Problem

Does the speed of air effect its pressure?

Materials

1. Strip of notebook paper
2. Coffee stirrer
3. Soda straw
4. Cup of water
5. Leaf blower
6. Broom stick
7. Roll of toilet paper

Procedure

1. Put paper strip under lip.
2. Blow across paper. Record what happens.
3. Place thin straw in cup of water.
4. Use regular plastic straw to blow air across coffee stirrer. Record what happens
5. Use leaf blower to blow air over toilet paper roll. Record what happens

Results

The paper strip rises.

Water "Squirts" out of coffee stirrer.

Toilet paper shoots across the room

Conclusion

This works because of a concept called Bernoulli's Principal. It states that as the speed of a fluid, like air or water, increases the pressure in the fluid decreases.

When you blow across the paper the high-speed air above the paper pushes with less force than the still air below it. That makes the air below able to push the paper upward.

As you blow across the top of the stirrer, you decrease the air pressure pushing down into the stirrer. The still air pushing on the water in the glass is now able to push the water up the stirrer and into the air stream. The air stream carries the water with it.

As you blow air across the toilet paper roll, the high-speed air above the paper pushes with less force than the still air below it. That makes the air below able to push the paper upward. Since the paper is connected on the roll it continues to shoot as far as the low-pressured air will take it.