

Rock-A-Bye Pendulum

Build a pendulum and explore the effect of different amounts of force on an object in motion. Follow these steps to build a pendulum:

1. Gather a ball, string, ruler, and tape.
2. Place the ruler on a desk so that four inches are on the desk and eight inches extend over the side. Tape it to the desk.
3. Wrap one end of the string around the ball once. Wrap a piece of tape around the ball, covering the string. Put two pieces of tape where the string hangs off the ball.
4. Tie or tape the other end of the string around the ruler, three inches from the end.

Congratulations! You are ready to do the experiment.

Set the pendulum in motion by pulling it up and letting it go. Predict what will happen when each of the listed forces acts upon the pendulum. Write your group's prediction, then try applying the forces to the moving pendulum. Write what happened and why you think it happened.

Force	Prediction	Results	Why do you think this happened?
Blowing			
Tapping with your hand			
Tapping with a paper			
No force (don't touch it, just watch what it does)			

Name three things that could happen when a force acts on a moving object.

- 1.
- 2.
- 3.