



Build a roller coaster

Materials

- Coaster track – approx. 2mts of flexible 1.5-inch foam pipe insulator, cut in half lengthwise.
- Marble to roll through the coaster
- Chairs, tables, boxes, pipes or general objects to attach the coaster to
- tape

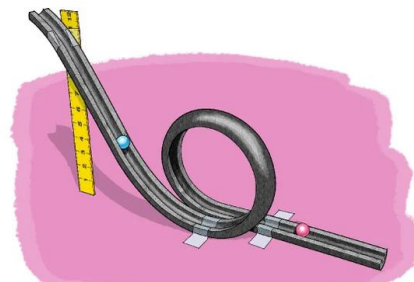


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[Original Source: Science Buddies](#)

Instructions

1. Tape one end of the foam pipe to a high point (top of a table, back of a chair, PVC pipe, etc)
 2. Tape the other end to the ground and roll a marble down it to test it – does the marble fall out?
 3. Add a loop after the track reaches the ground.
- Test out different loop sizes and twists to see how it affects the marble.
 - Change the starting point height of the track? How high does it need to be so the marble can go through the loops?
 - Does the starting height need to change if the loop diameter is smaller or larger?

Key Terms and ideas

- Potential energy (stored energy)
- Kinetic energy (energy of motion)
- Gravity
- Velocity
- Friction
- Slope (rise/run)