

1. What is a circuit?

2. The flow of charge through a circuit is compared to the flow of water through a closed system. What does each part represent?
 - 1) Pump= _____
 - 2) Pipes= _____
 - 3) Any device operated by the water= _____

3. What type of circuit forms a single pathway for electricity to flow?

4. What type of circuit forms multiple branches for electrons to flow?

5. What type of circuit will fail if any portion of the circuit is cut off?

6. What is a schematic diagram?

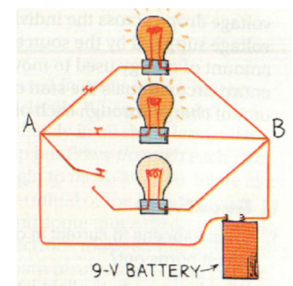
7. Draw the symbols for the following 5 circuit devices:

Battery:	Closed switch:
Connecting wire:	Resistance:
Open switch:	

8. When the electric lines in your home carry more than the safe amount of current, they are said to be _____. This can lead to melted insulation and can start a fire.

9. What is put in a circuit to prevent overloading?

10. What type of circuit is pictured to the right?
11. What happens to the voltage in each branch of the circuit?
12. What happens to the current when all three switches are “on” or “closed?”
13. If you remove one of the 3 bulbs, can you still light the other two?



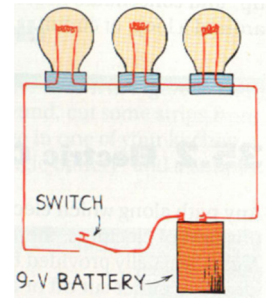
14. What type of circuit is pictured to the right?

15. If you remove the middle bulb, can the other two still light up?

16. Does the electric current change throughout the circuit?

17. What happens to the voltage as it moves through the three bulbs?

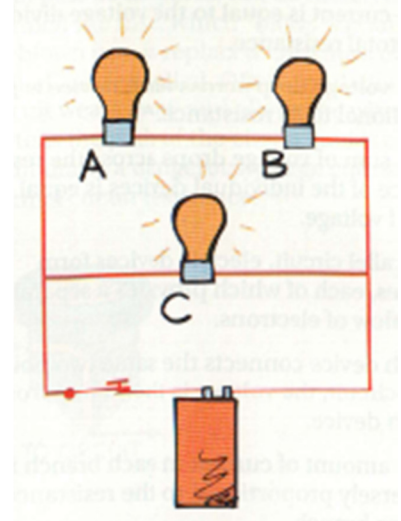
18. Which bulb could you remove and still have two other bulbs lit?



19. Bulbs A & B are in _____ while bulbs B & C are _____.

20. Draw a switch on the picture that would operate bulb C only.

21. Draw the circuit using the correct schematic symbols?



Bonus Stamp: What is the total current in the circuit shown?

(Show your work)

