



### Lesson Question



### Lesson Goals

Define .

Explain how energy and  are related.

Identify and describe the different  of energy.



### Words to Know

Write the letter of the definition next to the matching word as you work through the lesson. You may use the glossary to help you.

\_\_\_ kinetic energy

A. the ability to do work

\_\_\_ mechanical energy

B. the stored energy an object has due to its position or shape

\_\_\_ energy

C. the energy an object has because of its motion

\_\_\_ potential energy

D. the energy of an object due to its potential energy and kinetic energy



### Work and Power

- Work is the use of  to move an object over a distance.
- is the rate at which work is done.

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**Energy**

- is the ability to do work.
  - Work being done means energy is being .

**Work and Energy**

- Work  energy.
  - Work can  energy between objects.
  - Work can cause a change in the  of energy.
  - Work can change potential energy into  energy, or the energy of motion.
- Energy and work share the same unit— (J).

W  
2k

**Words to Know**

*Fill in this table as you work through the lesson. You may use the glossary to help you.*

compress	to press in to make more <input type="text"/>
chemical potential energy	the energy stored in the <input type="text"/> of atoms

W  
2K**Words to Know**

elastic potential energy	the energy stored in a compressed or <input type="text"/> object
gravitational potential energy	the energy of an object due to its <input type="text"/> above a surface
internal energy	the <input type="text"/> potential and kinetic energies of the particles in a substance

**Kinetic and Potential Energy**

- energy is the energy an object has because of its .
  - More  = more energy
  - More motion = more
- energy is stored energy because of an object's   
or shape.

**Mechanical Energy**

- energy is the energy of an object because of its potential  
and kinetic energies.
  - Due to  and position

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**Gravitational Potential Energy**

- potential energy is energy of an object because of its  above a surface.
  - More  = more energy
  - More  = more energy

**Elastic Potential Energy**

- potential energy is energy stored because of stretching or compressing an object.
- To  means to press in or make more compact

W  
2k

**Words to Know**

*Fill in this table as you work through the lesson. You may use the glossary to help you.*

<input type="text"/>	the energy stored in the nucleus of an atom
<input type="text"/>	a disturbance that carries energy from one place to another through matter and space
<input type="text"/>	a type of wave that carries energy through space where there is almost no matter

W  
2K**Words to Know**

	the energy associated with electromagnetic waves
	the energy due to the flow electrical charges
	the part of total internal energy that can be transferred

**Kinetic and Potential Energy at Different Scales**

- Energy is described using two different scales: the energy of the  object or the energy of the particles that make up the object.
- is the total potential and kinetic energies of the particles in a substance.

**Chemical Potential Energy**

- potential energy is energy stored in the chemical bonds of atoms.

**Thermal Energy**

- energy is part of the total internal energy transferred between substances.

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**Nuclear Energy**

- energy is energy stored in the nucleus of an atom.

**Electrical Energy**

- energy is energy from the flow of electrical charges.
  - Can be positive or

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**Radiant Energy**

- A  is a disturbance that carries energy from one place to another.
  - An  wave is a type of wave that carries energy through space where there is almost no matter.
  - energy is energy associated with electromagnetic waves.

## Summary

## Introduction to Energy

**Lesson  
Question**

What is energy?

**Answer**

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**Review: Key Concepts**

Energy is the ability to do  . There are many forms of energy:

- energy
- energy
- energy
- potential energy
- potential energy
- energy



# Summary

## Introduction to Energy

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- potential energy
- energy
- energy
- energy
- energy

*Use this space to write any questions or thoughts about this lesson.*