

Name: \_\_\_\_\_ Period: \_\_\_\_\_

# ROLLERCOASTER LAB

## Procedures:

1. Create and build a rollercoaster out of pipe insulators and tape that is able to show potential and kinetic energy.

Rollercoaster needs to include:

1. 2 hills
2. 1 Drop
3. 1 twisting turn or 1 loop

AND when a marble is placed on the roller coaster, it must be able to travel from the beginning to the end by being pushed ONLY ONE time.

Data: Draw a diagram of your roller coaster. On the diagram, label the areas of **Kinetic** and **Potential** Energy.

2. Take the initial drop of your roller coaster (the beginning) and lower it 15cm. Drop the marble down the roller coaster.

Does the marble still make it all the way to the end?

Why/why not?

3. Take the initial drop of your roller coaster (the beginning) and lower it 15cm MORE. Drop the marble down the roller coaster.

Does the marble still make it all the way to the end?

Why/why not?

#### Questions:

1. What was the biggest challenge in building your roller coaster?

2. What “extras” did you add to your roller coaster?

3. What changes in potential energy did you observe after lowering the roller coaster?

4. What changes in kinetic energy did you observe after lowering the roller coaster?