

3-1 What are the two basic kinds of energy? (use Orange Physical Science Book p. 42)

1. What is another name for gravitational potential energy? _____
2. When a baseball player is holding a baseball bat, what kind of energy does the bat have? _____
3. When the baseball player is swinging a bat, what kind of energy does the bat have? _____
4. Two people are running a five-kilometer race. Person A is running at a pace of 15 km per hour, while person B is running at a pace of 12 km per hour. Which runner has more kinetic energy? _____
Why? _____
5. Two people are walking to school at a rate of 5 km per hour. Person A weighs 600 newtons, Person B weighs 555 newtons. Which person has more kinetic energy? _____
Why? _____
6. In what unit is potential energy measured? _____
7. A 50 kg stone and a 70 kg stone are raised to the same height above the ground. Which has more gravitational potential energy? _____
Why? _____

****Study each situation and decide whether the situation involves potential or kinetic energy, then describe why.**








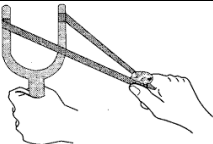
	Energy Type	Why?
		
		
		
		
		
		
		
		

Fig. 5.11

**Each of the following items has potential energy or kinetic energy. Write a P for potential energy and a K for kinetic energy in the space provided.

	Water falling over a dam		Parked car
	Water in a cup		Running dog
	Park bench		Falling raindrop
	Rock on the ground		Speeding bullet
	Moving car		Rolling ball

**Match the items in column 1 with the terms or phrases in column 2. Write the letter of the correct term in the blank on the left.

Column 1

Column 2

- | | |
|---|--|
| <p>_____ 1. Work</p> <p>_____ 2. Energy</p> <p>_____ 3. Mechanical energy</p> <p>_____ 4. Potential energy</p> <p>_____ 5. Kinetic energy</p> <p>_____ 6. Law of conservation of energy</p> | <p>a. Total amount of kinetic and potential energy in a system</p> <p>b. Energy may change from one form to another, but it cannot be created or destroyed.</p> <p>c. Stored energy</p> <p>d. Transfer of energy through motion</p> <p>e. Energy in the form of motion</p> <p>f. The ability to cause change</p> |
|---|--|

**Use the definitions of kinetic and potential energy to decide what kind of energy each example listed below has. Write a K for kinetic energy and P for potential.

- _____ 1. A moving skateboard
- _____ 2. A rock at the edge of a cliff
- _____ 3. A glass of milk
- _____ 4. Gasoline
- _____ 5. A basketball passing through the hoop
- _____ 6. A dry cell of a battery
- _____ 7. An acorn hanging from an oak tree
- _____ 8. A person climbing a ladder
- _____ 9. A piece of celery
- _____ 10. Blowing wind

**Use your answers from the previous section to complete the following.

Determine which of the above examples of POTENTIAL energy are gravitational potential energy and which are chemical potential energy. Write your answers in the box provided.

Gravitational Potential Energy	Chemical Potential Energy