

OH WOW!

STEM Water Wheel

Materials :

- 2 heavy duty paper plates
- 6 mini plastic cups
- Wood skewer
- Duct tape

Procedure :

1. Use the tip of a wooden skewer to poke a hole through the center of each paper plate
2. Take one paper plate and lay it bottom up on the table
3. Evenly space and place 6 plastic cups in a circle on the paper plate
 - a. The bottoms of each cup should face the hole in the center of the plate; the tops of each cup should touch the edge of the inner ring of the plate
4. Tape each cup in place using a strip of duct tape
5. Place the wooden skewer through the hole of the plate
6. Thread the next plate onto the skewer
 - a. The bottom of the plate should touch the cups
7. Use small pieces of tape to attach the top plate to the cups
8. Test your water wheel in an empty bathtub or sink
 - a. Turn water on- it should run gently
 - b. Hold both ends of wooden skewer
 - c. Place water wheel under the faucet
9. Watch the water wheel spin

Challenge Tasks :



1. Test under different water conditions! What happens if the water is faster or slower? Is there a difference between the sink and the bathtub faucet?
2. Engineer a new design! What could you use besides cups? Can you make something to catch the water? Can you make it bigger? Can you make it smaller?

The Science Behind It :

This DIY water wheel activity is a great way to discuss different forms of energy. As the water flows, it has kinetic energy; the kinetic energy is then used to spin the water wheel. This energy cycle continues as long as the water runs and fills the cups.

Additional Resources :

1. <https://theresjustonemommy.com/water-wheel-stem-activity/>
2. <https://www.pinterest.com/pin/316729786296458407/>
3. <https://www.pinterest.com/pin/145311525453116021/>