

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

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

## Wrecking Ball

Standard 8.2.1-3

### Task 1

**I can use computational thinking to analyze data to identify the relationship between mass of an object and its kinetic energy.**

Using the data below, describe the relationship between the mass of an object and its kinetic energy.

Wrecking ball	Mass	Distance wall moves
1	450 kg	0 cm
2	600 kg	2 cm
3	1000 kg	50 cm
4	2000 kg	100 cm

### Task 2

**I can use computational thinking to analyze data to identify the relationship between speed of an object and kinetic energy.**

A wrecking ball was dropped from different heights the longer the wrecking ball dropped the faster it was falling when it hit the wall. Using the data below, describe the relationship between the speed of an object and its kinetic energy.

Wrecking ball drop	Height when dropped	Distance wall moves
Test 1	5 m	0 cm
Test 2	7 m	3 cm
Test 3	15 m	55 cm
Test 4	25 m	120 cm

Rubric (1-3)

Concept	3	2	1	0
<b>Mass</b>	Student correctly explains the relationship between mass and kinetic energy.	Student explanation shows an incomplete understanding of the relationship between mass and kinetic energy..	Student explanation shows he/she is beginning to understand the relationship between mass and kinetic energy.	Student explanation shows no understanding of the relationship between mass and kinetic energy.
<b>Velocity (Speed)</b>	Student correctly explains the relationship between speed and kinetic energy	Student explanation shows an incomplete understanding of the relationship between speed and kinetic energy.	Student explanation shows he/she is beginning to understand the relationship between speed and kinetic energy.	Student explanation shows no understanding of the relationship between speed and kinetic energy.
<b>Kinetic Energy</b>	Student can correctly explain what kinetic energy is.	Student explanation shows an incomplete understanding of what kinetic energy is.	Student explanation shows he/she is beginning to understand what kinetic energy is.	Student can NOT explain what kinetic energy is.