**Potential and Kinetic Energy Interactive**

**Direction**: Write down the purpose and answer all the questions (letters).



**Purpose:** Learn about the relationships between potential and kinetic energy.

**Set up:**

1. CUT and PASTE

<https://phet.colorado.edu/sims/html/energy-skate-park-basics/latest/energy-skate-park-basics_en.html>

1. Choose the “INTO” option on the left
2. Click the 3 boxes to the right for: Pie Chart, Bar Graph and Grid

**Procedures:**

1. Pick up the skater and place him on the top of the ramp on either side at the “6” line.
	1. How far up did the skater go (number wise from the grid)
	2. What did you notice about the potential energy (Blue) line in either the Pie chart or the bar graph?
	3. What did you notice about the kinetic energy line (Green) in either the Pie chart or the bar graph?
	4. What is the relationship between kinetic and potential (Example: As the potential increases the kinetic…..)
2. Move the MASS slider in the key to the right to both increase and decrease
	1. What do you notice about the relationship between mass and potential/Kinetic energy? (Example: As the mass increases the kinetic…..)
3. Select the “friction”
4. Click the 3 boxes to the right for Pie Chart, Bar Graph and Grid
5. Pick up the skater and place him on the top of the ramp on either side at the “6” line.
6. Play round with the friction bar AND mass bars, moving the skater back to the top of the ramp if he stops moving.
	1. What do you notice about the relationship between Friction and height? (Example: As the Friction increases the height…..)
7. Select the “playground”
8. Build a ramp that the skateboarder can go through that completes one loop successfully without changing his Mass or Friction.
	1. Show your teacher when you have completed this