

# The Nature of Energy

## Types of Kinetic and Potential Energy

Question: \_\_\_\_\_

What is **ENERGY**? \_\_\_\_\_

List some examples of different forms of energy: \*there are more than the ones on this slide\*

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- 
- 

**KINETIC ENERGY:** \_\_\_\_\_

The amount of kinetic energy depends on \_\_\_\_\_ and \_\_\_\_\_ of the moving object.

List examples of kinetic energy:

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- 
- 

**POTENTIAL ENERGY:** \_\_\_\_\_

List examples of potential energy:

- 
- 
- 

TRUE or FALSE There is more than one type of potential energy.

## Different Types of Potential Energy

- \_\_\_\_\_ Potential Energy: energy \_\_\_\_\_ by something that can \_\_\_\_\_ or \_\_\_\_\_
  - Examples: \_\_\_\_\_ or \_\_\_\_\_
- \_\_\_\_\_ Potential Energy: energy stored in \_\_\_\_\_
  - Example: \_\_\_\_\_
- \_\_\_\_\_ Potential Energy: anything that can \_\_\_\_\_ has stored GPE
  - Example: \_\_\_\_\_

**MECHANICAL ENERGY:** \_\_\_\_\_

- Mechanical Energy = \_\_\_\_\_ + \_\_\_\_\_

TRUE or FALSE Energy can be created.

TRUE or FALSE Energy can NOT be transformed.

TRUE or FALSE A light bulb takes electrical energy and transforms it into light energy and thermal energy.

What is the name of the scientific law that says energy may change form, but it cannot be created or destroyed under ordinary conditions?

\_\_\_\_\_

**Vocabulary Review:** Match each word with its description.

- |                                     |   |
|-------------------------------------|---|
| __1. Energy                         | A. stored energy due to position        |
| __2. Gravitational Potential Energy | B. energy stored in food and fuels      |
| __3. Kinetic Energy                 | C. energy stored by things above Earth  |
| __4. Elastic Potential Energy       | D. the ability to cause change          |
| __5. Chemical Potential Energy      | E. energy in form of motion             |
| __6. Potential Energy               | F. energy stored by things that stretch |

7. Identify each as Potential Energy (gravitational, chemical, elastic), Chemical Energy, Mechanical Energy, Thermal Energy, Kinetic Energy, Light Energy

Example	Type of Energy
a cookie	
going down a slide	
a horse racing across a pasture	
a battery	
the sun	
photosynthesis	
a bird sitting on a power pole	

8. Which of the following could be used to convert light energy to electrical energy?

- |                             |                                       |
|-----------------------------|---------------------------------------|
| A. Windmill                 | C. Rotating coils in a magnetic field |
| B. Chemical storage battery | D. Solar Cell                         |

9. The stored energy in a battery can best be described as \_\_\_\_.

- |             |            |
|-------------|------------|
| A. Thermal  | C. Nuclear |
| B. Chemical | D. Kinetic |

10. What kind of energy does a windmill use to do work?

- |               |               |
|---------------|---------------|
| A. Electrical | C. Chemical   |
| B. Nuclear    | D. Mechanical |

11. The amount of kinetic energy a moving object has depends on its \_\_\_\_\_ and \_\_\_\_\_.

12. The sun gives off what two forms of energy? \_\_\_\_\_ and \_\_\_\_\_

13. An electric blanket warms you on a cold evening. How did energy change form?

14. Your car seat is hot after sitting outside in the sun all day. How did energy change form?