

## Unit 3 Test Review

1. Define the following and give 3 examples of each:

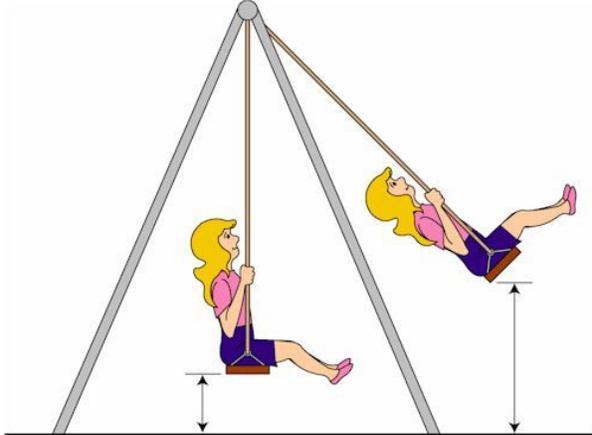
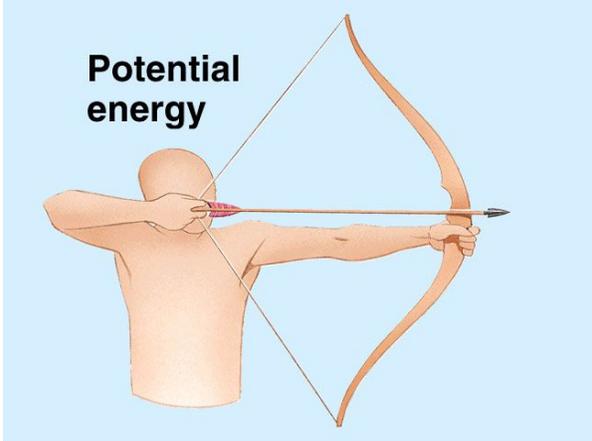
**Physical property:** a characteristic of matter that you can observe or measure without changing the identity of the matter. Ex: color, size, shape, boiling point, melting point, density, state of matter.

**Physical change:** a change in the size, shape, form, or state of matter that does not change the matter's identity. Ex: ice cube melting, tearing paper, boiling water, cutting a log in half.

**Chemical property:** the ability or inability of a substance to combine with or change into one or more new substances. Ex: ability to burn, ability to change color, ability to rust

**Chemical change:** a change in matter in which the substances that make up the matter change into other substances with different chemical and physical properties. Ex: burning a log, an apple changing color, a nail rusting

2. Define and draw a picture that represents the following:

Kinetic Energy	Potential Energy
<p data-bbox="203 1115 506 1146"><b>Energy due to motion</b></p> 	<p data-bbox="824 1115 1344 1178"><b>Stored energy due to the interactions between objects or particles</b></p> 

3. What is the sum of both potential and kinetic energy in an object? **Mechanical energy**
4. Particles move faster in something that is: **warm** or **cold**
5. Define the following:
  - a. Energy- **the ability to cause change**
  - b. Gravitational potential energy- **the energy of an object due to its mass and distance above Earth's surface.**
  - c. Elastic potential energy- **Potential energy stored as a result of deformation of an elastic object, such as the stretching of a spring**
6. Hot water is poured into a mug and the mug gets hot. This is an example of which type of energy transfer? **Conduction**
7. Summarize the Law of Conservation of Energy- **energy cannot be created or destroyed it can only be transferred or change forms.**
8. How are temperature and kinetic energy related? **The higher the temperature the more kinetic energy (faster) of the particles that make up the object.**
9. List the three types of heat transfer and give an example of each.  
**Conduction- a pot heating on a stove**  
**Convection- water boiling**  
**Radiation- heating up from the sun's rays.**
10. Which temperature scale is typically used by Scientists?  
**Celsius**

11. Match each event or object with the correct energy form:

- a. Electric
- b. Mechanical
- c. Nuclear
- d. Radiant
- e. Sound
- f. Thermal

\_\_\_**b**\_\_\_ weight lifted above your head

\_\_\_**e**\_\_\_ bee buzzing

\_\_\_**A**\_\_\_ cell phone battery

\_\_\_**b**\_\_\_ piston in an engine

\_\_\_**d**\_\_\_ radio waves

\_\_\_**c**\_\_\_ atoms splitting

\_\_\_**f**\_\_\_ rubbing hands together to warm them

\_\_\_**d**\_\_\_ sunlight

\_\_\_**a**\_\_\_ television

\_\_\_**c**\_\_\_ uranium power plant

\_\_\_**e**\_\_\_ yell or scream