



## Activity 4

## Observe Like a Scientist

## Energy Basics

Energy is part of everything that happens in the world and everything we do. What is energy and how do we know we are using energy? **Read** the text. **Find** evidence to explain how energy and work are related.

Do you like to play outside, read a book, or draw? All these activities need energy. Energy is the ability to do work, or make things happen. Energy can be stored and changed into different forms. We cannot see energy, but we can see and measure what energy can do. Whenever you detect motion, heat, light, or sound, you can be sure energy is being used. Work occurs when a force causes an object to move. When you kick a ball, the force of your kick causes the ball to move in a different direction. Energy was needed to move your leg, which caused the ball to move.



**Talk Together** Now, talk together about the ways work and energy are related.

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## What Is Energy?

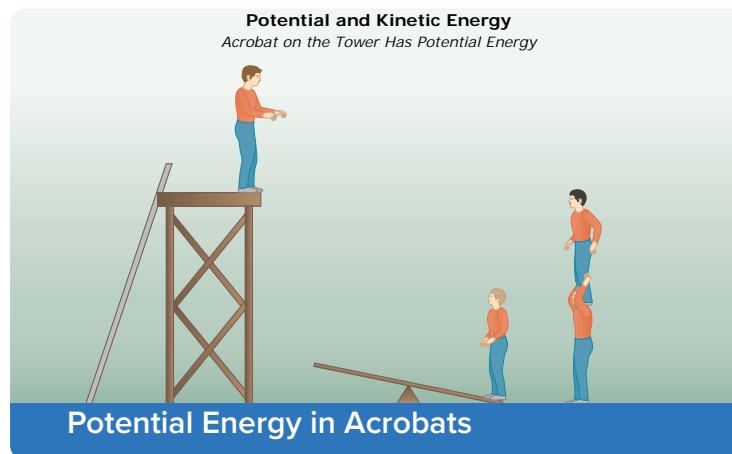


### Activity 5

## Analyze Like a Scientist

### Kinetic and Potential Energy

Have you ever dropped a book on your foot? One way that scientists talk about energy is to classify energy as kinetic or potential. Objects have **kinetic energy** if they are in motion. **Potential energy** is possible, or stored, energy. While you hold the book, it has potential energy. When you let go and it falls on your foot, the book is moving and has kinetic energy. **Look** at the image. **Think** about what would happen next. Then, **read** the text and **write** your answer to the question.



### Kinetic and Potential Energy

Energy is the ability to do work. Energy makes things happen. If there were no energy on Earth, nothing would get done. There are two categories of energy: kinetic energy and potential energy. Kinetic energy is the energy of motion. The word *kinetic* means that something is moving. In other words, kinetic energy is the energy an object has because it is moving. Potential energy is stored energy or the position energy. Position in other words, potential energy means that an object is ready to do work or to be active.

What most likely happened next in the picture of the four acrobats?

**Life Skills** I can identify problems.