



Cloud Conundrum

Learn how clouds impact climate change!

Activity Guide

Scientists know that clouds play an important part in shaping the climate; however they aren't sure of exactly how they will affect things here on Earth. Put together these cloud puzzles to learn more!

Try This!

Step 1: Open the bag containing the cloud puzzle pieces.

Step 2: Work the puzzle pieces around until you complete each puzzle.

Step 3: Look at the completed puzzles and learn about the role of different cloud types.

How is each type of cloud playing a role in climate change?

Please break up the puzzles when you are finished!

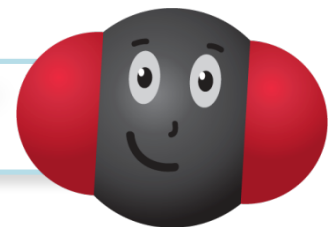


Contrails are the man-made clouds left behind by jets in the sky.

Climate Connection

Climate scientists are still relatively uncertain about the impact of clouds on the climate. Although we can observe that different types of clouds have different short-term effects, sophisticated climate models are needed to determine the long-term roles of various types of clouds.

Did you know? Scientists simply haven't put all the pieces together yet about how clouds fit into the climate change puzzle.



Turn the page over to learn more!

What's Happening?

Scientists know that certain cloud types are both affecting and being affected by the increased heat that is being trapped within the Earth's atmosphere as a result of climate change.

Stratus clouds, the low lying, layered clouds, help to cool the Earth's surface by reflecting the sun's heat away from it. **Cirrus clouds**, the wispy and high flying clouds warm the planet by letting in the sun's heat and trapping it underneath them. **Contrails**, the clouds left behind by jets in the sky, also play a role in the Earth's climate by making days cooler and nights warmer.

Although scientists are aware that clouds are playing a part in recent climate change, they are uncertain as to what extent these effects will have on the long term climate.

Though technological advances are being made daily, the physics of clouds are extremely complicated and our climate models are limited by current technology. The discipline of climate modeling however is constantly growing and our climate models are getting more and more sophisticated and accurate! These advances will help to solve the cloud conundrum.

Climate models that help us understand the affects of clouds are getting more accurate all the time!



Climate Detective Challenge

Why are scientists uncertain about the effects of clouds on climate change?

Find the answer to this question on the Activity Map!

