Visit for Oct 22: Magnetism

Key Concepts/ Introduction

- Begin by talking about magnets in general, try to make connections between real life examples of magnets and how they to help the kids have a better feel of what you're going to talk about (ex, magnets on a fridge ask them why they think magnets stick to a fridge)
- Relationship between magnets and metals based off of the invisible force of the magnetic field.
- Write on the board different key terms such as poles, magnetism, attraction, repulsion and discuss these terms with them
- Draw diagrams of things that will help you explain how the different poles attract each other such as two magnets with a south pole and a north pole. Draw examples of things that are magnetic like keys and paperclips, those that are not like cats and food.

Compass Experiment: by using water, cups, paperclips and Styrofoam balls, make your own compass by using the paperclip as a needle inserted into the Styrofoam ball that will spin on top of the water in the cup until it points north.

- Need:
  - plastic cups (12)
  - Styrofoam mini balls (12)
- **Procedure:**
  - Set up the project first by filling up the cups with water. Separate the students into groups of four; there will be 3 groups then.
  - Help the students magnetize their paperclips after they have straightened out their paperclip. Be sure to help explain the relationship between the magnet and the paperclip. There will be at least one magnet per group.
  - Stick the paperclip through the Styrofoam ball and place the ball on top of the water and watch the paperclip “needle” spin until it points north.
  - Ask questions throughout the experiment to make sure the students understand what they are doing.

- **Questions to ask:**
  - What happened to the paperclip? Why was it moving?
  - When would a compass be useful?
  - How does the compass work with the poles of the earth?

**Discussion/ Word Search**

- Magnets are attracted to each other’s opposite poles because of the force of magnetism
- Metals, like iron, are also magnetic and can interact with magnets
- Magnets use the poles of the Earth to indicate which direction is north.
- Hand out the word search and help the kids go over the key terms again.

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