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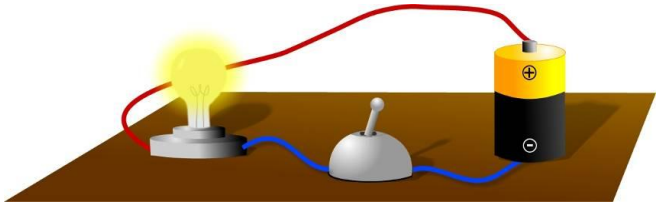
Unit 4F: Circuits and conductors



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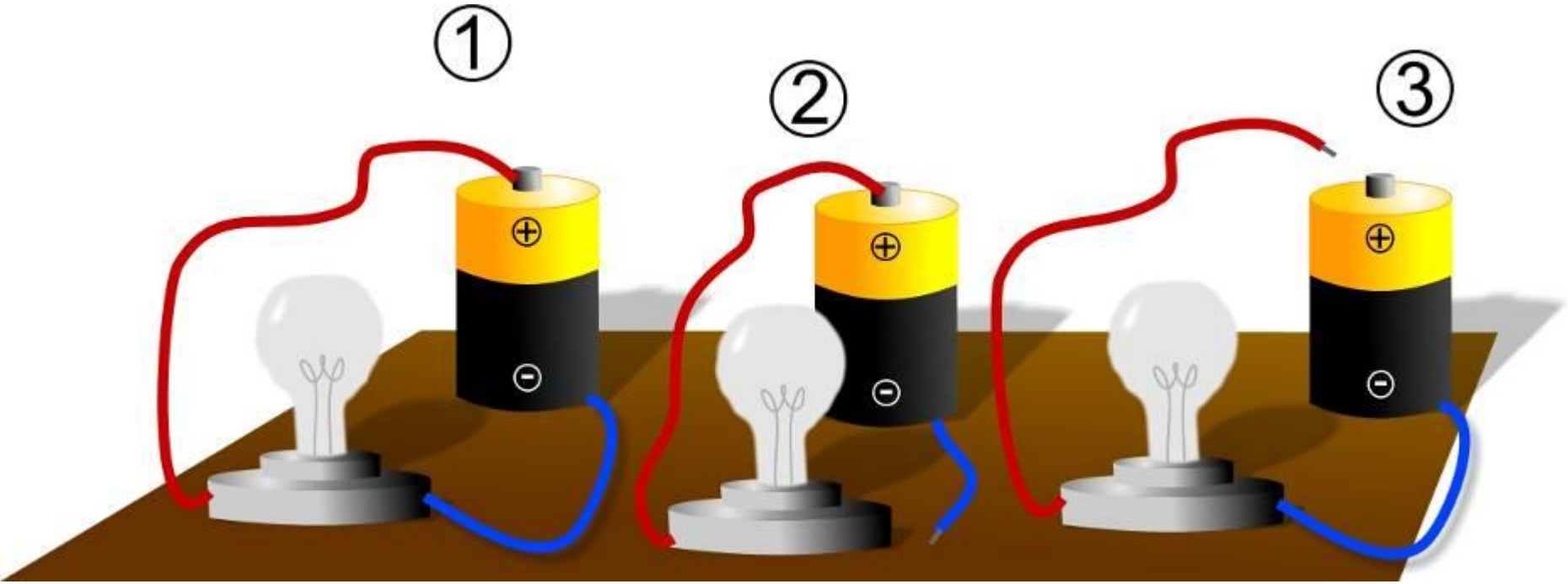
Circuits and conductors

Useful Words

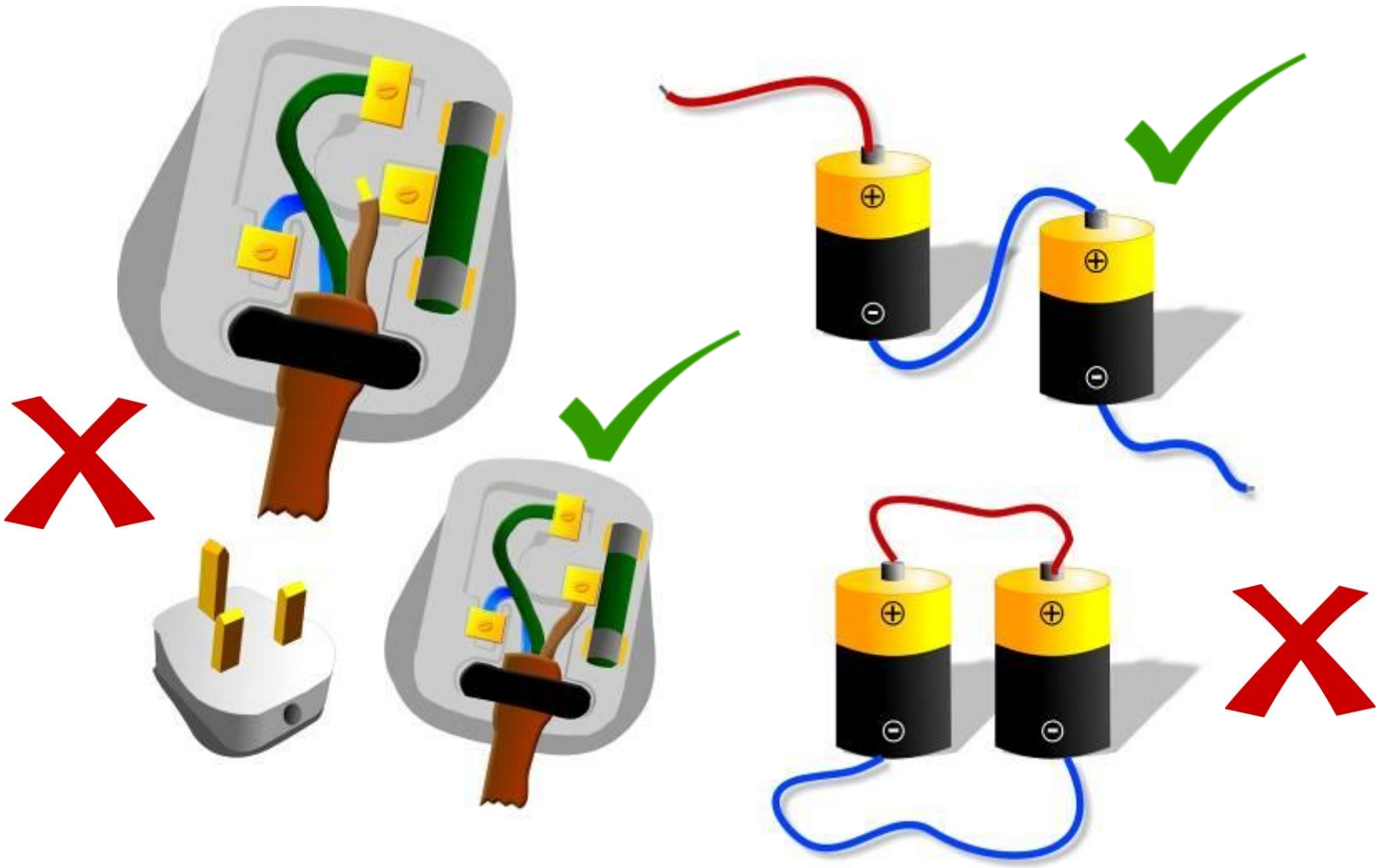
Battery	An electrical energy source
Bulb	A light source powered by electricity
Buzzer	A sound source powered by electricity
Motor	A device that uses electricity to produce movement
Break	In an electric circuit a break will stop the circuit working
Electrical insulator	A material that will not allow electricity to pass through
Electrical Conductor	A material that will allow electricity to pass through
Metal	A good conductor of electricity
Plastic	An electrical insulator

Simple Circuits

Which of the circuits will work and which ones will not?
Why will they not work?



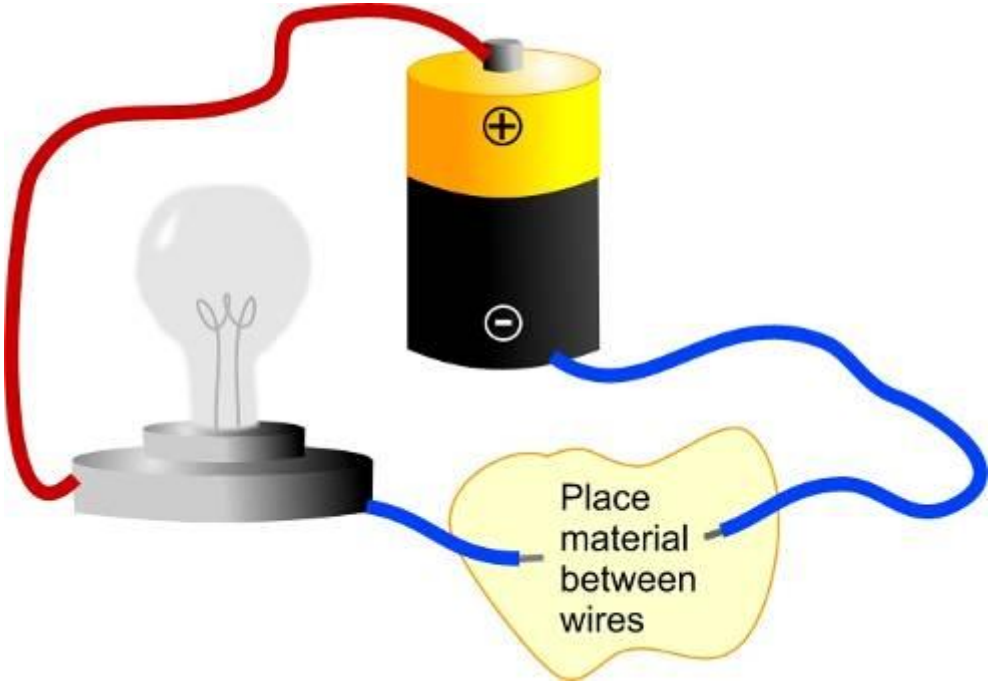
Safe Experiments



Conductors and Insulators

What materials are good conductors of electricity?
How can we test various materials to see if they are conductors?

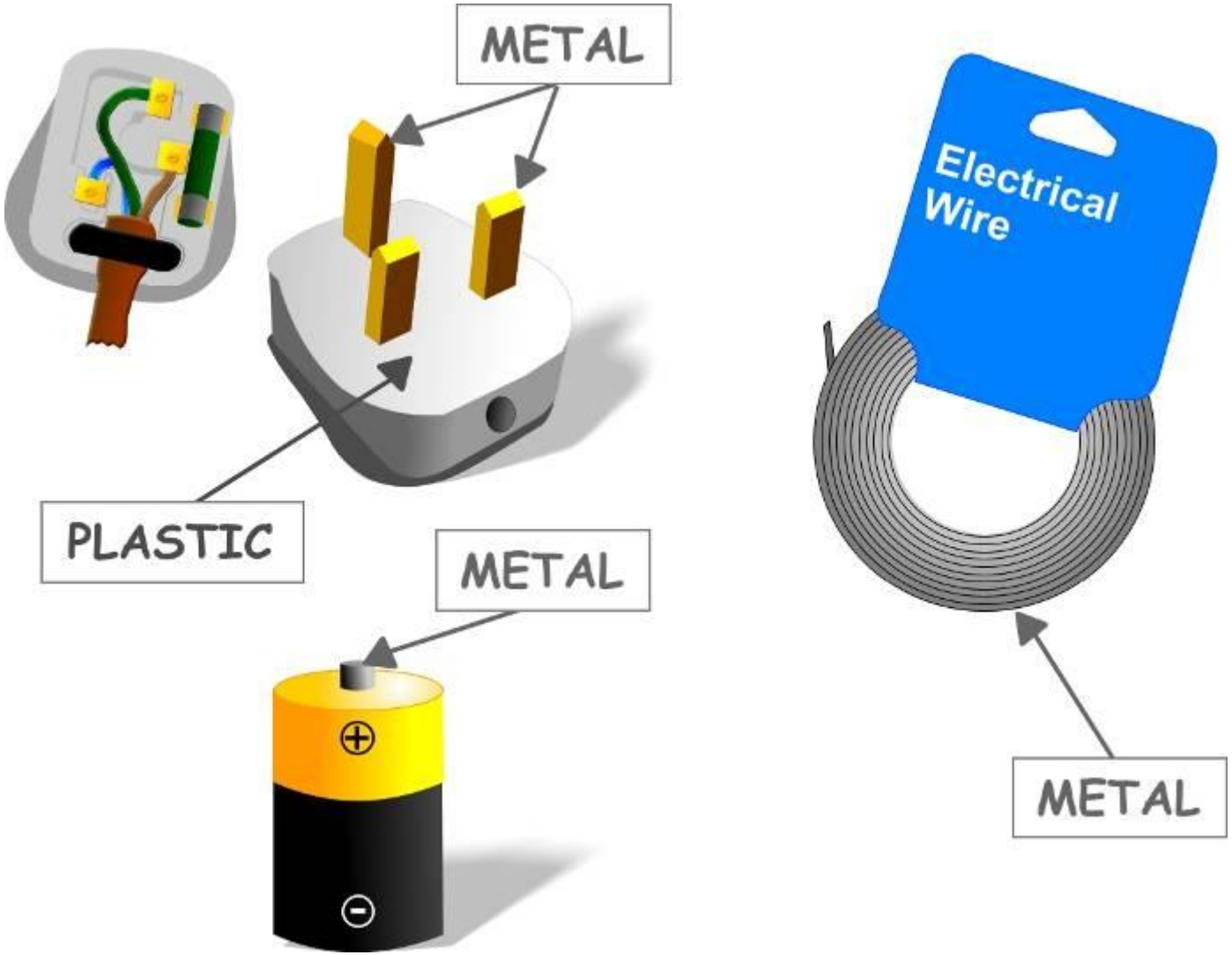
Material	Conductor	Insulator



What do the results show?

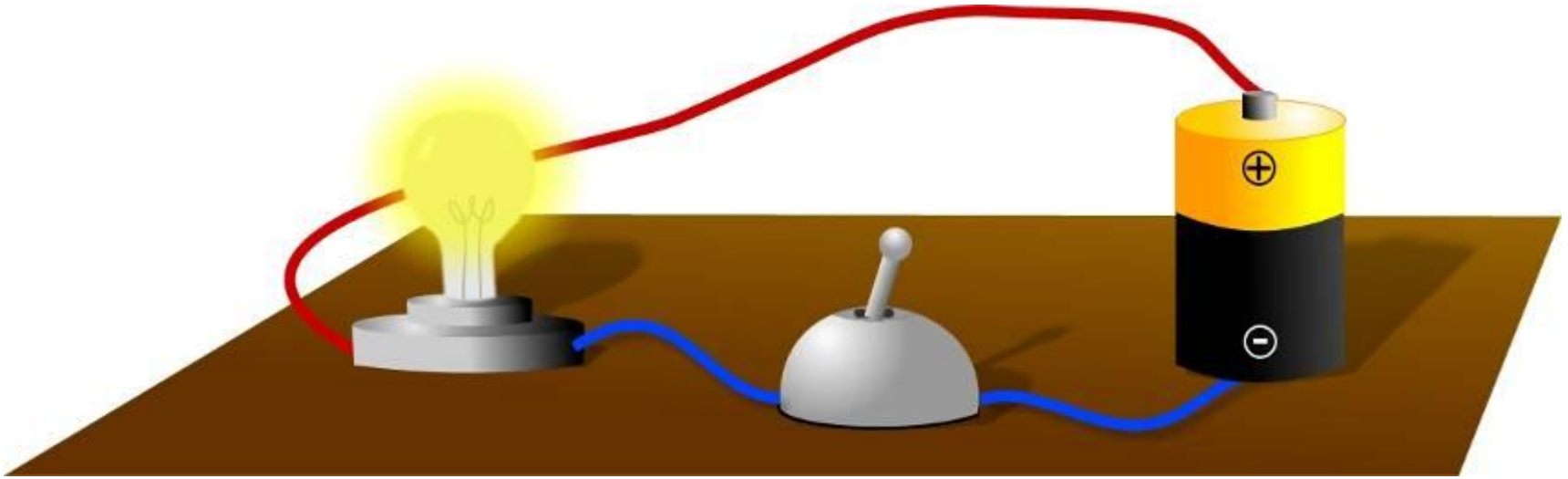
Are there any exceptions to the general rule?

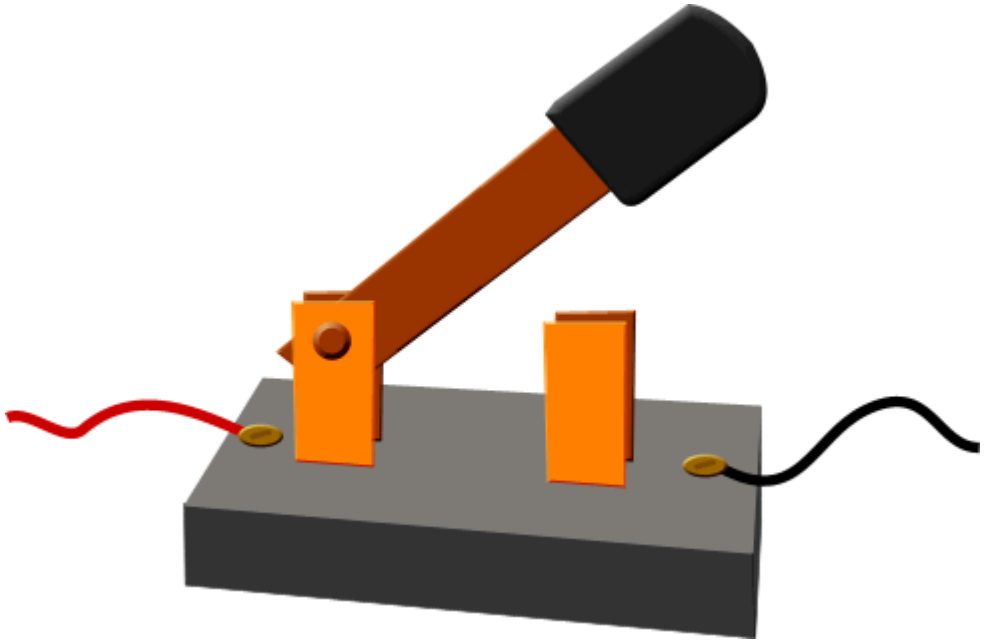
Uses of metals and plastics in electrical circuits

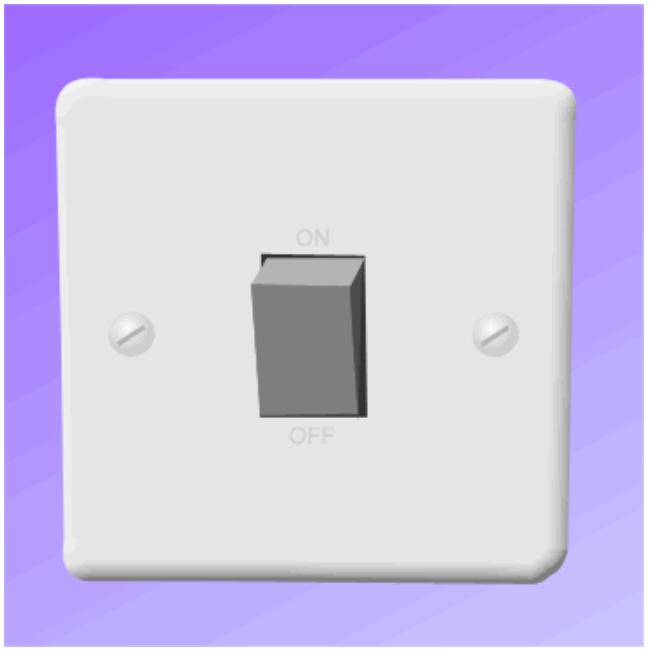


Switches

What does the switch actually do?

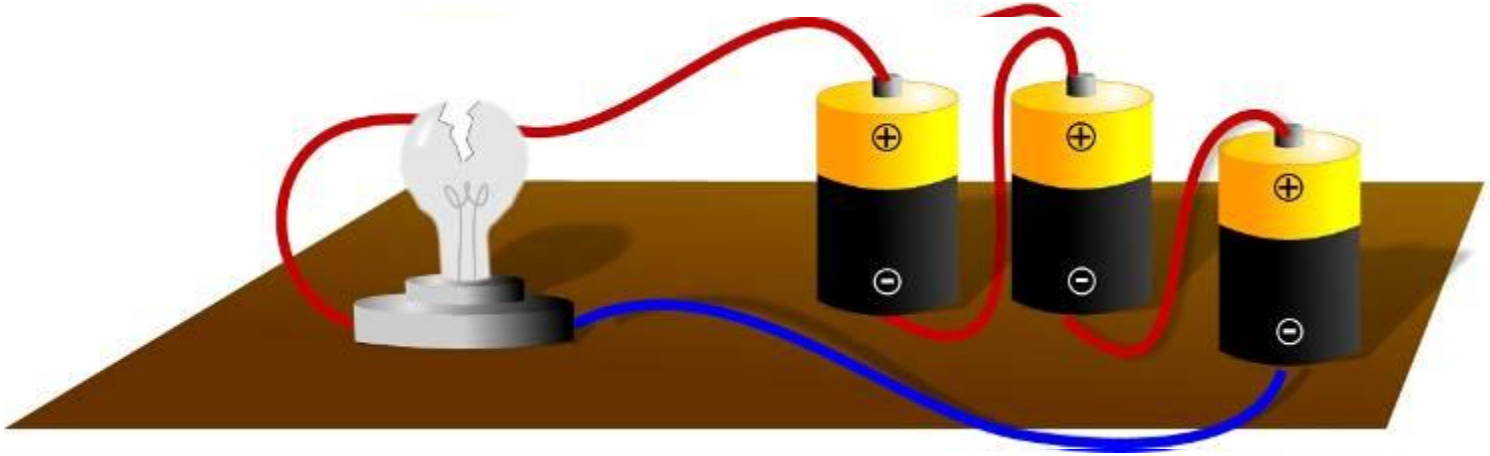




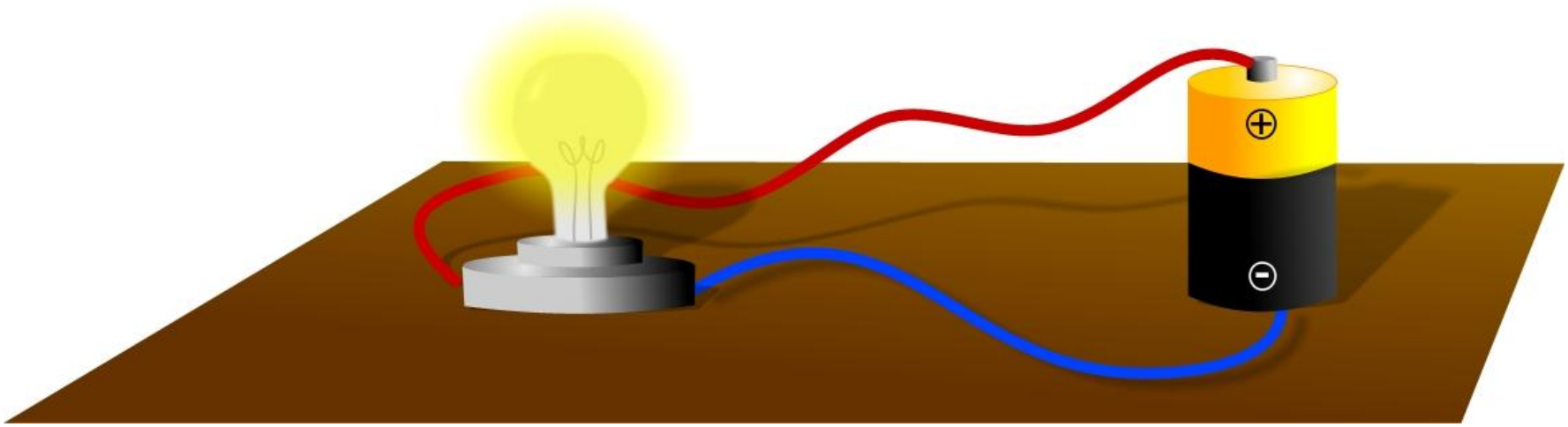

ON
OFF


ON
OFF

Varying Components



Changing circuits



How can you change the brightness of the bulb?
List all the things you could change to do this.
What will happen if you add more bulbs to the circuit?
What would a switch do to the circuit?
If the bulb was exchanged for a motor, how could the speed of the motor be changed?
How could the loudness of a buzzer be changed?

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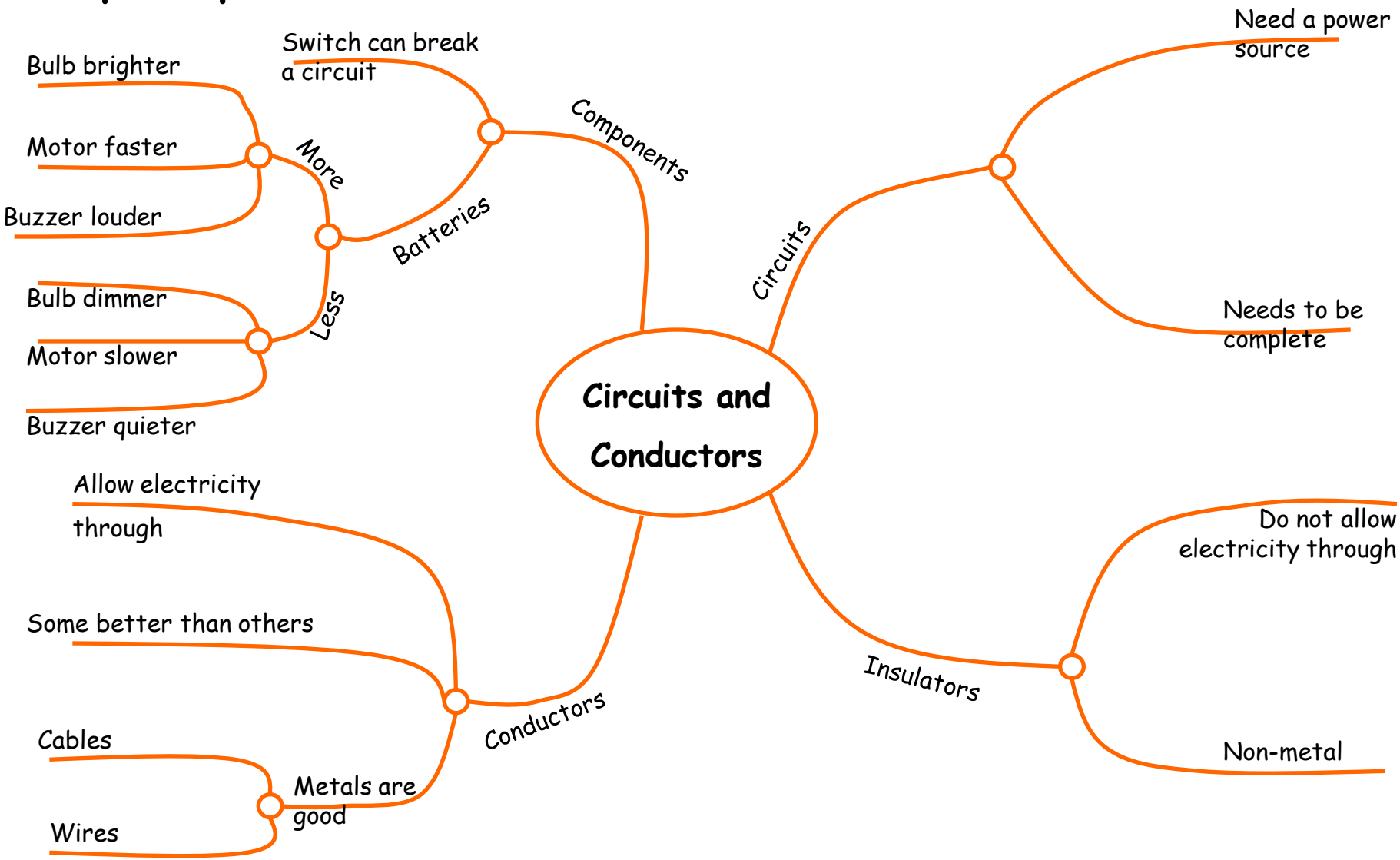
Concept Map



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