



Rhode Island Energy™
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e-SMARTkids



EXPERIMENT TIPS

Make a Mini Greenhouse

Background

The greenhouse effect is the rise in temperature that the earth experiences because certain gases in the atmosphere absorb heat from the sun and radiate it back down to the earth's surface. Without these gases, heat would escape into space and the earth would be a lot colder. Because of how they warm the earth, these gases are referred to as "greenhouse gases."

Burning fossil fuels to produce energy for electricity, heat, and transportation causes more greenhouse gases to build up at a faster rate. When there are more greenhouse gases, more heat is radiated towards the earth's surface and our planet gets warmer. This is known as global warming.

Why is global warming bad? It can cause glaciers to melt and add water to the oceans, causing sea levels to rise. It can change ocean temperatures and weather patterns, causing droughts and floods. It can alter plant and animal habitats, forcing animals to move or die out. Hotter and colder temperatures, and then the need for more energy use, also affect humans.

To understand how the greenhouse effect works, try this experiment in which you build a mini greenhouse.

Materials

- Two large glass bottles or jars of the same size
- One piece of plastic wrap (or a recycled plastic bag!)
- One rubber band
- Four ice cubes, all the same size
- Optional: two thermometers that will fit inside the bottles
- A printout of this experiment
- A pencil