



Can reflection of the Sun's rays change the climate?

Albedo is the term used to refer to the percent of solar energy that is reflected back into space. Clouds, for example, reflect about 50 percent of the solar energy they receive, whereas dark surfaces on Earth might reflect as little as 5 percent. Snow has a very high albedo and reflects 75 to 90 percent of the solar energy it receives. The differences in how much solar energy is reflected back into the atmosphere from different regions of Earth can cause differences in climate. Also, changes in albedo can affect the climate of that region.

Materials

bowl	polyester film	light source
transparent tape	stopwatch	thermometer

Learn It

When an observation cannot be made directly, a simulation can be used to draw reasonable conclusions. This strategy is known as **inferring**. Simulating natural occurrences on a small scale can provide indirect observations so realistic outcomes can be inferred.

Try It

1. Read and complete a lab safety form.
2. Make a data table for recording temperatures.
3. Cover the bottom of a bowl with a sheet of polyester film. Place a thermometer on top of the sheet. Record the temperature in the bottom of the bowl.
4. Put the bowl under the light source and set the timer for 5 minutes. After 5 minutes, record the temperature. Remove the thermometer and allow it to return to its original temperature. Repeat two more times.
5. Repeat the experiment, but this time tape the sheet of polyester film over the top of the bowl and the thermometer.