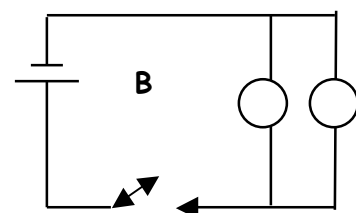
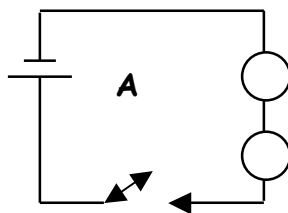


Review Questions - Electrical Applications

- An ebonite rod rubbed with fur causes paper to "stick" to it when brought near. Answer each question in terms of electric charges.
 - Why is the ebonite rod considered to be charged?
 - Why is the paper considered to be neutral?
 - Why is the paper attracted to the rod?
- Why do people get shocks after they drag their feet on a rug?
- Define each: static electricity, the law of electric charges, current electricity.
- A charged Lucite rod touches a neutral pith ball, and is removed. When brought near it again, the pith ball moves away. Answer each question in terms of charges.
 - If the Lucite rod was positively charged, what charge was given to the pith ball?
 - How were these charges transferred?
 - Why was the pith ball repelled when the rod was brought near, after contact?
- Define each: electric current, voltage, discharged, voltage drop.
- What is the difference between each pair of terms?
 - a live/hot wire and neutral wire
 - a voltmeter and an ammeter
- Define electrical load. All electrical loads converted electrical energy into which 4 energy types?
- For each of the 4 parts of an electric circuit, state:
 - the part
 - the function
 - two examples
- What is the difference between an open and a closed circuit?
- Draw a circuit diagram of three 6-V cells connected in (A) series and (B) parallel. Include a switch and 4 loads in each diagram.
- State 3 differences between a series circuit and a parallel circuit.
- Explain each of the following observations.
 - if 1 bulb is removed from a series circuit, all other lights go out
 - if 1 bulb is removed from a parallel circuit, all others remain lit
 - if another bulb is added in series, all bulbs get dimmer
 - if another bulb is added in parallel, the bulb brightness remains unchanged

13. Examine each circuit diagram. Why does the voltage drop across the battery differ from that across 1 bulb for circuit A and **NOT** circuit B?



- What is resistance? What are the units of measure for this?
- What is the difference between a conductor and a resistor?
 - Explain why the filament in a light bulb is made of tungsten rather than copper.
- What is the voltage drop across a light bulb with a resistance of $100\ \Omega$ and a current of $2.0\ A$?
- Pick one form of electricity generation. Describe how this technology works. Include what material used to make the electricity.