

The Nature of Energy



Directions: Determine whether the italicized term makes each statement true or false. If the statement is true, write *true* in the blank. If the statement is false, write in the blank the term or terms that make the statement true.

	_ 1. <i>Energy</i> is done when a force causes an object to move.
	2. <i>Potential</i> energy is the energy of motion.
	3. <i>Elastic</i> potential energy is the energy of an object above the surface of Earth.
	4. <i>Thermal</i> potential energy is the energy stored in chemical bonds between atoms.
	_ 5. The <i>joule</i> is the unit of energy in the SI system.
	6. As the height of an object above the surface of Earth increases, its potential energy <i>remains the same</i> .
	_ 7. The energy coming from the sun is called <i>chemical</i> energy.
of 3 kg is	
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a. 6 joules	c. 12 joules
b. 18 joules	d. 24 joules
_	nal potential energy of an object with a mass of 1 kg at a height he surface of Earth is approximately
a. 2 joules	
b. 10 joules	c. 2 joules
	c. 2 joules d. 20 joules
10. When a substan	•
10. When a substant a. increases	d. 20 joules
	d. 20 joules nce burns in oxygen, the amount of chemical energy
a. increasesb. decreases	d. 20 joules nce burns in oxygen, the amount of chemical energy c. remains the same
a. increasesb. decreases	 d. 20 joules nce burns in oxygen, the amount of chemical energy c. remains the same d. is not important



Conservation of Energy



Directions: In each of the following situations, energy changes form. Study each situation and identify the energy transformations in the spaces provided.

- 1. An electric blanket warms a bed on a chilly night.
- 2. A rock in Death Valley, California, becomes hot during a summer afternoon.
- 3. A deputy sheriff rides a horse while directing traffic.
- 4. A chandelier brightens a ballroom after a waiter moves a switch.
- **5.** A swallow sitting on a fence sings a song for anyone who will listen.
- **6.** A jet plane rapidly accelerates on the runway.
- 7. A walnut falls to the ground from a high tree branch.
- 8. A placekicker sends a football through the uprights of a goalpost.
- 9. A base runner slides safely into third base.
- 10. A nuclear powered submarine transports its crew from New Orleans to Mobile.