A STEM in the Park
Take Home Activity

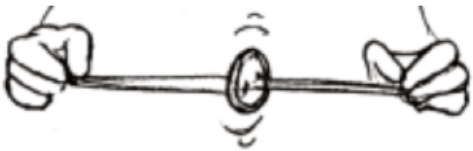
STEM in the PARK™

Science, Technology, Engineering, and Mathematics

Button Flywheel

What You Need

- Button
- String



What To Do

1. If your button has two holes, loop the string through them. If your button has four holes, loop the string through two holes diagonal from each other.
2. Tie the ends of the string together to form a loop, and move the button to the middle of the loop.
3. Grasp the tied end of the loop in one hand and the other end of the loop in your other hand, and then twirl the button about 30 to 40 times. This will wind the string, so the ends of the loop you're holding will get closer to the button.
4. Start to pull the string apart.
5. Time how long your button spins.

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The Science

The flywheel is a terrific example of potential and kinetic energy. Potential energy is stored energy. Kinetic energy is energy in motion. Your flywheel works like a potter's wheel that turns while you push it and also stores energy, so it keeps spinning for a while even when you stop pushing it. When the string is twisted, your button flywheel contains potential energy. When you pull the string, the potential energy is converted to kinetic energy as the button begins spinning. The kinetic energy is converted back to potential energy as the button winds the string again in the opposite direction.

This activity is brought to you by the Imagination Station

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