

## Science Vocabulary

**energy** -- the ability to do work

**force** -- any push or pull that causes an object to move, stop, or change speed or direction

**friction** -- the resistance to motion created by two objects moving against each other; a force that works against motion

**gravity** -- an unseen force that pulls two objects toward each other

*inertia* -- the tendency for objects to resist motion (Unless acted on by a force, objects in motion tend to stay in motion, and objects at rest remain at rest.)

**kinetic energy** -- the energy of motion

**motion** -- a change in an object's position (described by the object's direction and speed)

*potential energy* -- stored energy

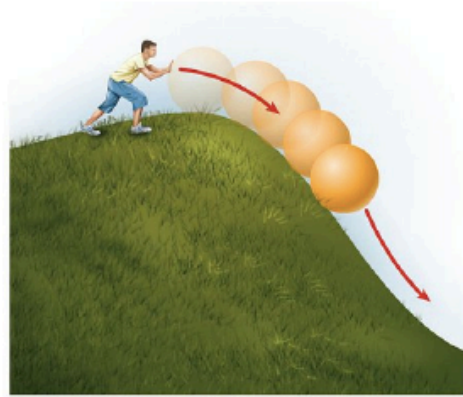
**speed** -- the measure of motion, how fast an object is moving

**work** -- when a force moves an object

The *italicized* words above in the "Science Vocabulary" section are for enrichment purposes.



a) Potential energy



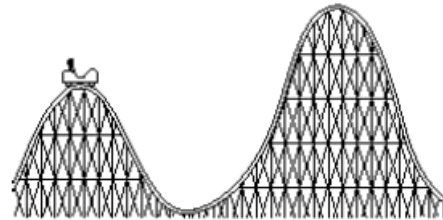
(b) Kinetic energy

HCPS 4<sup>th</sup> Grade  
Science Curriculum Framework

SOL 4.2  
Unit of Study: Force, Motion, and Energy



This rollercoaster has enough kinetic energy to carry itself over the second hill because the first hill is larger than the second.



This rollercoaster *does not* have enough kinetic energy to carry itself over the second hill because the second hill is taller than the first.