

HURRICANES ACTIVITY



In low pressure areas, a circular motion pulls into the center of the area like a whirlpool. This circulating pattern of air pulls in the water vapor from around it. As the air gets to the center, it has to rise. Air cools as it rises, and clouds form. Water droplets in clouds collide and join together, becoming heavier until precipitation falls. Low pressure leads to cloudy weather, grey skies, and rain. High pressure areas have a circulation that pushes air out of it, "clearing" the area of moisture and weather. High pressure areas usually have clear skies and good weather.

Materials/Resources:

- a plastic water bottle with a narrow opening
- a freezer
- a balloon
- a large saucepan
- hot water

Procedures:

1. Put the water bottle in the freezer. Wait for 15 minutes so the air inside the bottle cools.
2. Fill the saucepan with hot water.
3. Take the empty bottle out of the freezer. Carefully stretch the balloon over the opening of the bottle.
4. Place the saucepan of the hot water, holding it upright. Watch what happens to the balloon.
5. With the balloon still on the bottle, return it to the freezer for another 15 minutes.
6. Remove the bottle from the freezer. What has happened to the balloon?

CRITICAL THINKING

1. When you placed the bottle in the freezer, the air inside it cooled. After removing the bottle and placing it in the hot water, the cold started to warm. What happened to the molecules during this process? Explain why the balloon inflated as a result.
2. When you returned the bottle to the freezer, the air inside it cooled again. What happened to the molecules during this process? Explain why the balloon deflated as a result.
3. If you measured the air pressure in a hurricane, do you think it would be high or low? Explain.