Roller Coaster Energy WebQuest

An Investigation of Potential and Kinetic Energy

Step 1: Take a virtual ride on the Millennium Force at Cedar Point!

http://valravn.cedarpoint.com/visions-of-glory/pov-videos

1. How does a roller coaster relate to science and energy?

Step 2: Check out the energy in a roller coaster ride! Read the article and play the picture on this page to answer the questions below:

<http://science.howstuffworks.com/engineering/structural/roller-coaster3.htm>

1. What is potential energy? At which point is potential energy the greatest?
2. What is kinetic energy? At which point is kinetic energy the greatest?

Step 3: Copy and paste the link below into your browser and click the VIEW button:

<http://www.pbslearningmedia.org/resource/hew06.sci.phys.maf.rollercoaster/energy-in-a-roller-coaster-ride/>

1. What do you notice about the relationship between potential and kinetic energy and the path of the coaster?

Step 4: Take a second virtual ride, this time on the Power Tower!

<https://www.cedarpoint.com/rides/Thrill-Rides/Power-Tower>

1. What type of energy are you gaining as you go higher and higher in the air?
2. What happens to the potential energy as you begin to plummet to the Earth??

Step 5: Create your own roller coaster! Keep in mind all that you have learned about potential and kinetic energy to this coaster run and scare you!!

http://discoverykids.com/games/build-a-coaster/

1. What makes a successful roller coaster?
2. Draw your roller coaster you built below. Label points with potential energy and kinetic energy.