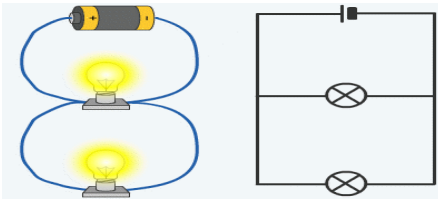
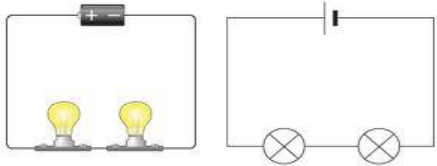
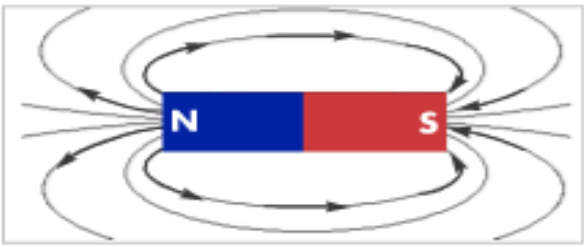


4.3 Review: Electricity and Magnetism

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1. Electricity	A form of energy made by electrons. There are two kinds of electrical energy.
2. Current Electricity	The flow of free electrons along a pathway such as a wire
3. Static Electricity	Electrons that do not flow, but build up on material (can be caused by rubbing certain materials together)
4. What do we call the discharge of static electricity in the atmosphere?	Lightning
5. Circuit	The pathway on which current travels.
6. Insulators	Materials that do not allow electricity to flow (rubber, wood, plastic)
7. Closed Circuit	Allows the movement of electrical energy (Think of a closed drawbridge- when it is closed, cars can travel across it)
8. Open Circuit	Prevents the movement of electrical energy (Think of an open drawbridge- when it is open, cars cannot travel over it)
9. Series Circuit	Has only one pathway for the current to flow to the bulbs. (old Christmas light strings- one bulb breaks, and the circuit is broken)
10. Parallel Circuit	Has two or more separate paths to bring the electricity to the bulbs.
11. What type of circuit is shown below? 	Parallel Circuit
12. What type of circuit is shown below? 	Series Circuit
13. Conductors	Materials that allow electrical; currents to pass more easily (metal)
14. What creates an electric current?	A continuous flow of negative charges (electrons) creates an electric current.
15. Magnetism	A force that can attract or repel certain substances
16. Electromagnet	A magnet created by the flow of electric current It is made by wrapping wire around an iron core. When the current flows through the wire the iron becomes a magnet.

17. Draw an example of a magnetic field.	 <p>The arc of the magnetic field flows from north to south.</p>
18. What creates a magnetic field?	An electric current
19. The rate at which energy flows depends upon the material's....	resistance
20. Thermal Energy	Energy associated with heat-
21. Radiant Energy	Energy associated with light
22. Mechanical Energy	Energy associated with motion
23. Electrical energy can be transformed into:	Radiant, thermal, or mechanical energy
24. A lamp uses electric energy and transforms this energy into what two types of energy?	Radiant and Thermal
25. An electric fan turns electric energy into-	Mechanical energy
26. A toaster turns electric energy into-	Thermal energy
27. Benjamin Franklin (1706-1790)	Proved that lightning is an electrical current that exists in nature
28. Michael Faraday (1791-1867)	He discovered that a magnetic field could produce a steady stream of electricity. He used that knowledge to invent the first electric generator.
29. Thomas Edison (1847-1931)	Made many contributions to the harnessing of electricity: Improved the lightbulb & developed the 1 st power station