



5-Minute Refresher: POTENTIAL ENERGY

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Potential Energy— The Key Ideas

- Energy comes in many forms.
- Potential energy is energy stored and ready to be released.

Potential Energy—Learning Objectives for Grades K-3

- The faster an object is moving, the more energy it possesses.

Potential Energy—Learning Objectives for Grades 4-6

- Potential energy is energy that is stored or available to make things happen.
- Energy can be moved place to place by moving objects through waves.

Potential Energy– Prior Knowledge K-2

- Students might be able to explain the word “potential.”
- Students might have some concept of energy-moving objects.

Potential Energy—Prior Knowledge 4-6

- Students should be able to explain that the faster an object is moving, the more energy it possesses
- Students will explore more about stored energy, which is called potential energy. It will help for students to review the Video Segment [Potential Energy](#). It will also help if they have:
 - Observed objects falling from a ledge.
 - Used a rubber band to move another object.

Potential Energy—Common Misconceptions

- Energy is truly lost in many energy transformations.
 - **Reality:** Energy can change from one form to another, but can be neither created nor destroyed. Energy is not lost; however, it can change into more than one form (e.g., heat and light).
- Energy is a “thing” or something that is tangible.
 - **Reality:** Energy is the capacity to do work. It is not tangible, nor is it a thing.

Potential Energy– Additional Information

- Have students view the video segment [Trampoline](#). Have them predict the effects of changing the mass of the person or height of the jump on kinetic and potential energy. Next, have students perform the Exploration [Moving On](#), then revisit their predictions.
- Have students read [Journal: The Movement in My Day](#), then make a list of the different forms of kinetic and potential energy they have encountered during the course of their day.