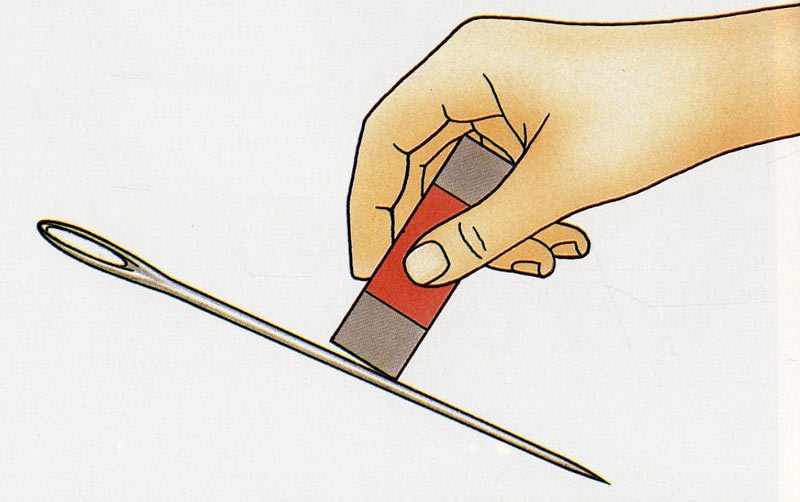
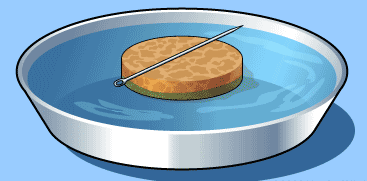
**How to make a magnetic compass**

**What You Will Need**

* Sewing needle about one to two inches long
* Small bar magnet or refrigerator magnet
* A small piece of cork (corks from wine bottles work well, but not the plastic stoppers) (Cut a larger cork into 4 pieces)
* A small glass or cup of water to float the cork and needle
* A small piece of sticky tac per group

**Method**

* + 1. Rub a magnet over the needle a few times, always in the same direction. This action magnetizes the needle.
    2. Cut off a small circle from one end of the cork, about 1/4-inch thick. Lay the circle on a flat surface.
    3. Use the sticky tac to attach the needle to the top of the cork.

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* + 1. Fill the glass or cup about half full of water, and put the cork and needle assembly on the surface of the water.
    2. Place your “compass” on a flat surface and watch what happens. The needle should point towards the nearest magnetic pole —north or south, depending upon where you live.
    3. Try placing a magnet near your compass and watch what happens. How close does the magnet have to be to cause any effects? Try this again with a nail or other steel object. You can see why it’s important to keep metal objects away from compasses on ships!