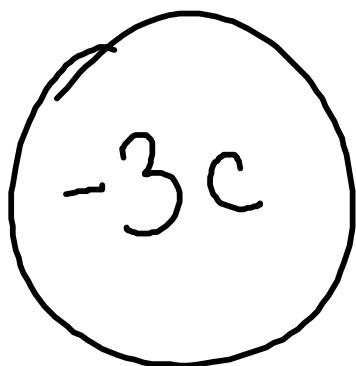


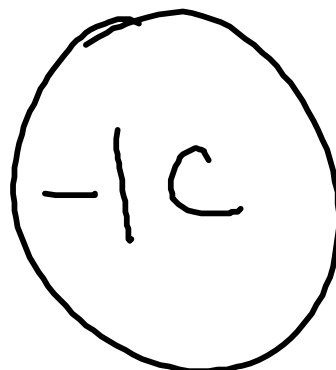
COULOMB - UNIT OF CHARGE

1 COULOMB = 6.24 BILLION BILLION  
ELECTRONS

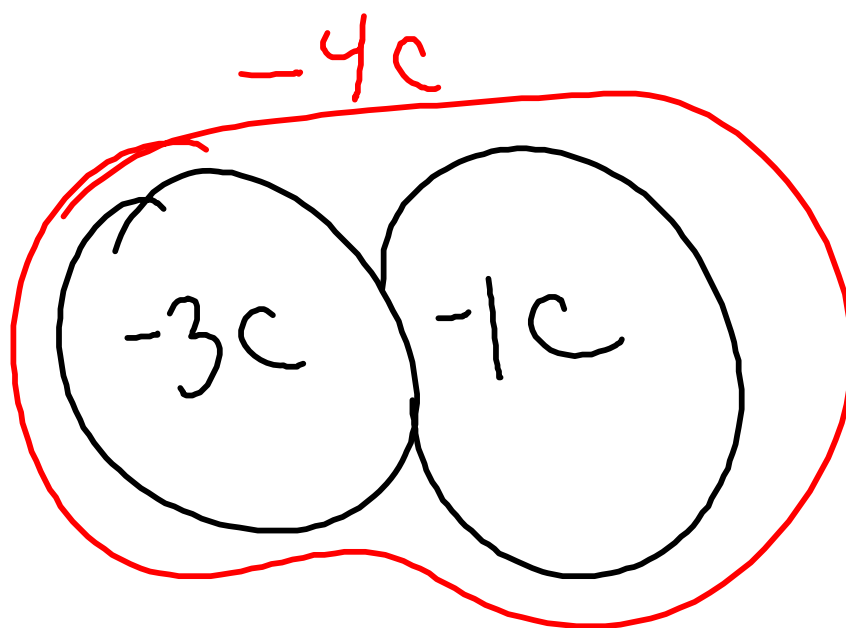
1 C

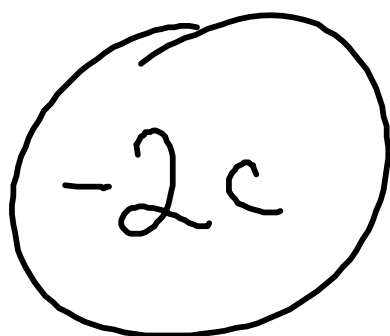


A hand-drawn circle containing the expression  $-3c$ . The circle is drawn with a single stroke, and the expression is written in the center.

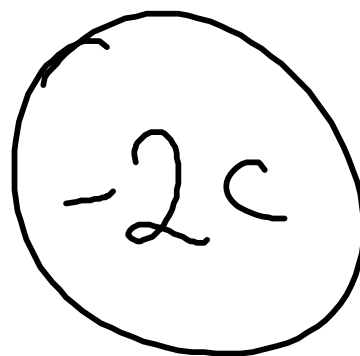


A hand-drawn circle containing the expression  $-1c$ . The circle is drawn with a single stroke, and the expression is written in the center.

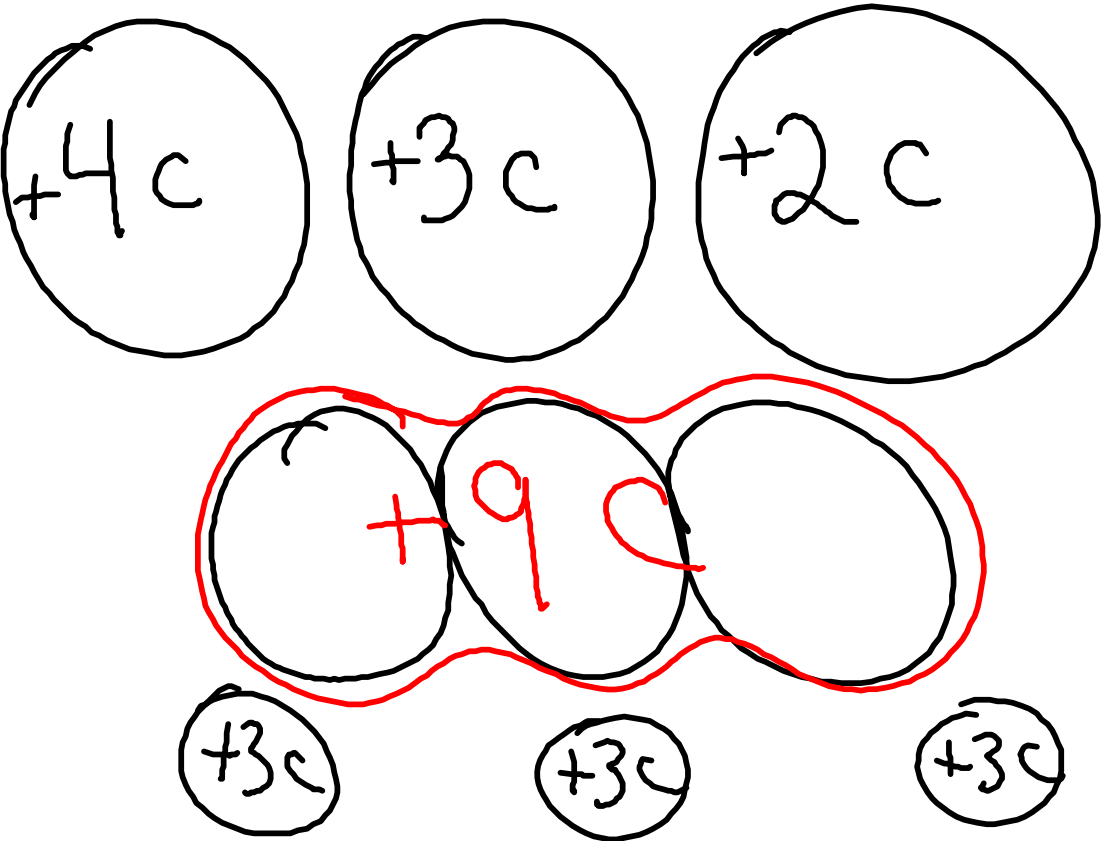




A hand-drawn circle containing the expression  $-2c$ .



A hand-drawn circle containing the expression  $-2c$ .



$$\begin{array}{cccc} (+2c) & (+8c) & (-1c) & (+3c) \end{array}$$

$$\begin{array}{cccc} & & (+12c) & \end{array}$$

$$\begin{array}{r} 3 \\ 4 \overline{) +12} \\ \underline{-12} \\ 0 \end{array}$$

$$\begin{array}{cccc} (+3c) & (+3c) & (+3c) & (+3c) \end{array}$$

$+1c$

$+2c$

$+3c$

$+1.5c$

$+1.5c$

STATIC ELECTRICITY -

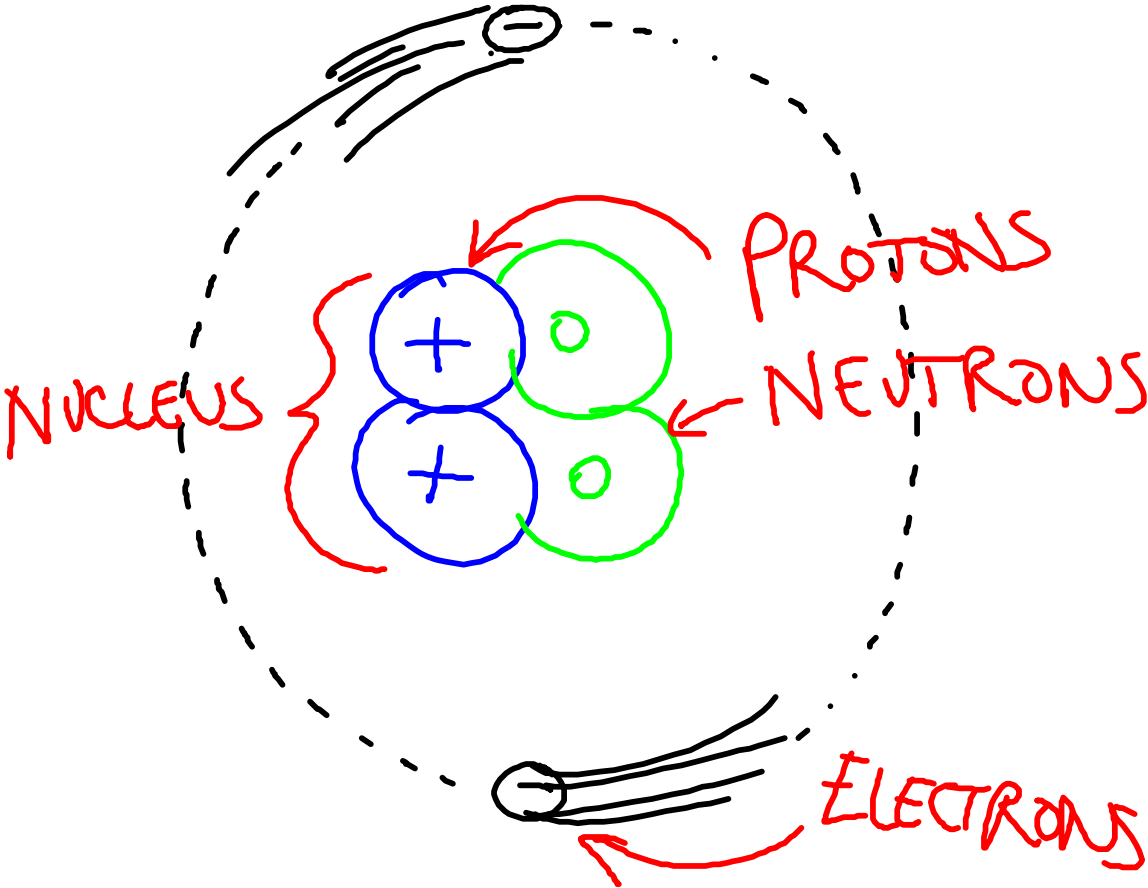
ACCUMULATION OF ELECTRIC CHARGES

CHARGES CAN BE  $+$ ,  $-$ ,  $0$

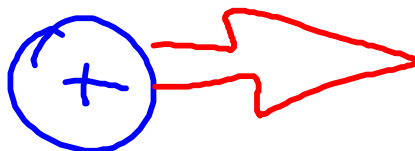
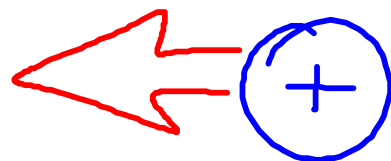
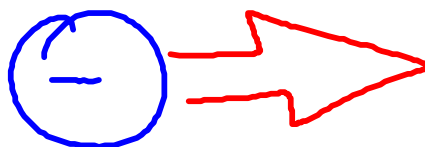
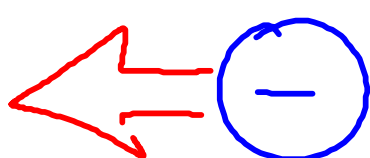
PROTONS - POSITIVE CHARGE, INSIDE  
NUCLEUS OF ATOM

ELECTRONS - NEGATIVE CHARGE, OUTSIDE  
NUCLEUS OF ATOM.

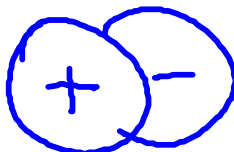
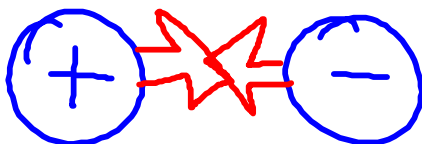
NEUTRONS - NO CHARGE (NEUTRAL)  
INSIDE NUCLEUS OF ATOM.



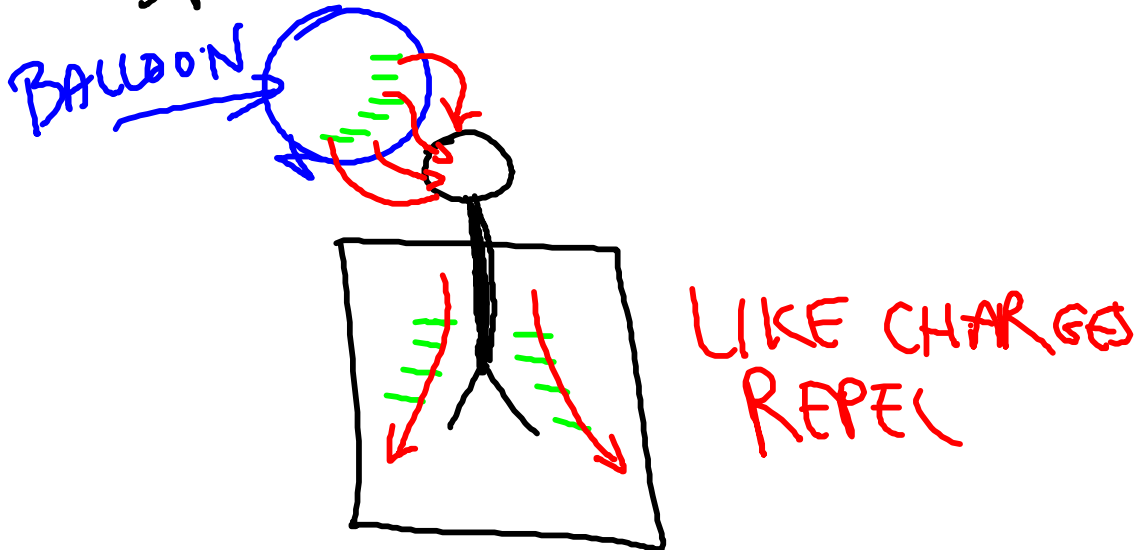
LIKE CHARGES REPEL.

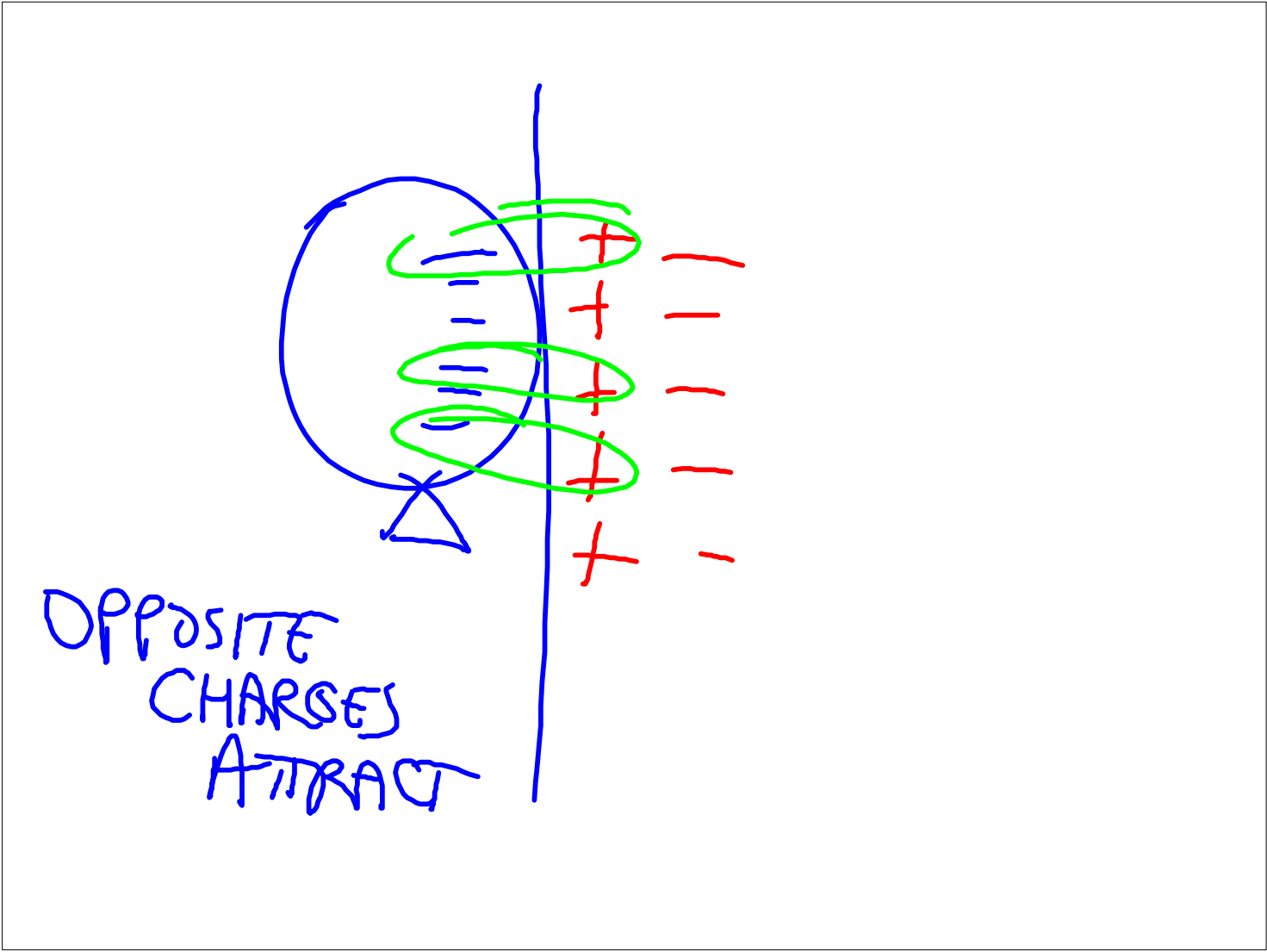


UNLIKE CHARGES ATTRACT.



# ELECTROSCOPE - DETECTS A STATIC ELECTRIC CHARGE





CONDUCTOR - ALLOWS ELECTRICITY  
TO GO THROUGH EASILY  
METALS

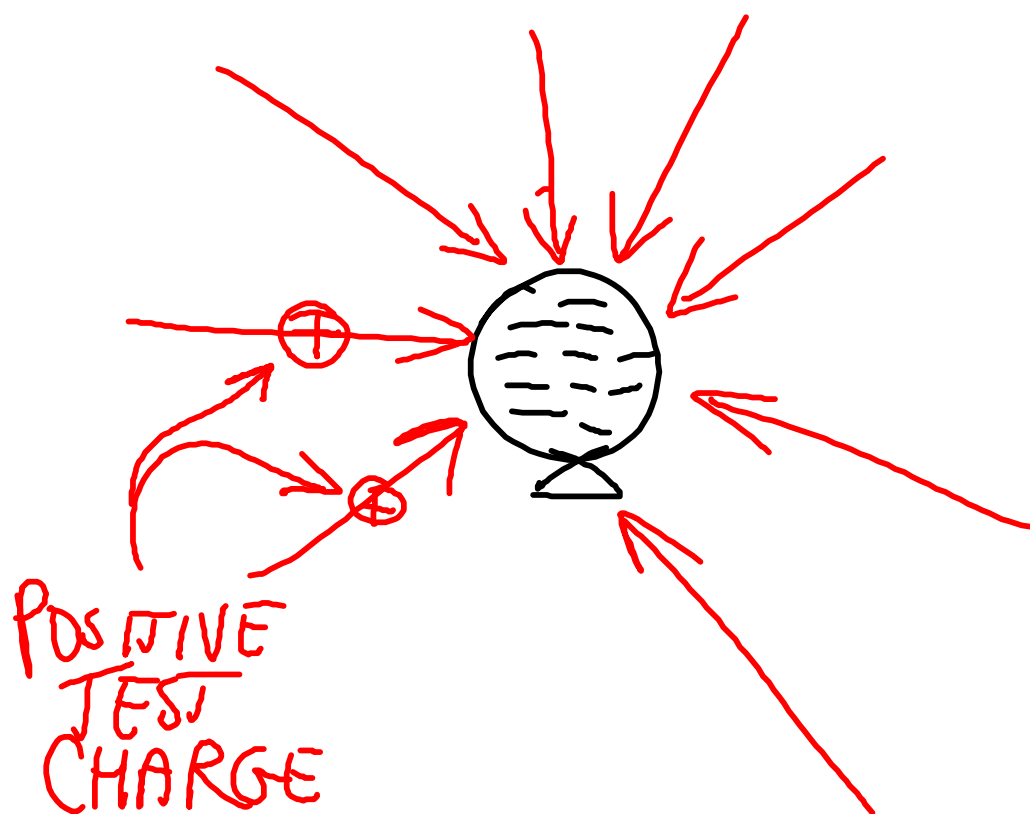
INSULATOR - DOESN'T ALLOW ELECTRICITY  
TO GO THROUGH EASILY  
PLASTICS

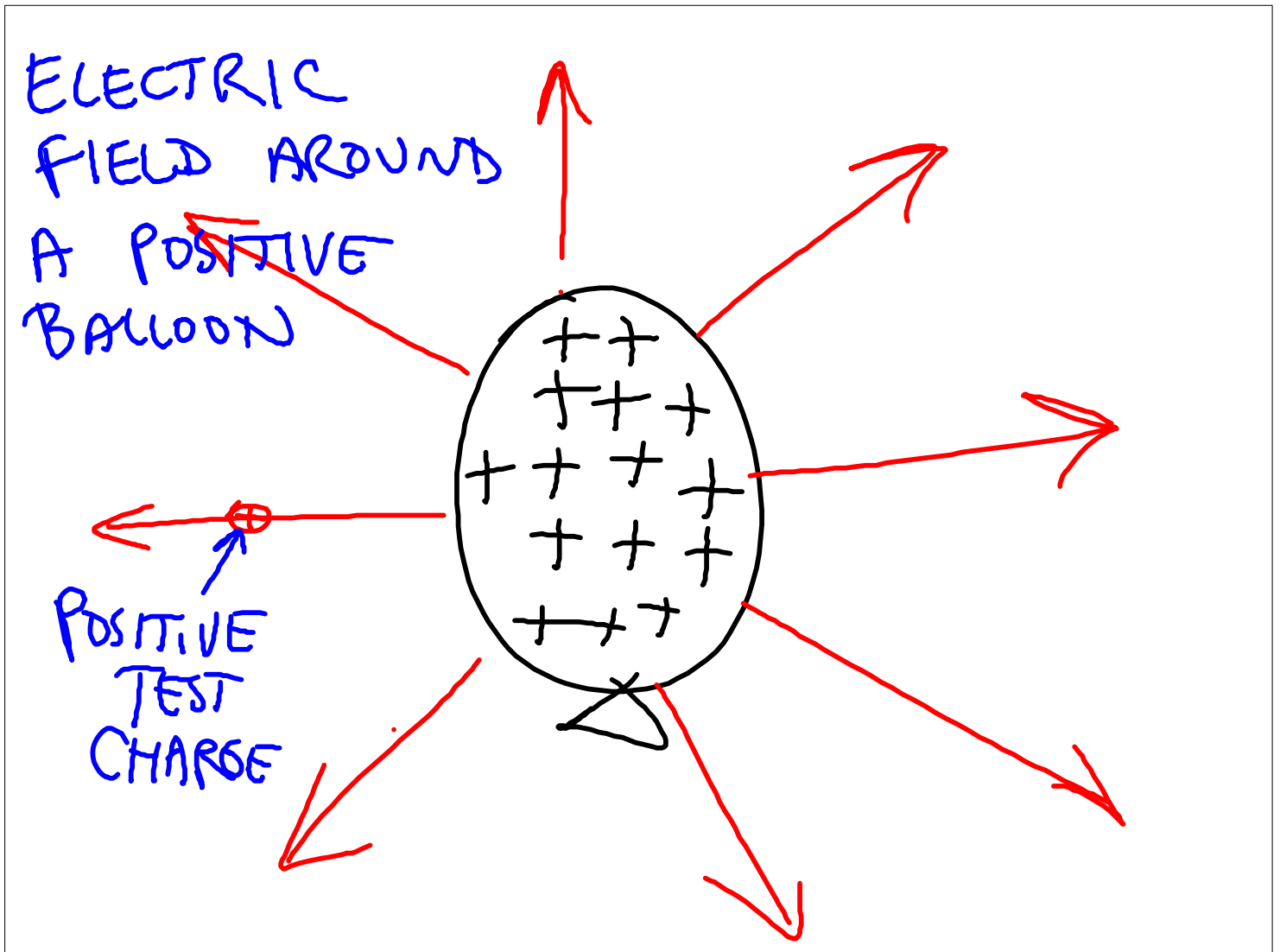
STATIC ELECTRICITY DISCHARGES ONCE  
VERY QUICKLY

ELECTRIC CURRENT IS A CONTINUOUS  
FLOW OF ELECTRONS

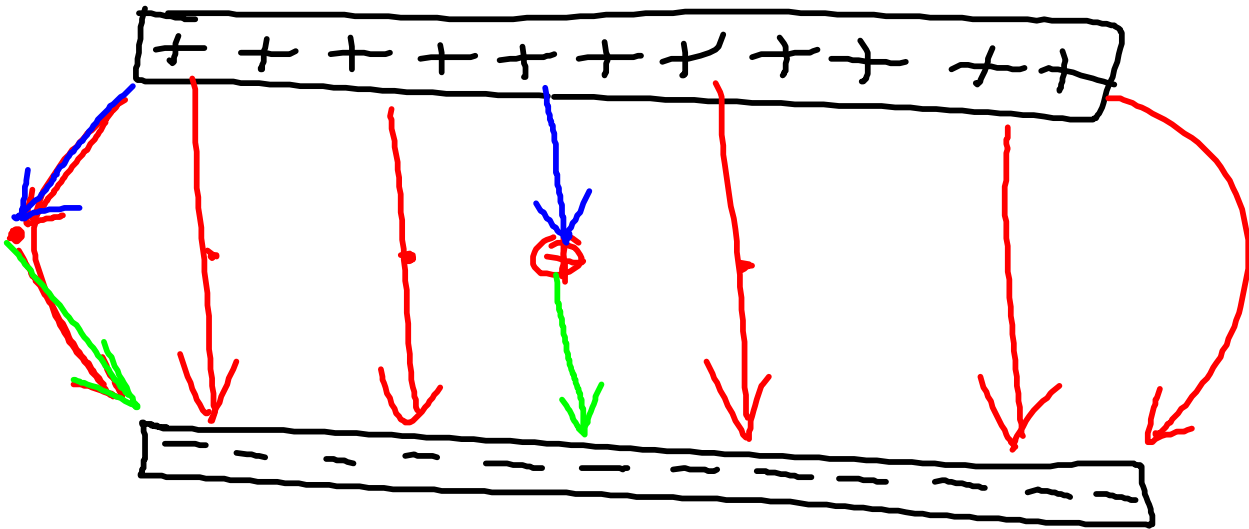
ELECTRICITY FLOWS THROUGH  
CONDUCTORS-METALS

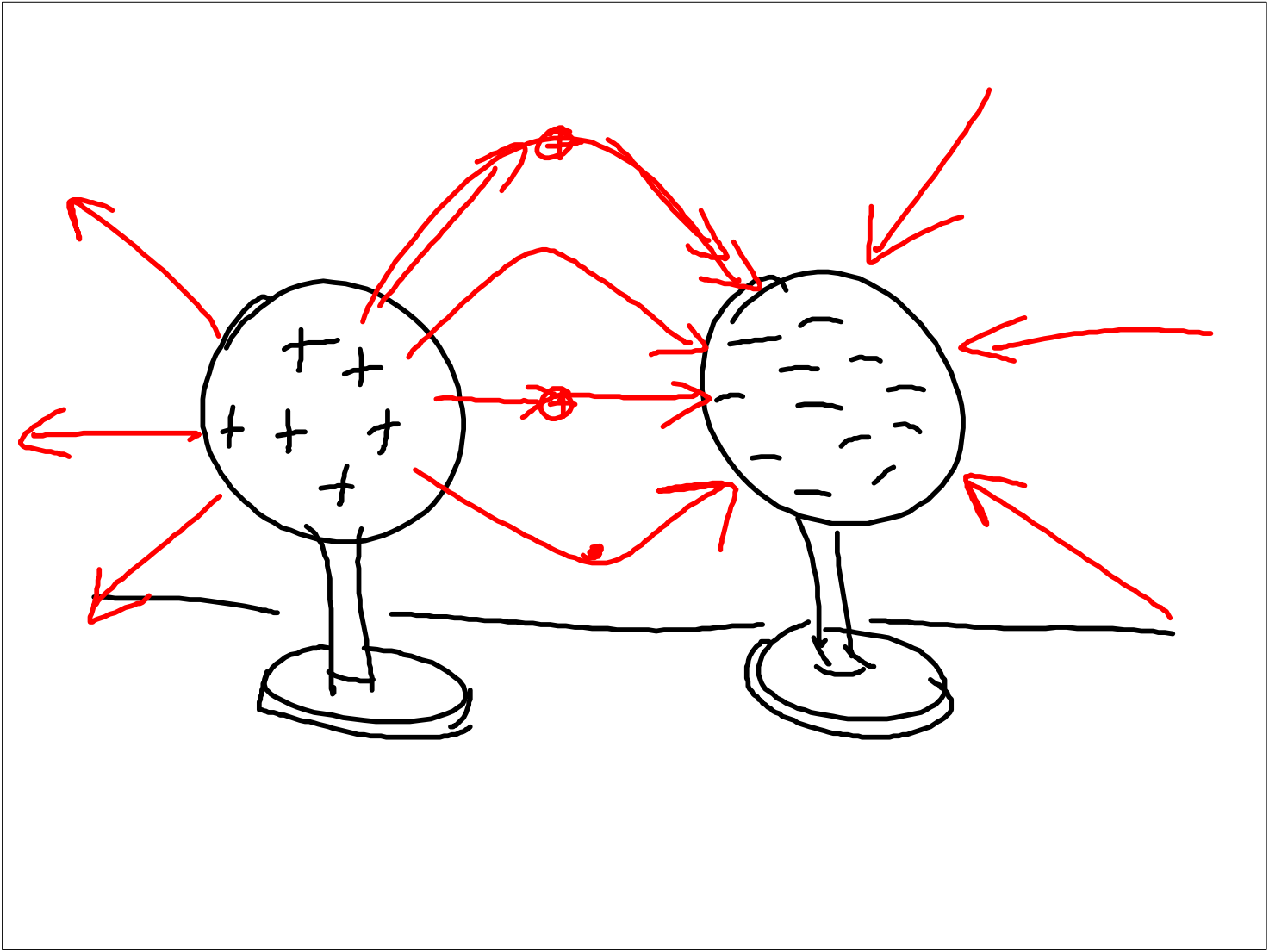
# ELECTRIC FIELD





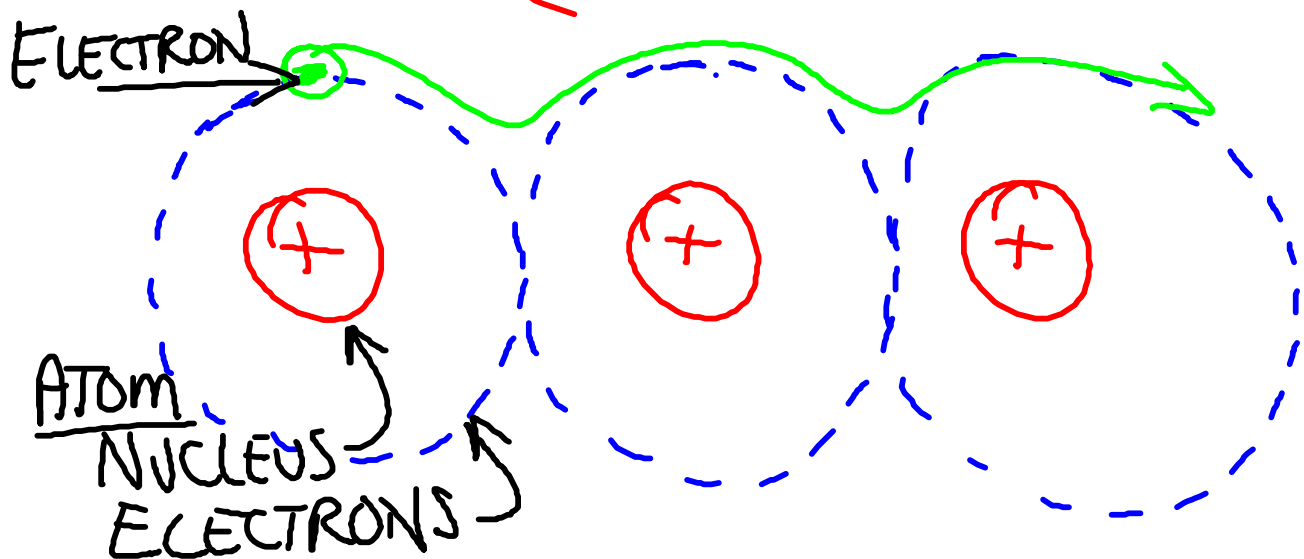
## ELECTRIC FIELD AROUND A POS. AND NEG. PLATES





# ELECTRIC CURRENT - FLOW OF ELECTRICITY

MOVING ELECTRONS IN ATOMS OF  
METALS (CONDUCTORS)



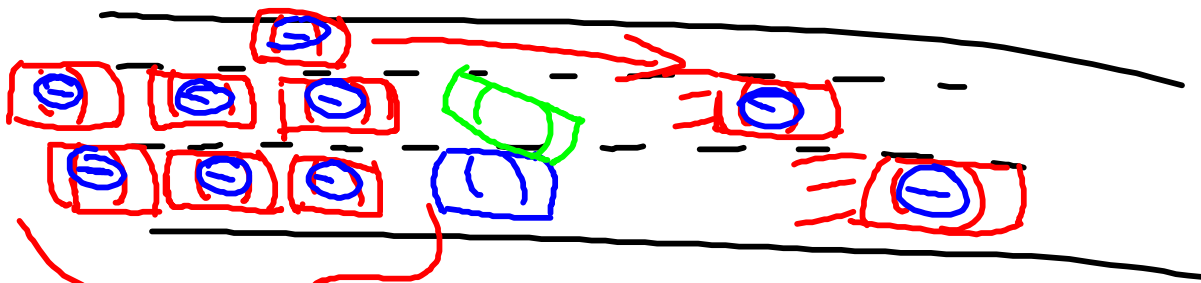
ELECTRICAL CURRENT (I)  
IS MEASURED IN  
AMPERES OR AMPS

EX.

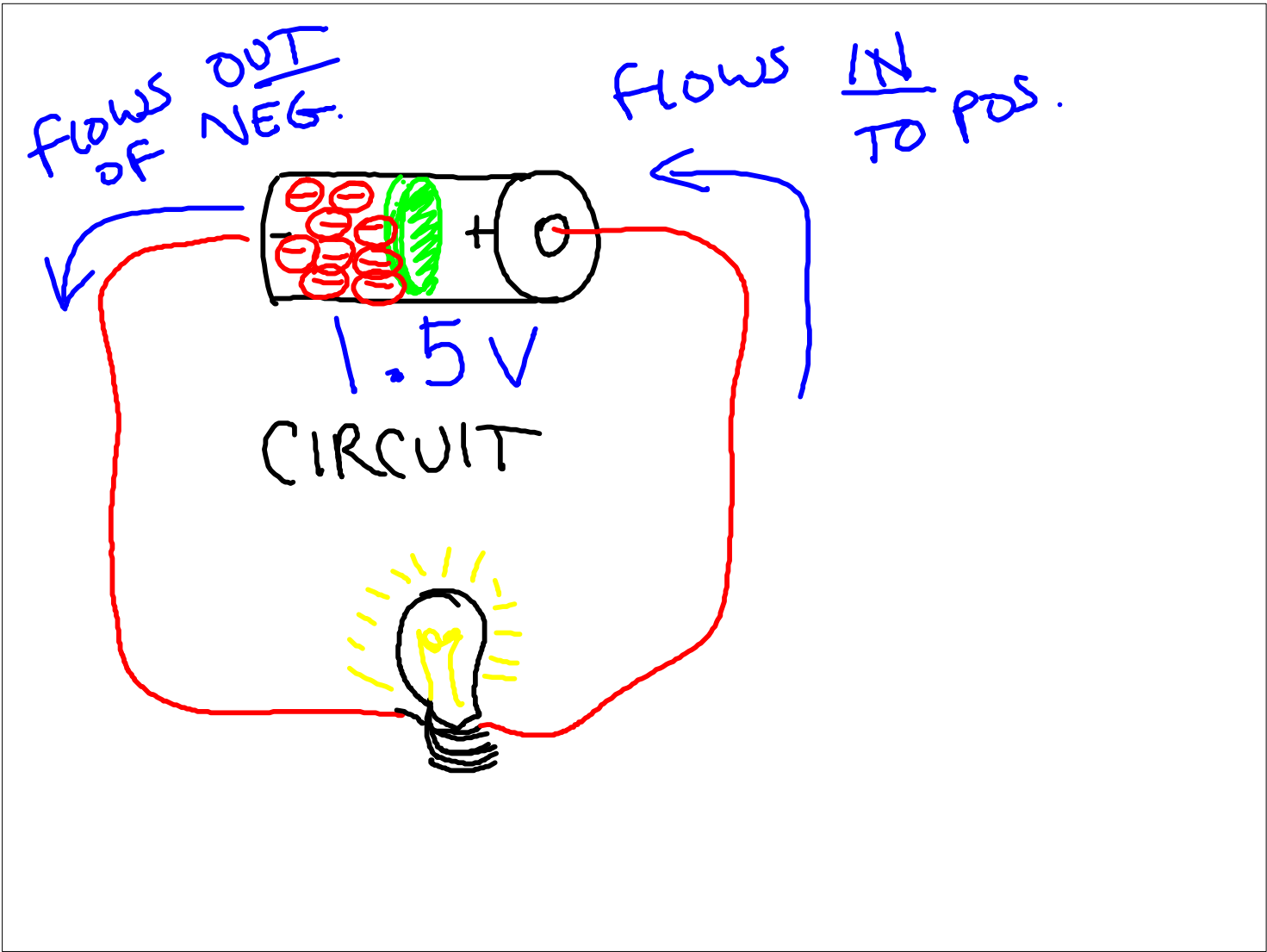
5A

VOLTAGE (POTENTIAL DIFFERENCE)  
VOLTAGE DIFFERENCE

"PILE UP" OF ELECTRIC CHARGES  
VOLTAGE (V) MEASURED IN VOLTS



POT. DIFF. - DIFFERENCE  
BETWEEN #CARS ON EACH  
SIDE



RESISTANCE - SLOWING DOWN  
THE FLOW OF ELECTRICITY  
RESISTANCE (R) MEASURED IN OHMS ( $\Omega$ )  
WIDE HALFS - LESS RESISTANCE

SKINNY HALFS - MORE RESISTANCE



$$V = I R$$

VOLTAGE =  
VOLTS (V)

CURRENT ×  
AMPERE  
AMPS (A)

RESISTANCE  
OHMS  
Ω

Ω  
GREEK LETTER  
OMEGA  
←

# ELECTRICAL CIRCUITS

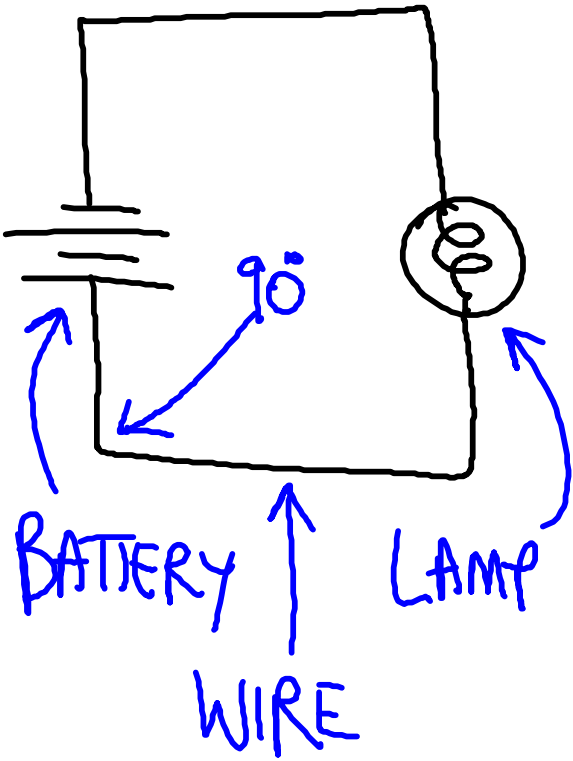
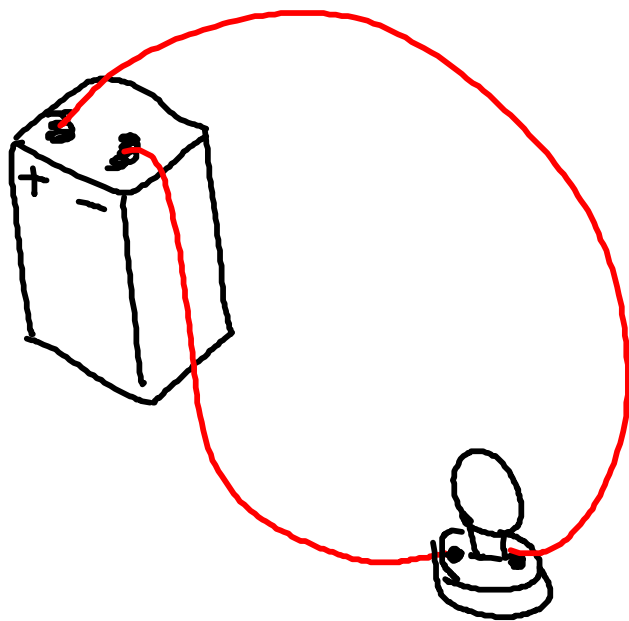
SERIES  
CIRCUITS

ONLY ONE (1)  
PATH FOR ELECTRONS  
TO TRAVEL

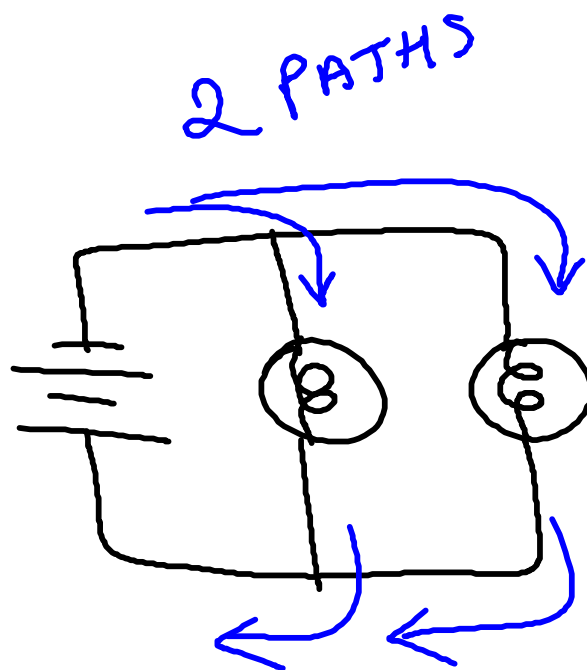
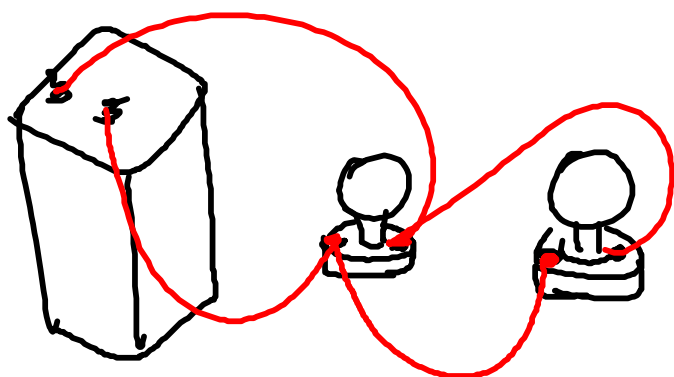
PARALLEL  
CIRCUITS

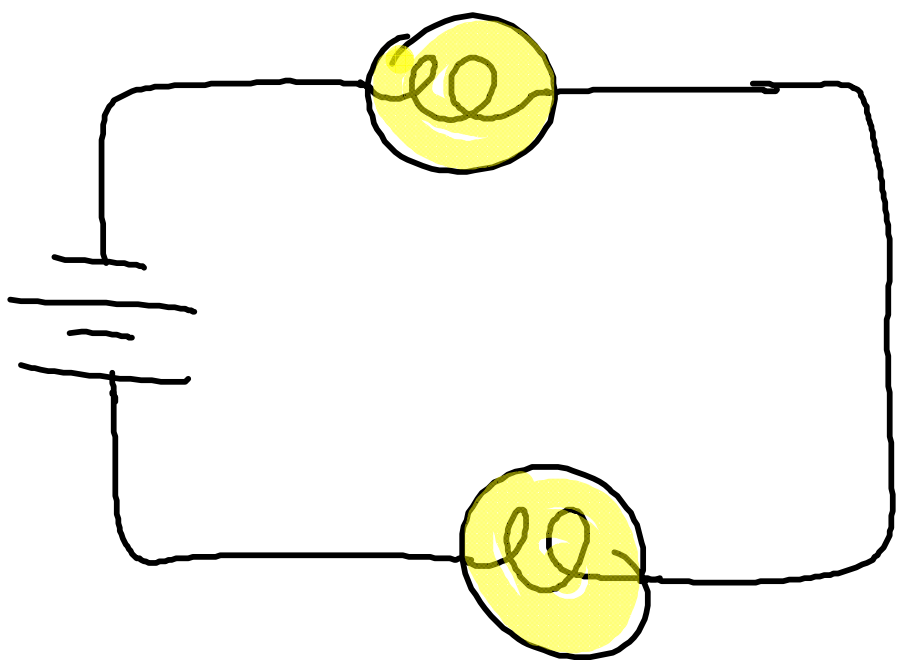
SEVERAL PATHS  
FOR ELECTRONS  
TO TRAVEL

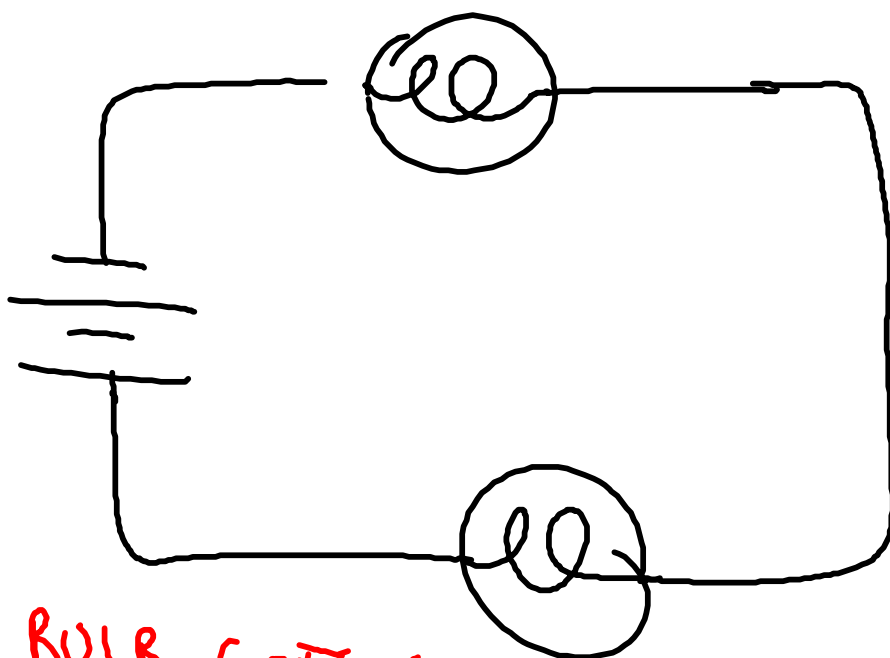
# SERIES CIRCUIT



# PARALLEL CIRCUIT







"1 BULB GOES OUT... THEY ALL GO OUT"

