**Energy Forms & Transformations**

**Learning Targets**

**(Book pages: 206-244)**

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| **Target** | **With****Help** | **On My Own** | **I Can Teach It** |
| 1. I can give examples of kinetic energy and potential energy.
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| 1. I can identify where kinetic energy and potential energy are increasing and decreasing and where each is at its maximum.
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| 1. I can identify potential energy as chemical, elastic (stored mechanical, atomic, or gravitational.
 |  |  |  |
| 1. I can recognize examples of the nine forms of energy.
 |  |  |  |
| 1. I can explain how energy is transformed from one form to another using different events. (ex: turning on a flashlight)
 |  |  |  |
| 1. I can explain the Law of Conservation of Energy.
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| 1. I can tell the difference between convection, conduction, and radiation and give examples of each occurring.
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| 1. I understand that heat moves from warmer to cooler areas until thermal equilibrium is attained.
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**Make and study flashcards for these vocabulary terms. Page numbers are in parentheses.**

* Energy (p.206)
* Kinetic Energy (p. 207)
* Potential Energy (p. 207)
* Elastic Potential (Stored Mechanical)

Energy (p. 208)

* Nuclear Energy (Atomic) (p.211)
* Chemical Potential Energy (p. 208)
* Gravitational Potential Energy (p. 208)
* Thermal (Heat) Energy (p.211)
* Electric Energy (p.211)
* Radiant (Light) Energy (p.211)
* Mechanical Energy (p.211)
* Sound Energy (p.211)
* Law of Conservation of Energy (p.227)
* Temperature (p. 236)
* Heat (p. 239)
* Thermal equilibrium – when the temperatures of materials that are in contact are the same
* Radiation (p.240)
* Convection (p.240)
* Conduction (p.240)
* Thermal Conductor (p.244)
* Thermal Insulator (p.244)

**Target 1**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_A book sitting on a table \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_A skier skiing down a mountain

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_An apple on a tree branch \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_A bouncing ball

**Target 2**



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**Target 3**

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_food \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_wind up car \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_apple hanging f          from a branch

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Target 4**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Windmill turning \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Alarm clock ringing**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hot Coffee in Mug \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Microwave**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Nuclear Power Plant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Plug in an outlet**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ball on Top of a Hill \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Arrow pulled back on a Bow**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sugar**

**Target 5**

**Cracking a glow stick \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy ⃗ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy**

 **Wind Turbine \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy ⃗ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy**

**Microwave heats spaghetti**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy ⃗ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Energy**

**Target 6**

**Summarize in your own words and give one example**

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**Target 7**

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|  | **Definition** | **Example** | **illustration** |
| **Conduction** |  |  |  |
| **Convection** |  |  |  |
| **Radiation** |  |  |  |

**Target 8**

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**Explain what will eventually happen to the water in the bathtub and the air in the living room.**

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