

CENTRIFUGAL SPINNER

Purpose

To understand the force created by spinning and build a toy that uses the same principle that governs the orbits of the planets.

Materials

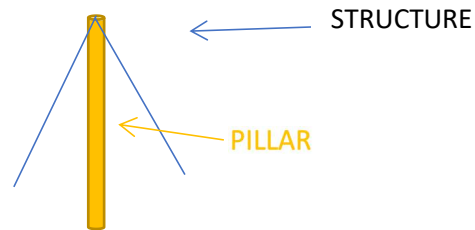
8 Strips of paper
Bottle cap
Pencil or marker
Scissors
Glue
Tape
BBQ skewer

Procedure

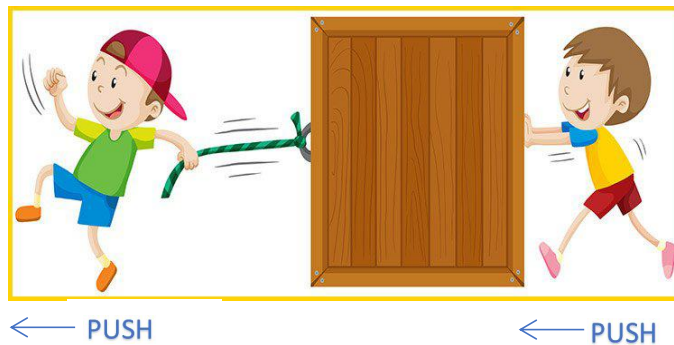
Watch instructional video.

Key Terms and Knowledge

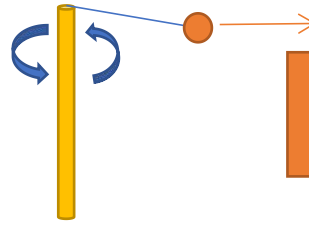
Pillar - The centre pole holding up a structure.



Force - The energy used to make something move. This force can be a push or a pull



Centrifugal Force - The force pushing an object away from the centre.



In a game of tether ball, as the ball rotates around the pole it wants to move away from the centre (the pole)

When the centre pillar **spins** it creates centrifugal force. The spinning is what causes the force. The objects attached to the spinning object want to move away from the centre.

Imagine you are in a car and the car is turning left. Your body moves right. That is an example of centrifugal force as your body wants to move away from the movement of the car.

Friction - A force caused by rubbing 2 things together.

Rub your hands together. Do you feel them warming up? Do you hear that sound they make? That is friction. The faster you move your hands the more friction you are creating.

In your creation, when you put the BBQ skewer in between your hands and rub them together, the **friction** allows us to control the speed that the skewer is turning. When the skewer spins it creates **centrifugal** force causing the paper to want to **push away from the centre**.