

Answer the questions using the simulation, background information, and key terms as references.

- a. At which point on the interactive roller coaster is the potential energy highest? Why?

- b. At which point on the interactive roller coaster is the potential energy highest? Why?

- c. At which point on the interactive roller coaster is the acceleration the highest? Why?

- d. Imagine you are making an animation of a roller coaster with a pie chart representing the total amount of potential and kinetic energy in the system. What are the cars doing as the section representing kinetic energy increases in size?

- e. The roller coaster in this interactive is a model. In real life, not all of the potential energy of the coaster cars is converted to kinetic energy and back again; some mechanical energy is converted to thermal energy. Describe how mechanical energy gets converted to thermal energy along the track. How does this conversion affect the potential energy and kinetic energy during the ride?