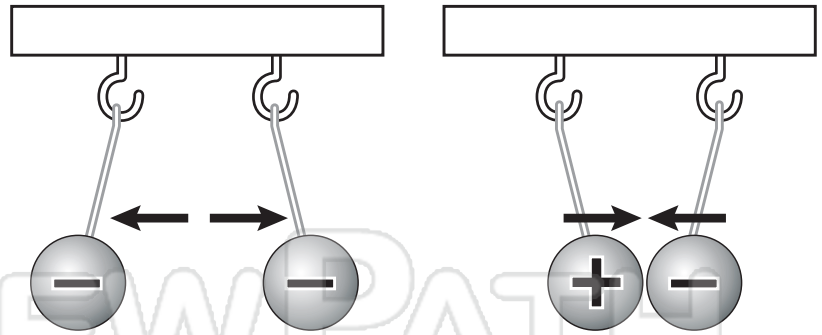




Electricity

Name _____ Class _____ Date _____

Atoms are made of positively charged **protons**, negatively charged **electrons** and **neutrons** which carry no charge. Objects with like charges **repel** each other, while objects with opposite charges **attract** each other.



A flow of electric charges is called **electric current**. The rate of electric current, expressed in **amps (A)**, measures the amount of charges that flow through a material past a given point per second. There are two kinds of electric current – **Alternating Current (AC)** and **Direct Current (DC)**.

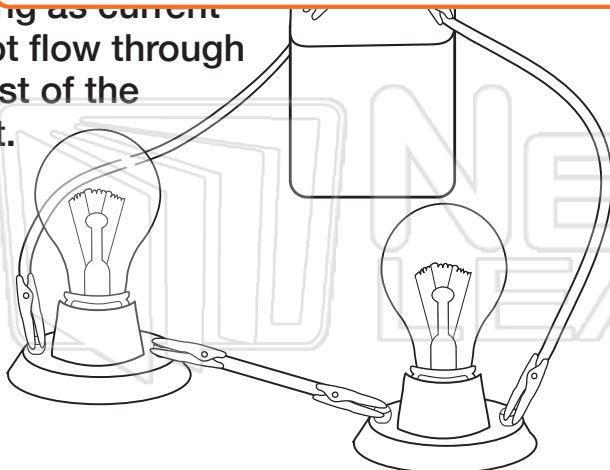
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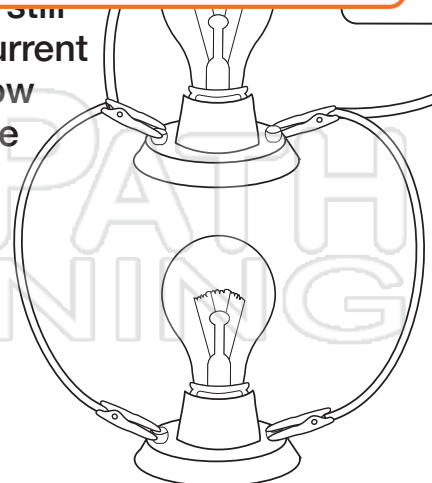
PREVIEW

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A **series** of **electrical** components connected in a single path so that the same current flows through each of them. If any one of the components is not working as current cannot flow through the rest of the circuit.



Others will still work as current can still flow through the rest of the circuit.





Electricity

Name _____ Class _____ Date _____

The rate of **electric current**, expressed in **amps (A)**, measures the amount of charges that flow through a material past a given point per second. The letter **I** is used as the symbol for **current** in equations.

Voltage

Voltage is the electrical force, or “**pressure**”, that causes **current** to flow in a circuit. **Voltage** is measured in **volts (V)**.



Resistance

Resistance is the **opposition** to the flow of electricity in a circuit. Resistance is measured in **ohms (Ω)**. In equations, the symbol for resistance is the letter **R**.



Just as water has less resistance flowing through a wide pipe than a narrow one,

Ohm's Law is a mathematical relationship between current, voltage, and resistance.

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Ohm's Law is a mathematical relationship between current, voltage, and resistance.

Power is the rate at which energy is transferred. Power is measured in watts (W).

units:

Ω = Resistance (ohms)

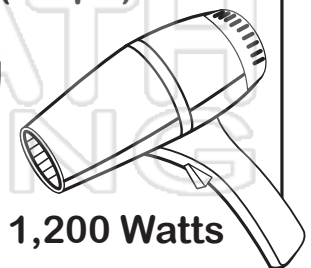
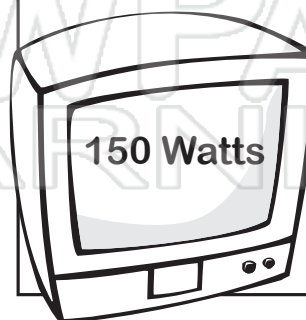
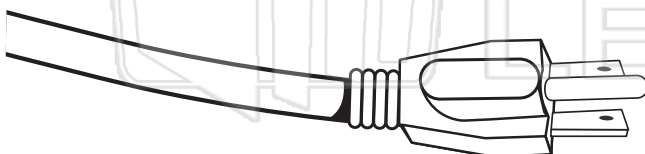
V = Voltage (volts)

A = Current (amps)

W = Power (watts)

V = Voltage (volts)

A = Current (amps)





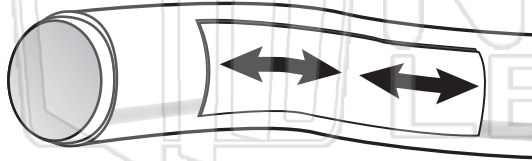
Electricity

Name _____ Class _____ Date _____

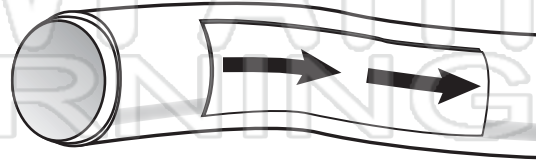
Fill in the blanks.

A flow of electric charges is called _____.

The rate of _____, expressed in _____, measures the amount of _____ that flow through a material past a given point per second.



The charges in



The charges in

flow
con



PREVIEW

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A _____ circuit has only one path for electric current to flow. The current must flow through all the circuit components. If any of the bulbs fail, the others will _____.

Current in a _____ circuit has at least two independent paths to flow. If any of the bulbs fail, the others will _____.



Electricity

Name _____ Class _____ Date _____

Fill in the blanks. Use the equations to answer the questions.

The rate of electric current, expressed in _____ (A), measures the amount of charges that flow through a material past a given point per second. The letter **I** is used as the symbol for current in equations.

_____ is the electrical force, or “pressure”, that causes current to flow in a circuit. _____ is measured in volts (V).

Resistance is the _____ to the flow of electricity in a circuit.

Resistance is measured in _____ (Ω). In equations, the symbol for resistance is the letter **R**.

between

Electrical forms

Calculate

A watt

PREVIEW

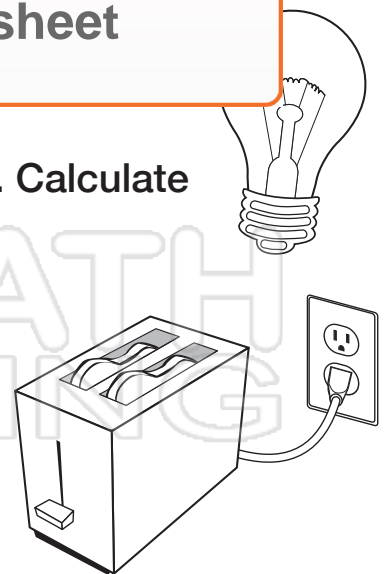
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A 55 watt bulb is plugged into a 110-volt electrical outlet. Calculate the **amperes** being used by the lightbulb.

_____ **A**

An electric toaster is using 2 amperes and is plugged into a 110-volt electrical socket. What is the **wattage** of the toaster?

_____ **W**





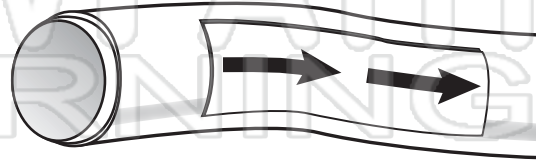
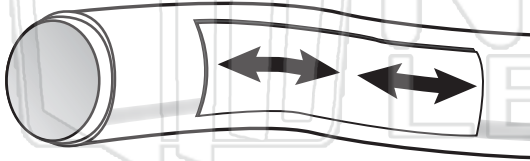
Electricity

Answer Key

Fill in the blanks.

A flow of electric charges is called electric current.

The rate of electric current, expressed in amps (A), measures the amount of charges that flow through a material past a given point per second.



The charges in

Alternating

The charges in

Direct

flow
control



PREVIEW

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A series circuit has only one path for electric current to flow. The current must flow through all the circuit components. If any of the bulbs fail, the others will

Current in a parallel circuit has at least two independent paths to flow. If any of the bulbs fail, the others will



Electricity

Answer Key

Fill in the blanks. Use the equations to answer the questions.

The rate of electric current, expressed in amps (A), measures the amount of charges that flow through a material past a given point per second. The letter **I** is used as the symbol for current in equations.

Voltage is the electrical force, or “pressure”, that causes current to flow in a circuit. Voltage is measured in volts (V).

Resistance is the opposition to the flow of electricity in a circuit.

Resistance is measured in ohms (Ω). In equations, the symbol for resistance is the letter **R**.

between

Electrical forms

Calculate

A watt

PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

A 55 watt bulb is plugged into a 110-volt electrical outlet. Calculate the **amperes** being used by the lightbulb.

0.5 A

An electric toaster is using 2 amperes and is plugged into a 110-volt electrical socket. What is the **wattage** of the toaster?

220 W

