Lift

Bernoulli's Floating Strips

Supplies

Scissors

Notebook or construction paper

Procedure

1. Cut a strip of paper, 2 inches by 8 1/2 inches.
2. Place the strip between your upper lip and nose and blow through your lips. Write down what happens and why.
3. Write down what you think will happen if you blow over the paper by putting the strip just under your lower lip.
4. Put the strip just below your lower lip and blow through your lips.

Questions

What were the results?

Why did your results change depending on the position of the paper?

How does this illustrate the relationship between air pressure and lift?

Lift

Hoverball

Supplies

Pingpong ball

Hair dryer

Carpenter's level

Books

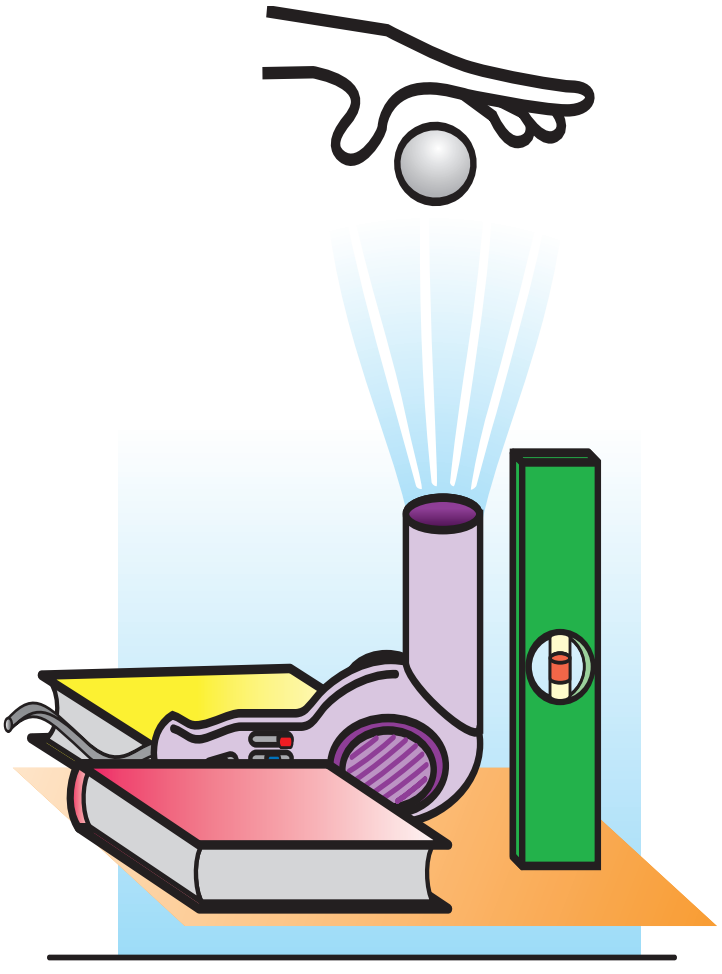
Procedure

1. Put a hair dryer facing straight up, using a level. Prop it up with the books. (Be sure to adequately vent the hair dryer. Leaving it on too long could cause a fire).
2. Turn the dryer to cool and high.
3. Place a pingpong ball into the airflow.

Questions.

Why does it float?

(Lift! It's not the air pushing up, it's the air rushing around that is pulling it up.)



Lift

The Wing Thing

Supplies

Scissors

Notebook or construction paper

String

Straw

Tape

Fan

Procedure

1. Have students cut strips of paper, 4 inches by 6 inches.
2. Fold the strip so that it creates an airfoil. Don't make a crease. Leave about half an inch between the top edge and the bottom edge to create the shape. (An airfoil should have one side longer than the other.)
3. Draw an X in the center of the wing and cut a hole into which you can insert the straw.
4. Put a string through the straw and attach it to a desk and the floor, going straight up and down.
5. Blow the fan over the top of the wing until it rises. (It should work!)

Questions

What were your results?