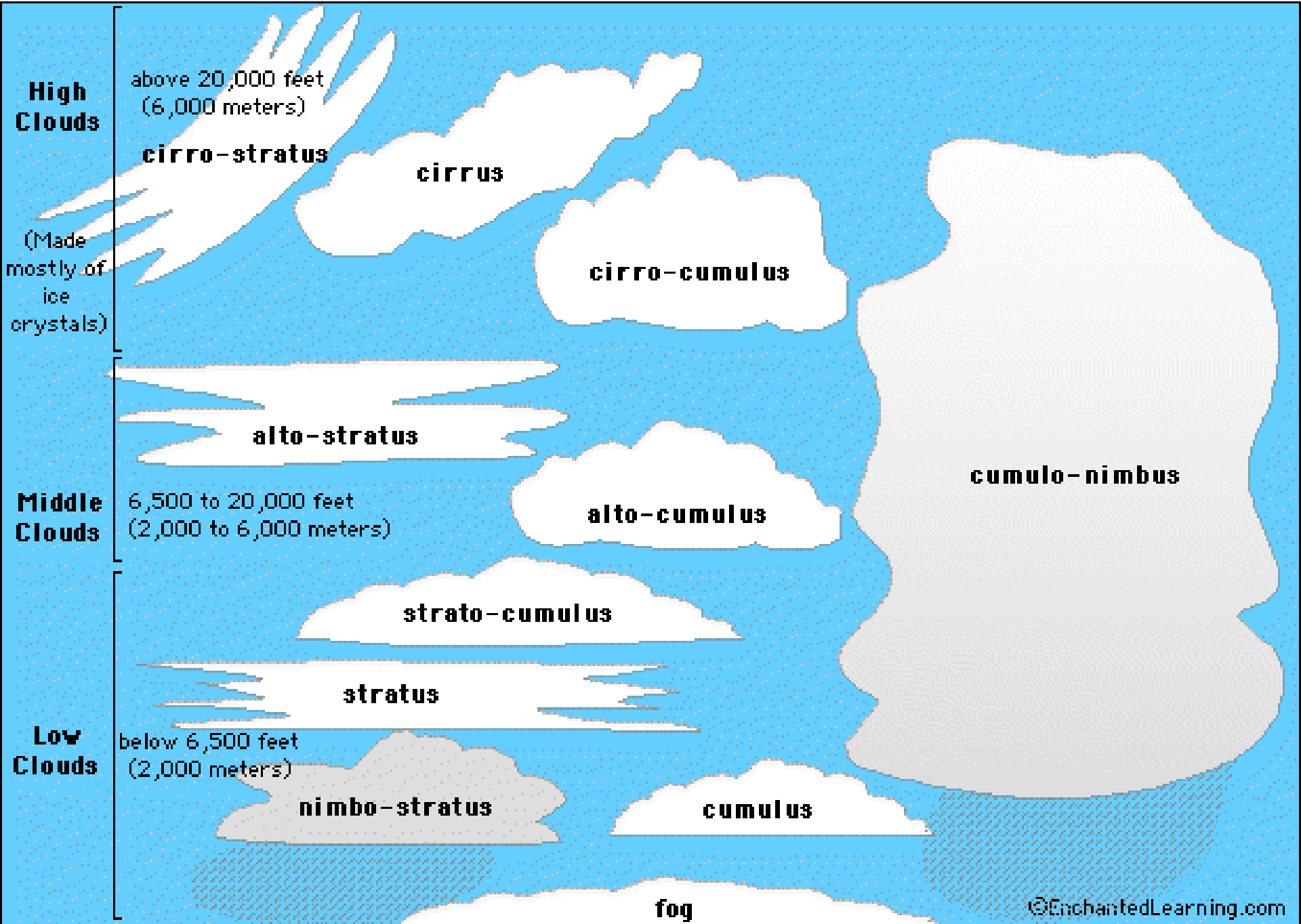




When does it precipitate?



When the water in the clouds gets too heavy... it rains, snows, or hails.



Look at these two types of clouds.
Do you notice anything different about these two clouds?

High Clouds

(Made mostly of ice crystals)

Middle Clouds

6,500 to 20,000 feet
(2,000 to 6,000 meters)

Low Clouds

below 6,500 feet
(2,000 meters)

cirro-cumulus

alto-cumulus

cumulo-nimbus

stratus

cumulus

nimbo-stratus

cumulus

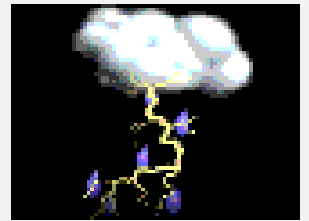
fog

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What clouds produce rain and thunderstorms?

- Nimbostratus clouds produce continuous rain or snow, but nothing too heavy.
- Cumulonimbus clouds are thunderstorm clouds. They are associated with heavy rain, snow, hail, wind, lightning, thunder and sometimes tornadoes.







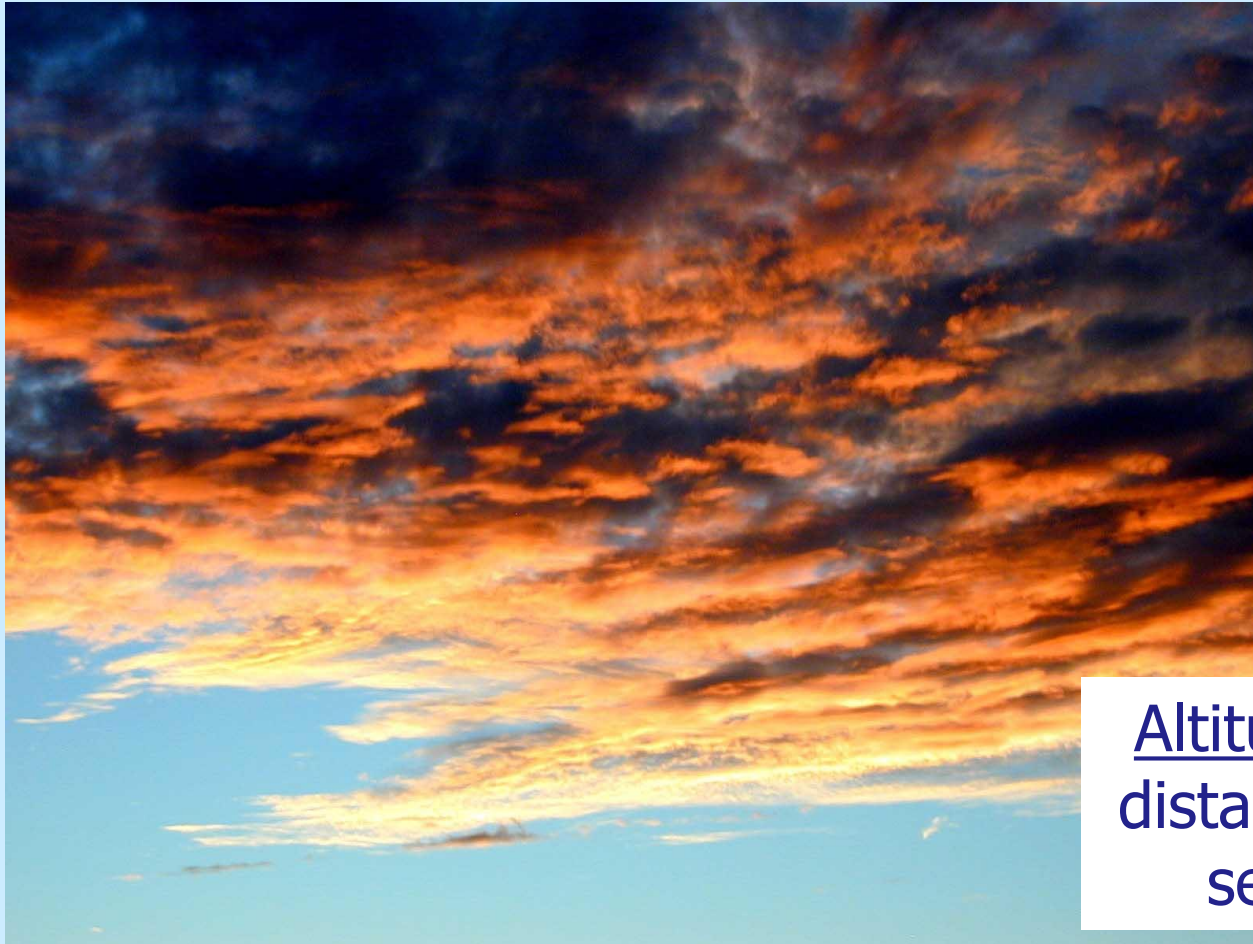


3 Main Types of Clouds

- Cumulus
- Cirrus
- Stratus



Clouds are Classified by shape and altitude



Altitude is the
distance above
sea level

Cumulus:

- In Latin, this means "heap."
- Cumulus clouds look like a heap of cotton balls or whipped cream.
- Low altitude (6,000 ft or below)
- Fair weather



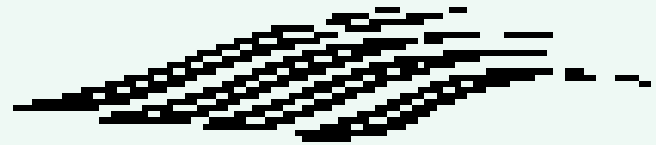


Cumulus Clouds



Cirrus:

- It's Latin for "curl."
- Wispy, feathery clouds.
- Highest clouds in the sky
 - High Altitude (18,000 ft or above)
- Made of ice crystals.
- Generally good weather.



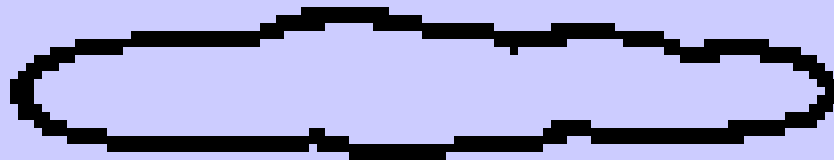


Cirrus Clouds



Stratus:

- It's Latin for "covering" or "blanket."
- Stratus clouds look like a flat gray blanket in the sky.
- Lowest cloud in the sky
 - Low Altitude (6,000 ft or below)
- Stratus clouds that are in contact with the ground is called fog.





Stratus Clouds



cirrus



cirrocumulus



cirrostratus



Cumulonimbus



HIGH

altocumulus



altostratus



MIDDLE

**Cumulus
(fair weather)**



**Cumulus
(with development)**



Stratus



LOW

The End

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