Name _____ Date _____ Class _____

Forms of Energy

Key Concepts

- How can you determine an object's mechanical energy?
- What are some forms of energy associated with the particles that make up objects?

There are many different forms of energy. **Mechanical energy** is the energy associated with the motion or position of an object. Mechanical energy can be kinetic or potential energy. **You can find an object's mechanical energy by adding the object's kinetic and potential energy.**

Mechanical energy = Potential energy + Kinetic energy

Forms of energy associated with the particles of objects include thermal energy, electrical energy, chemical energy, electromagnetic energy, and nuclear energy.

Thermal energy is the total potential and kinetic energy of particles in an object. When the thermal energy of an object increases, the object becomes warmer.

Chemical energy is stored in chemical compounds. **Chemical energy** is potential energy stored in chemical bonds that hold chemical compounds together.

Moving electrical charges produce an electric current, and the energy they carry is called **electrical energy. Nuclear energy** is potential energy stored in the nucleus of an atom. **Electromagnetic energy,** such as light, travels in waves that have some electrical properties and some magnetic properties. Because waves move, they have kinetic energy.

Name _____ Date _____ Class _____

Forms of Energy

Understanding Main Ideas

Answer the following questions in the space provided.

1. How can you determine an object's mechanical energy?

_____

_____

_____

2. Name two forms of energy associated with the particles that make up objects.

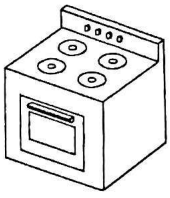
_____

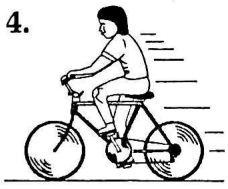
_____

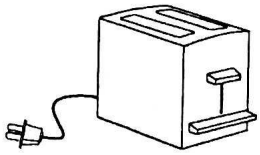
Building Vocabulary

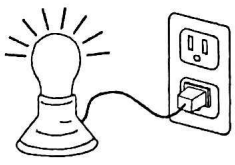
Match each illustration with the correct form(s) of energy by writing the letter or letters of the form(s) of energy on the line at the left.

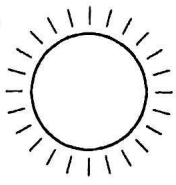
a. mechanical energy
b. electrical energy
c. thermal energy
d. nuclear energy
e. chemical energy
f. electromagnetic energy

___ 3. 

___ 4. 

___ 5. 

___ 6. 

___ 7. 

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