

Name & class: \_\_\_\_\_



## Matter & Energy

Vocabulary:

1. kinetic energy: the energy of any moving object
2. potential energy: stored energy
3. conduction: the passing of heat through a material while the material itself stays in place
4. convection: the flow of heat through a liquid or a gas, causing hot parts to rise and cooler parts to sink
5. radiation: the transfer of heat through electromagnetic rays

## What is Electrical Energy?



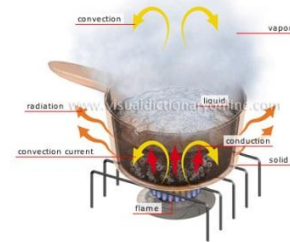
1. A battery provides \_\_\_\_\_ energy.
2. The chemical reactions in a battery produce \_\_\_\_\_, each of which carries energy.
3. When a battery is connected to a light bulb with wired, a(n) \_\_\_\_\_ is formed.
4. When electrons in a circuit pass through a light bulb, they give up some of their energy to the wire in the light bulb, called the \_\_\_\_\_.
5. The \_\_\_\_\_ measures amps, telling us how many electrons flow each second.
6. The \_\_\_\_\_ measures volts.

## What Are Other Forms of Energy?

7. Energy is a measure of how much \_\_\_\_\_ something can produce.
8. Work is using \_\_\_\_\_ to move an object.

electrical	ammeter	electrons
closed circuit	filament	
forces	voltmeter	work

- 9. Energy is not a type of \_\_\_\_\_ .
- 10. Any object that is moving has \_\_\_\_\_ energy.
- 11. Stored energy is referred to as \_\_\_\_\_ energy.
- 12. The transfer of thermal energy from one object to another is \_\_\_\_\_ .
- 13. Heat always flows from \_\_\_\_\_ materials to cooler materials, never the other way.



**How Does Heat Move?**

- 14. In \_\_\_\_\_ , thermal energy flows through objects as their particles vibrate.
- 15. In \_\_\_\_\_ hot parts of a material rise while cooler parts sink.
- 16. Heat transferred through electromagnetic rays in \_\_\_\_\_.

conduction	potential	hotter
matter	kinetic	
heat	radiation	convection

## What Materials Conduct Heat Well?

17. Metals are the best \_\_\_\_\_ of heat.

18. The molecules in \_\_\_\_\_ are packed very closely together, and this makes transferring energy easier.

### Fill in the blanks

What is energy? Energy is not a type of \_\_\_\_\_. It is a measure of how much \_\_\_\_\_ something can produce. To scientists, work means using \_\_\_\_\_ --a push or pull—to move an object. There are many \_\_\_\_\_ of energy. When something moves, its energy is called \_\_\_\_\_. Another main form of energy is \_\_\_\_\_. this energy can be described as stored energy. An example of this is \_\_\_\_\_, which is the energy stored in links between atoms.

chemical energy

potential energy

kinetic energy

forms

force

work

matter

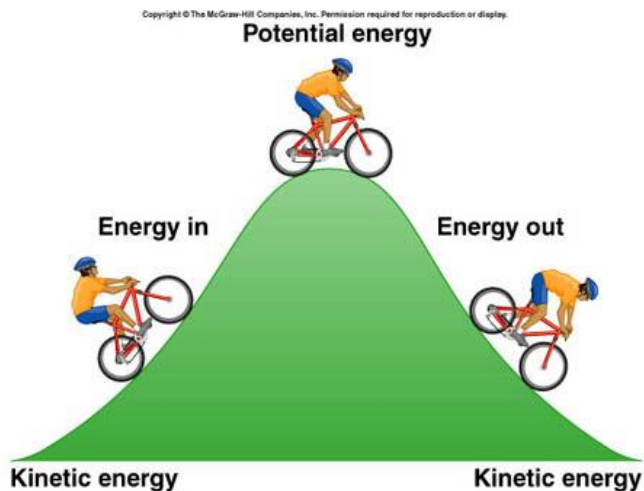
solids

conductors

## Vocabulary

- \_\_\_\_\_ the ability to move matter around
- \_\_\_\_\_ when hot parts of a material rise, while cooler parts sink
- \_\_\_\_\_ the energy of a moving object
- \_\_\_\_\_ a thin wire in a bulb
- \_\_\_\_\_ energy stored in an object or material
- \_\_\_\_\_ when heat is transferred through electromagnetic rays
- \_\_\_\_\_ movement of energy from a hot object that come into contact with a cooler object; the material remains in place

	kinetic energy		potential energy
conduction		convection	radiation
	filament		energy



## Correct-a-Word

potential	emulsion	mass
kinetic	volume	physical
boiling	radiation	gel

One word in each sentence below is wrong. Cross it out and write the correct word above it. One has been done for you. Use the word box to check your spelling.

*mass*

1. The amount of matter in an object is its ~~density~~.
2. The energy of any moving object is ~~kindling~~ energy.
3. The ~~vacuum~~ describes how much space a sample of matter takes up.
4. A ~~gem~~ is a solid spread through a liquid.
5. The ~~melting~~ point is when a substance changes from liquid to gas.
6. In a ~~physics~~ change, matter changes in size, shape, or state without also changing identity.
7. One liquid is spread through another in an ~~emotion~~.
8. Stored energy is ~~pretentious~~ energy
9. The giving off of electromagnetic rays through space is ~~radical~~.