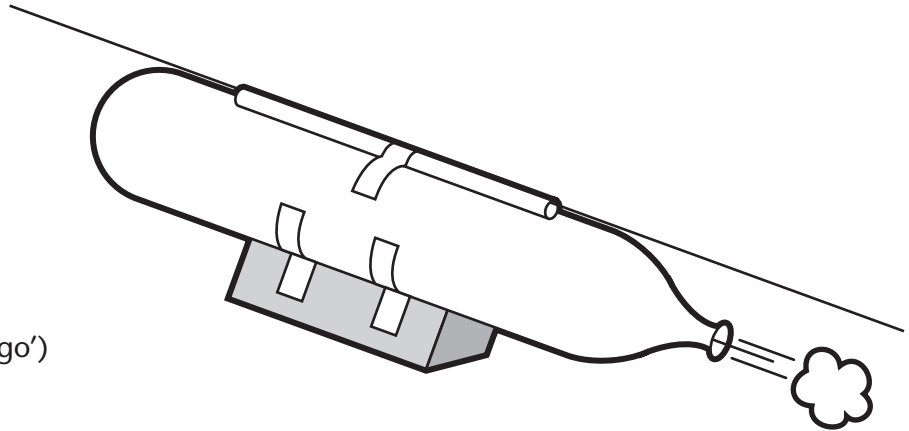


Balloon Rocket

What You Need

- tape
- straw
- scissors
- cereal box
- balloon
- fishing line
- metal washers (to use as 'cargo')
- clothespin



What to Do

Build Your Rocket

1. Build your cargo container from a cereal box or any other light material.
2. Blow up your balloon and use the clothespin to hold it closed.
3. Tape the cargo container and a straw to the balloon.

Launch Your Rocket

1. Secure one end of the fishing line to a wall at a desired height. Hold the other end in your hand at approximately the same height.
2. Place your cargo (metal washers) in the cargo container.
3. Thread the fishing line through the straw attached to your balloon rocket.
4. To launch your balloon rocket, unclip your clothespin.

What's Happening

The balloon is made up of an elastic material that wants to shrink down to its normal small size. Newton's third law of motion states, "for every action, there is an equal and opposite reaction." So when the air pushes out one way, it causes the balloon rocket to move in the opposite direction.

Now Try This

Now that you have seen your balloon rocket travel across the fishing line, think about what you could do to make it faster or more stable. Can you make your rocket transport more weight? What happens if you hold the fishing line at an upward or downward angle? Does the size and shape of the balloon change the speed of your rocket?