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Key Concept Builder



LESSON 1

Forms of Energy

Key Concept What are different forms of energy?

Directions: On each line, write the term from the word bank that matches the description correctly. Some terms may be used more than once, but only one term may be used per line.

electrical

mechanical

nuclear

radiant

sound

thermal

1. shooting a basketball Mechanica

2. the total of the potential energy and kinetic energy in an object or group of objects Mechanica

3. a phone ringing Sound

4. the energy of moving atoms Therma

5. Light is an example. Radiant

6. energy given off by the Sun Radiant

7. carried by an electric current electrical

8. Microwaves are an example. Radiant/electrical Bounds

9. Heat is the movement of this type of energy. Thermal

10. energy that is stored in the nucleus of an atom Nucleus

11. a radio playing Sound

12. an ocean wave Mechanical

13. a microwave heating food Hermal

Lesson Quiz A

LESSON 1

Forms of Energy

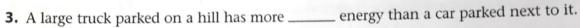
Multiple Choice

Directions: On the line before each question or statement, write the letter of the correct answer.

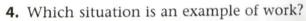
- 1. Energy is the ability to
 - A. use gravity.
 - B. hold objects.
 - C. cause change.



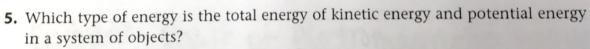
- A. sound
- B. kinetic
- C. potential



- A. sound
- B. kinetic
- C. potential



- A. a person holding several tools
- B. a person sitting in a parked car
- **C.** a person hitting a pitched baseball



- A. sound energy
- B. radiant energy
- C. mechanical energy

Matching

Directions: On the line before each definition, write the letter of the term that matches it correctly. Each term is used only once.

is used on

6. released when nuclei split

7. stored in a stretched rubber band

8. moves from warmer objects to cooler objects

9. used when your body moves

10. carried by electromagnetic waves

A. elastic potential energy

B. thermal energy

C. nuclear energy

D. radiant energy

E. chemical energy

Name

Content Practice A

LESSON 2

Energy Transformations

Directions: On each line, write the term from the word bank that correctly completes each sentence. Some terms may be used more than once.

electrical

energy transformation

friction

kinetic

law of conservation of energy

potential

radiant

thermal

1. According to the <u>law of conservation</u>, energy cannot be created or destroyed. of energy

2. A change from electrical energy to radiant energy to thermal energy is called

a(n) energy transformation

3. A force that resists the sliding of one surface over another

4. A microwave oven changes electrical

energy to radiant energy to

5. Suppose you are shooting a basketball toward a hoop. As the ball rises in the air, its

decreases.

energy increases and its potential

6. As the ball falls back toward the floor, its potential energy increases

and its ______ decreases. 7. Friction transforms some mechanical energy into Hermal

energy.

8. You use a lamp to change electrical

energy into

9. When you use a battery, you transform chemical energy stored in the battery to

energy.

thermal

__ energy that cannot be

10. The exhaust from a car contains used. Scientists often refer to this energy that cannot be used as waste energy.

Lesson Quiz A

LESSON 2

Energy Transformations

Multiple Choice

Directions: On the line before each question or statement, write the letter of the correct answer.

- ____ occurs when energy changes from one type to another type.
 - A. increase
 - B. conversion
 - C. transformation
- 2. What happens to potential energy when a ball is tossed into the air?
 - A. It never changes.
 - **B.** It increases as the ball approaches its highest point.
 - C. It decreases as the ball approaches its highest point.
- 3. According to the law of conservation of energy, energy cannot
 - A. be created or destroyed.
 - **B.** transferred from one region to another.
 - C. transformed from one form into another.
- 4. When a ball is thrown into the air, its kinetic energy is lowest
 - A. at its highest point.
 - **B.** at the moment it is released.
 - **C.** as it begins to fall back to the ground.
- 5. What type of energy transformation occurs during photosynthesis?
 - A. Radiant energy becomes chemical energy.
 - **B.** Thermal energy becomes chemical energy.
 - C. Nuclear energy becomes mechanical energy.

Directions: On the line before each definition, write the letter of the term that matches it correctly. Each term is used only once.

- 6. transforms gravitational potential energy into kinetic energy
- 7. transforms mechanical energy into thermal energy
- 8. transforms radiant energy into sound energy
- 9. force that reduces kinetic energy and produces
- 10. reduces friction's creation of thermal energy

- A. friction
- B. lubricant
- C. electric heater
- D. cell phone
- E. a marble falling off a table