SPS10. Students will investigate the properties of electricity and magnetism.
c. Investigate applications of magnetism and/or its relationship to the movement of electrical charge as it relates to simple motors

Build an Electric Table Fan

An _____ is an electrical machine that converts _____ energy into _____ energy.

Today's Objective: Today you will be making an electric table fan and answering conceptual questions based upon your observations.

Materials: Battery, Simple Motor, 20 oz water bottle, Scissors, Table stand, Marker, Ruler, 2 Alligator clamps, Electric Tape, Nail

Directions:

1. Remove the wrapper from the bottle, open the 20 oz. bottle and empty the water inside. Screw the top back on the bottle.

2. Use scissors to cut the bottle in half. Draw 4 perpendicular lines across from each other on the end part of the bottle that you cut.

3. Use the scissors to cut the ends of the bottle up to the bottle cap. You should have 4 fan blades.

4. Bend your blades back. Use the scissors to cut and shape your blades so they go in the same direction.

5. Unscrew the cap to the fan and use the nail provided to make a tiny hole in the **CENTER** of the cap. Screw the cap back on and insert your motor in the hole you made. BE CAREFUL NOT TO MAKE YOUR HOLE TO LARGE OR YOUR FAN WILL NOT ROTATE PROPERLY.

6. Tape your fan to the top middle bar of your table stand. Attach the extension alligator clamps to your motor and then attach them to the ends of your battery holder. You have just made an electric table fan. Awesome!!!

Conceptual Questions:

1. How is an electric generator made? _____

2. What types of energy transfer occurred to make your table fan? _____

3. Why was it important that you only made a small hole in the bottle cap? _____

4. Name 3 ways electric generators are used today. _____

5. Name 3 ways you could increase the strength of your electric table fan. _____

Created By: Chivas Spivey

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