



## Greenhouse Project

by Danny A.

The greenhouse effect is the trapping of heat in the atmosphere. Without the gases in the air, heat from the sun would bounce back into space. Too much gas in the air causes too much heat to be absorbed into the atmosphere, therefore disrupting the earth's equilibrium (balanced state).

### Problem:

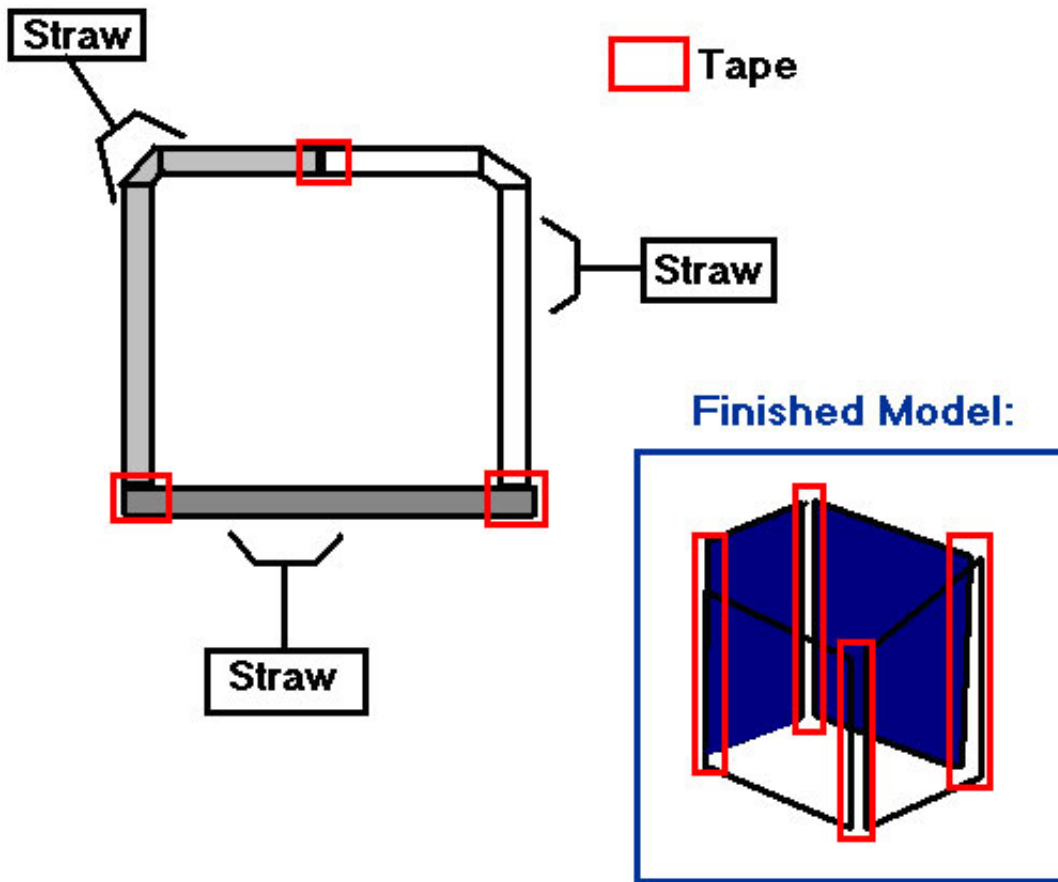
How do gases and pollution affect the earth's atmospheric pressure?

### Materials:

- Bendy straws
- Plastic wrap
- Tape
- 2 Thermometers
- Watch, clock, or timer

### Procedure:





1. Grab the bendy straws. Put them together like this diagram:
2. Make 4 sides that look like the diagram above. Notice the bottom gray straw is straight. If the bendy straw sticks out, cut the excess length.
3. Tape the straws together in all the red areas.
4. The finished model should be a cube with no roof or bottom. Making those parts would be a waste of material.
5. Wrap the plastic wrap around the cube so that it forms a complete cube and there are no openings. (You may build multiple cubes to test how a thicker wrapping of plastic affects the temperature.)
6. Draw or print out a chart. Here is an example:

	<b>Inside Cube</b>	<b>Outside Cube</b>
<b>In the sun</b>		
<b>0 min.</b>	<input type="text"/>	<input type="text"/>
<b>1 min.</b>	<input type="text"/>	<input type="text"/>
<b>2 min.</b>	<input type="text"/>	<input type="text"/>
<b>3 min.</b>	<input type="text"/>	<input type="text"/>
<b>4 min.</b>	<input type="text"/>	<input type="text"/>
<b>5 min.</b>	<input type="text"/>	<input type="text"/>
<b>In the shade</b>		
<b>0 min.</b>	<input type="text"/>	<input type="text"/>
<b>1 min.</b>	<input type="text"/>	<input type="text"/>
<b>2 min.</b>	<input type="text"/>	<input type="text"/>
<b>3 min.</b>	<input type="text"/>	<input type="text"/>
<b>4 min.</b>	<input type="text"/>	<input type="text"/>
<b>5 min.</b>	<input type="text"/>	<input type="text"/>

7. Go outside and place the cube on the ground. Make sure it is in direct sunlight.
8. Look at your thermometers. Record the starting temperatures in the 0 minute boxes.
9. Make a small slit through the roof of the cube and tape the thermometer inside the cube. Make sure it does not touch the ground.
10. Use your watch, clock or timer to write down the temperature inside and outside the cube every 1 minute.
11. After 5 minutes, move your cube and the thermometers into the shade.
12. Record the temperatures in the shade every 1 minute.
13. After 5 minutes, you should have completed your chart.
14. Go inside and look over the data.
15. Write down what differences you saw in the cube and outside the cube.
  - How did the temperatures differ?
  - Did the speed of the increase or decrease of temperatures differ?
  - Which cube was hotter in the sun?
  - Which cube was colder in the shade?

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