

## Energy Transfer in a Roller Coaster

### Final Assignment Instructions

In this lesson, you have learned how energy changes form as roller coaster cars move along a track. You have also learned that engineers design roller coasters and other mechanical devices using their understanding of the transfer of energy. You will now write an essay that shares what you have learned and what you think about it. You will need a printout of your notes.

- Choose one of the topics below and **write** an essay.
- **Organize** your response so that it includes at least three supporting details that you have learned from the reading passage, video, and other materials in this lesson.
- **Use** at least three vocabulary words (or a form of the words) as part of your supporting details. For example, for the word *jump*, you could use *jumps*, *jumped*, or *jumping*.

### Essay Topics

1. Describe the transfer of energy within a roller coaster ride. Be sure to explain in your essay:
  - What types of energy are present during a roller coaster ride
  - How the changes in form of energy affect the roller coaster cars' movement
2. Imagine you're on a roller coaster ride. Describe the changes in forces that happen during the course of the ride. Be sure to include in your essay:
  - Which part of the ride is the most exciting for you, and why
  - Where potential energy and kinetic energy must be greatest and least
  - How the design of a track makes this happen

### Vocabulary Words

ascend

descend

friction

gravity

kinetic

potential

transfer