

Intro to Energy Worksheet

Name: Key
 Date:
 Block:

Part 1. The two basic types of energy

Directions: Determine the best match between basic types of energy and the description provided. Put the correct letter in the blank.

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|--|--------------------------|
| <u>B</u> 1. A skier at the top of the mountain | (a) Kinetic Energy |
| <u>B</u> 2. Gasoline in a storage tank | (b) Potential Energy |
| <u>A</u> 3. A race-car traveling at its maximum speed | (c) Both forms of Energy |
| <u>C</u> 4. Water <u>flowing from a waterfall</u> ^{kinetic} <u>before it hits the pond below</u> ^{potential} | |
| <u>B</u> 5. A spring in a pinball machine before it is released | |
| <u>A</u> 6. A match burning | |
| <u>A</u> 7. A running refrigerator motor | |

Part 2. Definitions of Energy

Directions: Write down the definition for each of the following terms.

ENERGY: The ability to do work. Energy cannot be created nor destroyed, only transformed from one type to another.

KINETIC ENERGY: An object or its atoms doing motion

POTENTIAL ENERGY: The stored energy of an object or its atoms

Part 3. Forms of Energy Continued

Directions: Match the energy form(s) to the description provided. A few questions may have more than one answer. You may use these options more than once.

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|--|----------------|
| <u>A</u> 1. Falling rocks from the top of a mountain | (a) Mechanical |
| <u>C/D</u> 2. Release of energy from the Sun | (b) Electrical |
| <u>E</u> 3. Energy used to throw a baseball | (c) Heat |
| <u>E</u> 4. Batteries | (d) Solar |
| <u>B</u> 5. The energy that runs a refrigerator | (e) Chemical |
| <u>F/C</u> 6. Nuclear fission reactors | (f) Nuclear |
| <u>G</u> 7. The rumble of thunder from a storm | (g) Sound |
| <u>E</u> 8. Food before it is eaten | |

Part 4. Transformation of Energy

Directions: Use the following forms of energy to fill in the table below: **mechanical, electrical, heat, solar, chemical, nuclear, and sound**. The first one has been done for you.

	ORIGINAL ENERGY FORM	FINAL ENERGY FORM
1. Electric motor	electrical	mechanical
2. A battery that runs a moving toy	chemical	mechanical
3. A solar panel on the roof of a house	solar (radiant)	electrical
4. A nuclear power plant	nuclear	heat / electrical
5. Gasoline powering a car	chemical	mechanical
6. A light bulb	electrical	heat / light (radiant)
7. Photosynthesis	solar (radiant)	chemical