

Playful Machines: Workshop Extension Pulley Activity



In this activity, students will have the opportunity to make their own pulley systems!

A pulley is a grooved wheel with a rope or cable around it. A pulley moves things up and down. A pulley is a modification of a simple machine called a wheel and axle.

Materials:

- ✓ Cardboard
- ✓ Scissors
- ✓ Glue
- ✓ String
- ✓ Wooden skewer/
Chopsticks
- ✓ Plastic bottle
- ✓ Bottle cap

Safety Considerations:

Never play with scissors, always be careful with the glue, be respectful of others around you, make sure you have supervision...

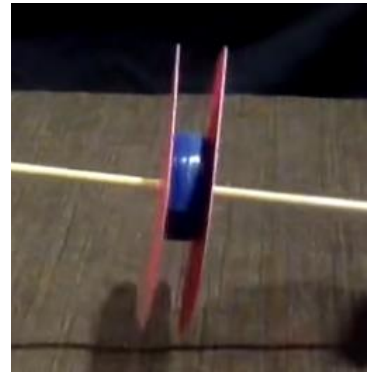
AND HAVE FUN!!!!



Playful Machines Extension

Let's Get Started!

1. Cut two round circles out from your cardboard paper that are similar sizes! They should be slightly larger than the bottle cap.
2. Take your bottle cap off the water bottle, using the skewer or scissors make a small hole that allows your wooden skewer to fit through. Complete the same with the two circles you just cut out.
3. Slide one of the circles to the middle of the skewer. Slide the bottle cap onto the skewer so it is right beside the circle. Put some glue on the circle and bottle cap and stick them together. Slide the other circle onto the skewer and glue it to the bottle cap, this is now your pulley system!
4. Cut your water bottle in half and poke one hole on each side big enough to put your string through. Thread your string through the holes and tie a knot on each side to secure it.
5. Tie one long piece of string to the ones you just secured to the water bottled and loop it over your pulley system. Now you have a working pulley that you can carry objects in!



Next steps: Test different weighted objects in your pulley system to see what is the heaviest one you can lift!

