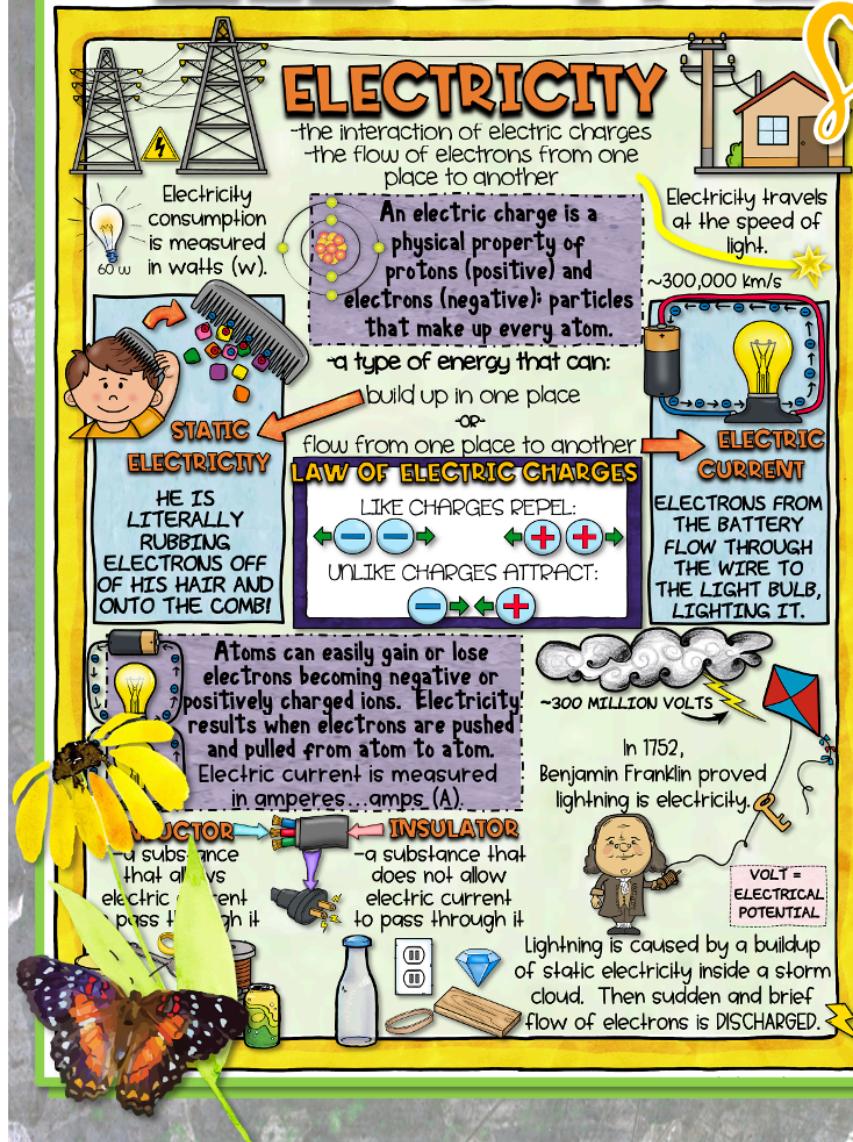


ELECTRICITY

Squiggle Sheets

INCLUDES:

- differentiated concept notes
- understanding checkpoint
- answer keys



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Please contact me with any questions, concerns, or comments at

blackeyedsusanscience@gmail.com.

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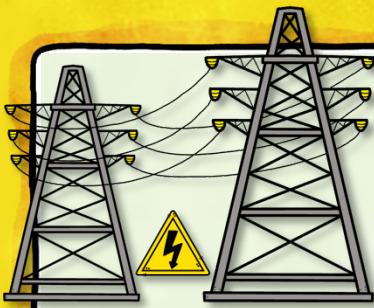
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ELECTRICITY

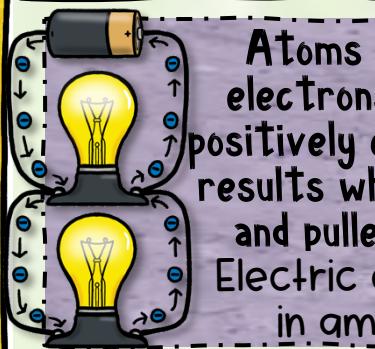


Electricity consumption is measured in watts (w).



STATIC ELECTRICITY

HE IS LITERALLY RUBBING ELECTRONS OFF OF HIS HAIR AND ONTO THE COMB!



Atoms can easily gain or lose electrons becoming negative or positively charged ions. Electricity results when electrons are pushed and pulled from atom to atom. Electric current is measured in amperes...amps (A).

CONDUCTOR

-a substance that allows electric current to pass through it



An electric charge is a physical property of protons (positive) and electrons (negative); particles that make up every atom.

-a type of energy that can:

build up in one place

-OR-

flow from one place to another

LAW OF ELECTRIC CHARGES

LIKE CHARGES REPEL:

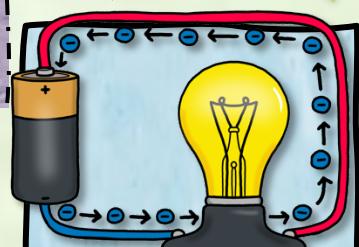


UNLIKE CHARGES ATTRACT:



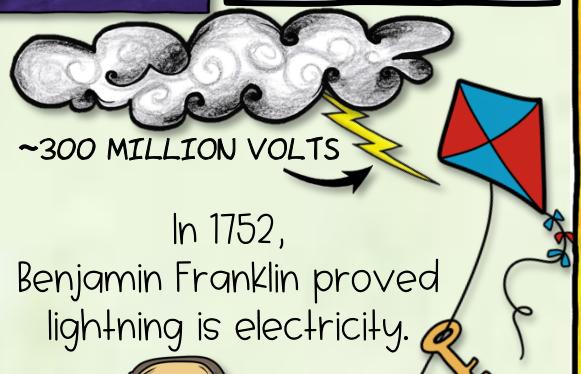
Electricity travels at the speed of light.

~300,000 km/s



ELECTRIC CURRENT

ELECTRONS FROM THE BATTERY FLOW THROUGH THE WIRE TO THE LIGHT BULB, LIGHTING IT.

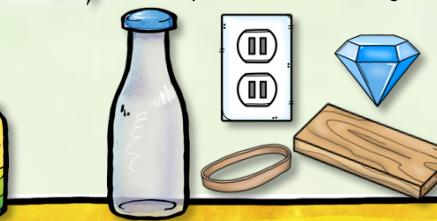


In 1752, Benjamin Franklin proved lightning is electricity.

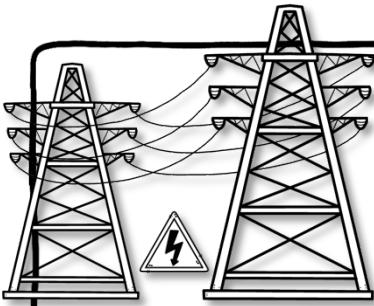


VOLT = ELECTRICAL POTENTIAL

Lightning is caused by a buildup of static electricity inside a storm cloud. Then sudden and brief flow of electrons is DISCHARGED.



ELECTRICITY

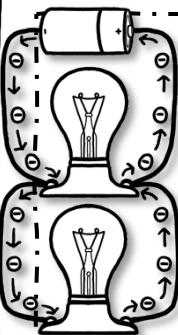


Electricity consumption is measured in watts (w).



STATIC ELECTRICITY

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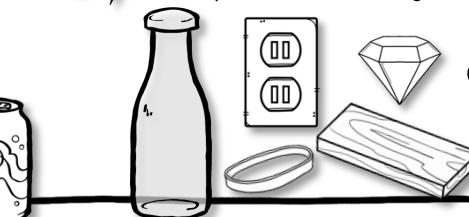
CONDUCTOR

-a substance that allows electric current to pass through it



INSULATOR

-a substance that does not allow electric current to pass through it



-the interaction of electric charges
-the flow of electrons from one place to another

An electric charge is a physical property of protons (positive) and electrons (negative); particles that make up every atom.

-a type of energy that can:

build up in one place

-OR-

flow from one place to another

LAW OF ELECTRIC CHARGES

LIKE CHARGES REPEL:

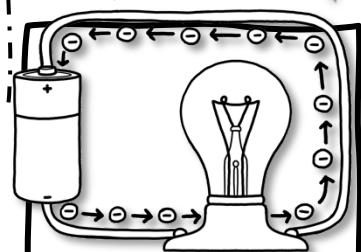


UNLIKE CHARGES ATTRACT:



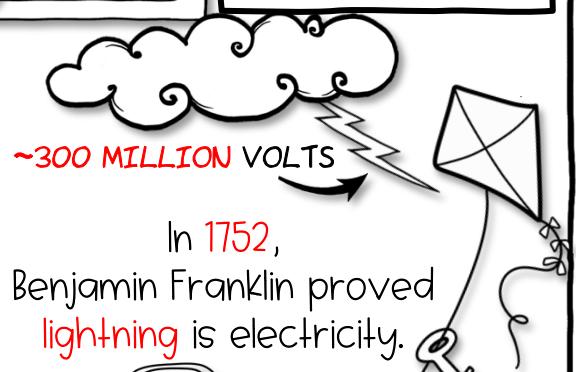
Electricity travels at the speed of light.

~300,000 km/s



ELECTRIC CURRENT

ELECTRONS FROM THE BATTERY FLOW THROUGH THE WIRE TO THE LIGHT BULB, LIGHTING IT.



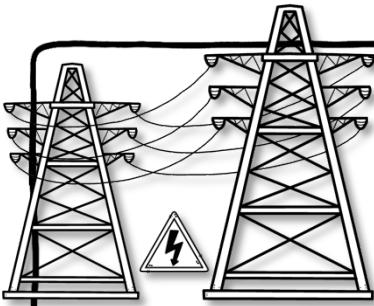
In 1752, Benjamin Franklin proved lightning is electricity.



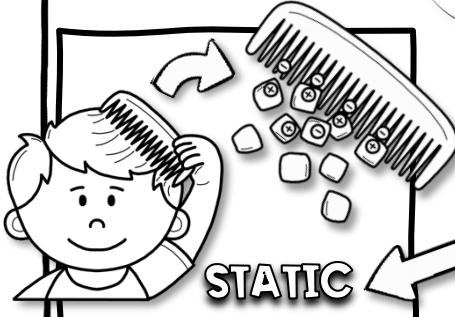
VOLT = ELECTRICAL POTENTIAL

Lightning is caused by a buildup of static electricity inside a storm cloud. Then sudden and brief flow of electrons is DISCHARGED.

ELECTRICITY



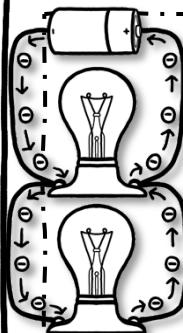
Electricity _____ is measured in watts (w).



STATIC ELECTRICITY

HE IS LITERALLY _____

OF HIS HAIR AND ONTO THE COMB!



Atoms can easily _____ electrons becoming negative or positively charged _____. Electricity results when electrons _____ from atom to atom.

Electric current is measured in amperes...

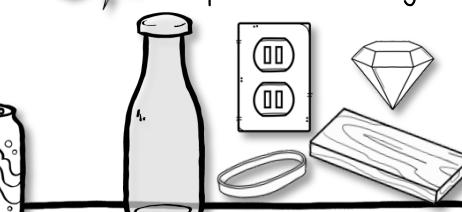
CONDUCTOR

-a substance that _____ electric current to pass through it



INSULATOR

-a substance that _____ electric current to pass through it



the _____ of electric _____
the flow of _____ from one place to another

An electric charge is a property of protons (_____) and electrons (____): particles that make up every _____
a type of _____ that can:

in _____

OR

from one place _____ another

LAW OF ELECTRIC CHARGES

LIKE CHARGES _____

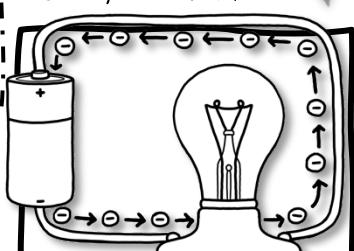


CHARGES ATTRACT:



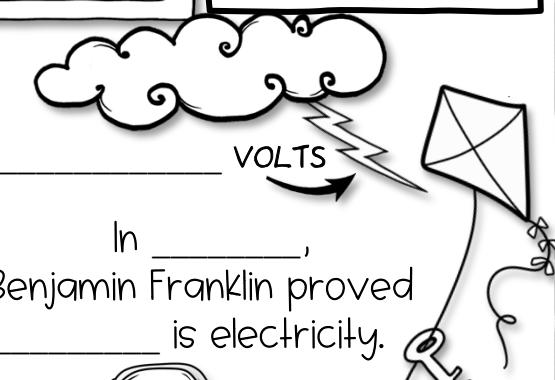
Electricity travels at the speed of light.

~300,000 km/s



ELECTRIC CURRENT

FROM THE BATTERY FLOW THROUGH THE _____ TO THE _____, LIGHTING IT.



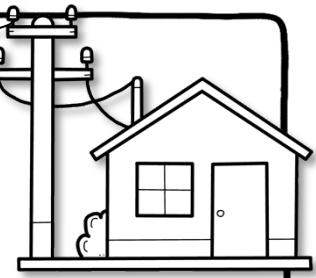
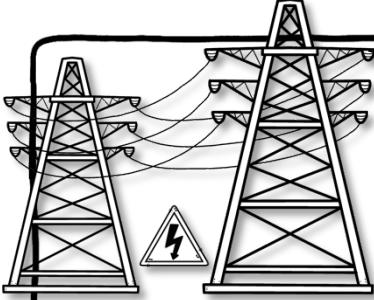
In _____, Benjamin Franklin proved _____ is electricity.



VOLT =
ELECTRICAL POTENTIAL

Lightning is caused by a buildup of _____ inside a storm cloud. Then sudden and brief flow of electrons is _____.

ELECTRICITY



STATIC
ELECTRICITY

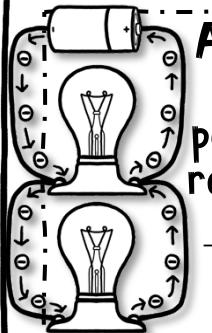
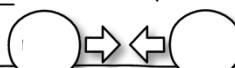
An electric charge is a property of protons () and electrons (): particles that make up every _____.

LAW OF ELECTRIC CHARGES

LIKE CHARGES _____.

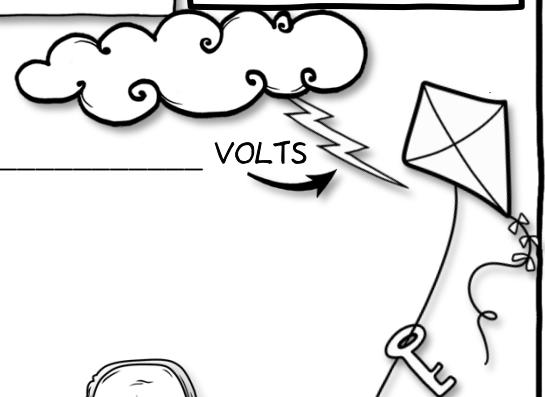


CHARGES ATTRACT:



Atoms can easily _____ electrons becoming negative or positively charged _____. Electricity results when electrons _____ from atom to atom.

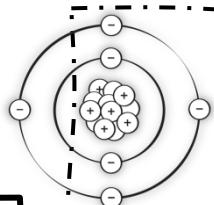
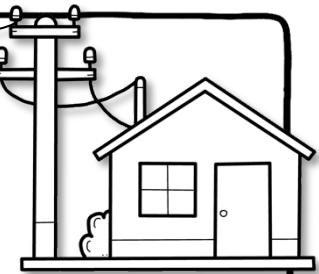
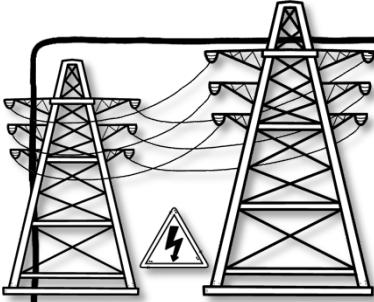
CONDUCTOR → INSULATOR ←



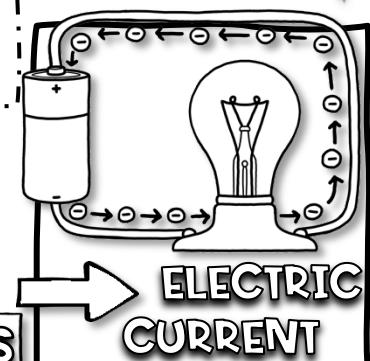
VOLT =
ELECTRICAL
POTENTIAL



ELECTRICITY

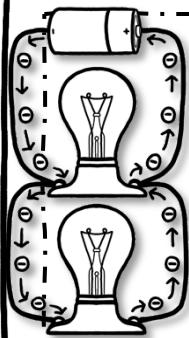
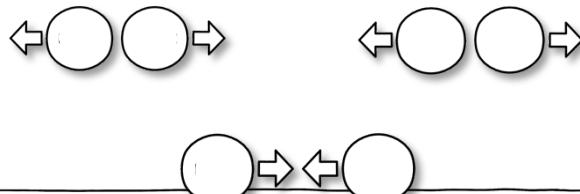


STATIC
ELECTRICITY

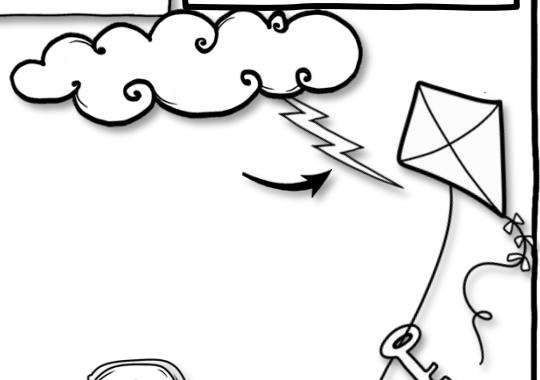


ELECTRIC
CURRENT

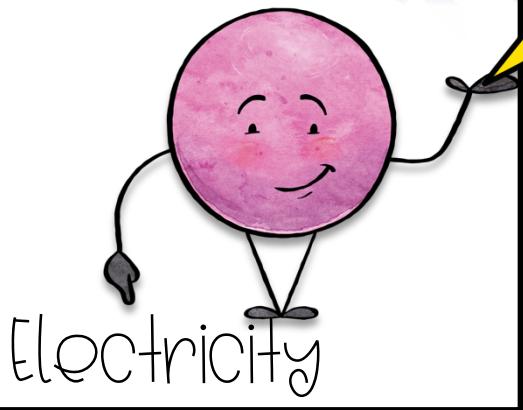
LAW OF ELECTRIC CHARGES



CONDUCTOR → INSULATOR ←



Understanding Checkpoint



1. Which type of electricity moves along a pathway to turn on a light?

2. Which best briefly summarizes the law of electric charges?
 - a. Charges always repel.
 - b. Charges always attract.
 - c. Charges that are opposite in nature attract; charges that are the same in nature repel.
 - d. Charges that are opposite in nature repel; charges that are the same in nature attract.
3. What is the buildup of electrical charges in one place called?
 - a. Neutrons
 - b. Static Electricity
 - c. Insulator
 - d. Conductor
4. What unit is electric current measured in?
 - a. Ω (Ohms)
 - b. V (Volts)
 - c. A (Amps)
 - d. W (Watts)

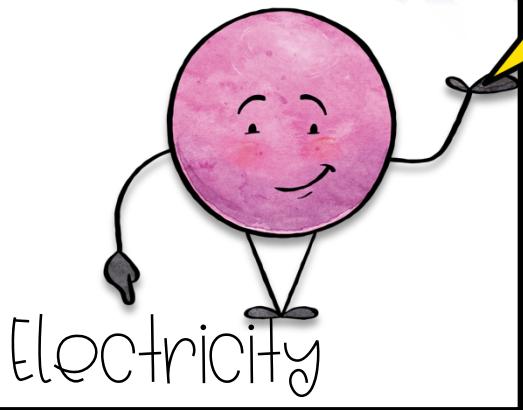
Name _____

Date _____

Period _____

5. Electricity travels at the speed of _____.
 - a. sound
 - b. darkness
 - c. light
 - d. none of these
6. Electric current is the flow of _____.
 - a. protons
 - b. neutrons
 - c. electrons
 - d. all of these
7. Two like charges _____.
 - a. neutralize each other
 - b. repel each other
 - c. must be neutrons
 - d. attract each other
8. Which of the following would be the best example of a conductor?
 - a. a tire
 - b. a plastic spoon
 - c. a log
 - d. aluminum foil
9. All wires used to carry electricity should be covered with _____.
 - a. a colored material
 - b. a conducting material
 - c. an insulating material
 - d. none of these
10. Which form of electric discharge appears in nature?
 - a. sunlight
 - b. thunder
 - c. lightning
 - d. northern lights

Understanding Checkpoint



1. Which type of electricity moves along a pathway to turn on a light?
Current electricity
2. Which best briefly summarizes the law of electric charges?
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Name _____
Date **KEY**
Period _____

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