



# Science Experiment: Magnet Magic with Liquids

## Project: Science, Chemistry, Electric, Biotechnology

### Supplies:

- 3 Glasses
- Magnet
- 12 Paper Clips
- 1/2 Cup Water
- 1/2 Cup Vegetable Oil
- 1/2 Cup Light Corn Syrup

**Time: 20 - 30 minutes**

### What to Do:

1. Place three cups in a row.
2. Fill the first cup up with water.
3. Fill the middle glass with the vegetable oil
4. Fill the third glass with the corn syrup
5. Next, place 4 paper clips in each glass
6. You may need to gently push the paper clips to the bottom of the glass with the corn syrup
7. Test your magnet by showing how paper clips outside of the liquid are attracted to it.
8. Next, take your magnet and place it next to each glass. Notice that all the paper clips are attracted to the magnet, but that the liquid in the glass causes the paper clips to move differently.

### How Does the Experiment Work?

The question answered in this experiment is how does the consistency of a liquid impact magnetic attraction? When using water and vegetable oil, the paper clips moved through the liquid to the magnet very quickly. This is because the liquids provided very little resistance. However, the paper clips in the corn syrup moved very slowly toward the magnet. This is because the corn syrup has a very thick consistency. The experiment shows that the thickness (also called consistency or viscosity) of a liquid impacts that magnetic attraction.

### Reflect:

1. How did the three liquids react differently to the magnet?
2. Why do you think they reacted differently?
3. What do you think would happen if you used other liquids?

### Apply:

1. How are magnets used in our world?
2. How does the thickness of liquids impact magnetic attraction? Give examples from the world around us.
3. What causes items to be conductive?

Facilitator tip: Magnets have magnetic force, the property of attracting some objects or pushing objects away. The force called magnetism happens when the atoms in the magnet line up. Although, we cannot see the atoms line up, we can experience what happens to an object when it is near a magnet.

**Source:** <http://coolscienceexperimentshq.com/how-liquid-impacts-a-magnet/>