



Potential & Kinetic Energy: Student Activity Sheet

Name: _____

Date: _____

Part 1: How does height affect kinetic energy?

Record your data below

Ramp Height	Trial 1	Trial 2	Trial 3	Median
_____ mm				
_____ mm				
_____ mm				

1. How did the height of the marble affect the distance the card traveled? _____

2. What role did friction play? _____

3. What other factors may have affected the results? _____

Part 2: How does mass affect kinetic energy?

Prediction:

1. Which ball will push the card the furthest? How far do you expect it to go?

2. Which ball will push the card the shortest distance? How far do you expect it to go?

Record your data below. The ramp height is 10 cm for each trial.

Ball Type	Trial 1	Trial 2	Trial 3	Median
Wood				
Glass				
Steel				

1. How did the mass of the ball affect the distance the card traveled? _____

2. What role did friction play? _____
- _____
3. What other factors may have affected the results? _____
- _____

Part 3: Hit your mark

Your goal is to solve each challenge in as few trials as possible. Use all the data that you have previously collected.

Challenge 1: Using the **steel ball**, what ramp height will cause the folded index card to travel 58cm?

Ramp Height (cm)	Reason for prediction	Distance the card traveled (cm)

Challenge 2: Using the **marble**, what ramp height will cause the folded index card to travel 25cm?

Ramp Height (cm)	Reason for prediction	Distance the card traveled (cm)

Challenge 3: Using the **wooden ball**, what ramp height will cause the folded index card to travel 15cm?

Ramp Height (cm)	Reason for prediction	Distance the card traveled (cm)