

Experiment with Magnet Magic

Is your child struggling to get a handle on the principles of magnetism? Here's a fun activity to demonstrate polarity and understand the basic principles of magnetism. Before you start, brush up on the properties of magnets to get a feel for the way they work.

Properties of Magnets:

- They attract certain metals
- All have a north-seeking pole and a south-seeking pole
- When placed near each other, opposite poles attract and like poles repel

What You Need:

- Bar of soap
- Magnet
- Long sewing needle or nail
- Plastic bowl

What You Do:

1. Gather all the materials in one place. Ask your child what he knows about magnets and how they work, and review the properties of magnets again if necessary.
2. Fill the plastic bowl halfway with water. Take the sewing needle and rub it vigorously against the magnet for about thirty seconds. Place the needle on the bar of soap, and then gently place the soap in the bowl of water.
3. The now-magnetized needle will orient itself in a north/south position. You have created your own compass! To test this, you can turn the bowl until you know it is facing east or west and watch the needle and bar of soap slowly turn itself back to the north/south position.
4. To demonstrate polarity, take the magnet and place it against the outside of the bowl. The needle will be drawn to it because opposites attract. Now turn the magnet around and watch the needle on the bar of soap spin around due to the change in polarity.
5. Review the terms and definitions with your child. See if your child can come up with another experiment to demonstrate these terms. Here are some examples:
 - Magnetize several needles to see the positive and negative ends attracting.
 - If you cut a magnet, it will still have a north and south pole.
 - You can temporarily magnetize steel by rubbing a magnet on it in one direction (a paper clip), but it will only stay magnetized for a short time.

