

# What Is Energy?

Write the letter of the correct answer on the line at the left.

1. \_\_\_ The kinetic energy of an object is equal to one half its mass multiplied by its speed  
 A squared  
B cubed  
C to the fourth power  
D to the fifth power
2. \_\_\_ The gravitational potential energy of an object is equal to its weight multiplied by its  
A depth  
 B height  
C volume  
D diameter
3. \_\_\_ Energy is the ability to do work or cause  
A events  
 B change  
C friction  
D explosions
4. \_\_\_ Energy and work are measured in  
A newtons  
 B joules  
C hertz  
D kilograms

Fill in the blank to complete each statement.

5. When you do work on an object, some of your energy is transferred to that object.
6. Power is the rate at which energy is transferred.
7. Potential energy results from the shape or position of an object.
8. A stretched rubber band has elastic potential energy.
9. A change in an object's speed has a(n) greater effect on its kinetic energy than a change in its mass.
10. A mountain climber at the peak has gravitational potential energy energy.

# Forms of Energy

Write the letter of the correct answer on the line at the left.

1. \_\_\_ To find an object's mechanical energy, you add its

- A kinetic and potential energy
- B kinetic and thermal energy
- C potential and thermal energy
- D kinetic and chemical energy

2. \_\_\_ A form of energy NOT associated with the particles of objects is

- A thermal energy
- B mechanical energy
- C nuclear energy
- D chemical energy

3. \_\_\_ Nuclear fusion reactions occur in

- A nuclear power plants
- B a microwave oven
- C a match that is struck
- D the sun

4. \_\_\_ The total potential and kinetic energy of the particles of an object is the object's

- A nuclear energy
- B electromagnetic energy
- C thermal energy
- D mechanical energy

Fill in the blank to complete each statement.

5. Mechanical energy is associated with the motion, position, or shape of an object.
6. Electromagnetic energy travels through space in the form of waves.
7. Lightning is a form of electrical energy.
8. The breaking of chemical bonds in food releases energy for your body to use.
9. The lower the temperature of an object, the lower its thermal energy.
10. Electrical energy is the energy of electric charges.

# Energy Transformations and Conservation

Fill in the blank to complete each statement.

1. All forms of energy can be transformed into other forms of energy.
2. A change from one form of energy to another is called a(n) energy transformation.
3. When you use a match to light a candle, multiple transformations of energy occur.
4. The law of Conservation of energy tells how much energy is present after electromagnetic energy changes to sound.
5. Whenever a moving object experiences friction, some of its kinetic energy is changed into thermal energy.
6. Your body changes chemical energy into Kinetic/mechanical energy when you walk upstairs.

Write the letter of the correct answer on the line at the left.

7. \_\_\_ Fusion reactions in the sun change nuclear energy into  
A mechanical energy  
B chemical energy  
C electromagnetic energy  
D potential energy
8. \_\_\_ In a pendulum, a continuous change occurs between kinetic energy and  
A potential energy  
B electromagnetic energy  
C thermal energy  
D mechanical energy
9. \_\_\_ A baseball in play has its lowest gravitational potential energy  
A when it is at its highest point  
B before it hits the ground  
C when the bat contacts it  
D after it hits the ground
10. \_\_\_ Energy can be neither destroyed nor  
A created  
B transformed  
C changed  
D transferred