

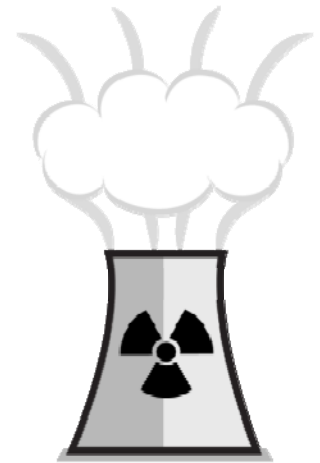
Name _____

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Energy Exists in Many Forms

Energy is the capacity of a physical system to perform work. Energy exists in several forms such as heat, kinetic or mechanical energy, light, potential energy, electrical, or other forms.

According to the law of conservation of energy, the total energy of a system remains constant, though energy may transform into another form. Two billiard balls colliding, for example, may come to rest, with the resulting energy becoming sound and perhaps a bit of heat at the point of collision.



In the context of physical sciences, several forms of energy have been defined. These include

- Thermal energy
- Chemical energy
- Electric energy
- Radiant energy, the energy of electromagnetic radiation
- Nuclear energy
- Magnetic energy

These forms of **energy** may be divided into two main groups; **kinetic energy** and **potential energy**. Other familiar types of energy are a varying mix of both potential and kinetic energy.

Energy may be transformed between different forms at various efficiencies. Items that transform between these forms are called **Transducers**.

It's good to know that energy does not disappear, it merely changes form. To receive different forms of energy we use different energy sources and technologies. The different forms of energy have different qualities and degrees of usefulness.

Primary energy sources are substances or processes with concentrations of energy at a high enough potential to be feasibly encouraged to convert to lower energy forms under human control for human benefit. Except for nuclear fuels, tidal energy and geothermal energy, all terrestrial energy sources are from current solar insulation or from fossil remains of plant and animal life that relied directly and indirectly upon sunlight, respectively. And ultimately, solar energy itself is the result of the Sun's nuclear fusion.

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Energy Exists in Many Forms Multiple Choice Questions

- 1. The Ability of a body to do work is known as**
 - a) Willingness
 - b) Energy
 - c) Power
 - d) Efficiency

- 2. The Substance that transforms one form of energy into another is called**
 - a) Transformer
 - b) Transmitter
 - c) Transducer
 - d) None of the above

- 3. Which of the following is NOT a type of Energy?**
 - a) Nuclear Energy
 - b) Magnetic Energy
 - c) Tidal Energy
 - d) None of the above

- 4. The energy of electromagnetic radiation is called**
 - a) Radiant Energy
 - b) Magnetic Energy
 - c) Electrical Energy
 - d) All of the above

- 5. Solar Energy is the result of**
 - a) Sun's hydro fission process
 - b) Sun's nuclear fusion process
 - c) Sun's Hydro thermal burning process
 - d) Heat

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Answers

1. b
2. c
3. d
4. a
5. b

Explanation of Answers

1. Energy is the capacity of a physical system to perform work.
2. Energy may be transformed between different forms at various efficiencies. Items that transform between these forms are called **Transducers**.
3. All the given options are form of energy.
4. Radiant energy, the energy of electromagnetic radiation
5. Solar energy itself is the result of the Sun's nuclear fusion.

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Energy Exists in Many Forms Writing Activity

1. Define Energy.

2. What are the two basic types of energy?

3. What is a Transducer? Can you give an example of a transducer?

4. What is the primary source of nuclear energy?
