

Make A Balloon Rocket



YOU WILL NEED:

- 1 balloon (round ones will work, but the longer "airship" balloons work best)
- 1 long piece of kite string (about 10-15 feet long)
- 1 plastic straw
- tape

WHAT TO DO:

1. Tie one end of the string to a chair, door knob, or other support.
2. Put the other end of the string through the straw.
3. Pull the string tight and tie it to another support in the room.
4. Blow up the balloon (but don't tie it) Pinch the end of the balloon and tape it to the straw. You're ready for launch.
5. Let go and watch the rocket fly!

HOW DOES IT WORK?

So how does it work? It's all about the air...and thrust. As the air rushes out of the balloon, (that's the 'thrust' part), it pushes against the air that is in your room. If you push against a wall it moves you away from the wall, the air in the balloon pushing against the air in the room moves it forward. The air rushes out one direction and the balloon moves the other direction.

By the way, you don't always need air to create thrust - real rockets burn fuel to create rocket thrust in outer space - even though there is no air in space.

MAKE IT AN EXPERIMENT

The project above is a **DEMONSTRATION**. To make it a true experiment, you can try to answer these questions:

1. Which type of balloon (round, long, etc.) makes the rocket go the farthest?
2. Does the size of the straw affect how long the rocket travels?
3. Does the type of string affect how far the rocket travels? (try fishing line, nylon string, cotton string, etc.)
4. Does the angle of the string affect how far the rocket travels?