

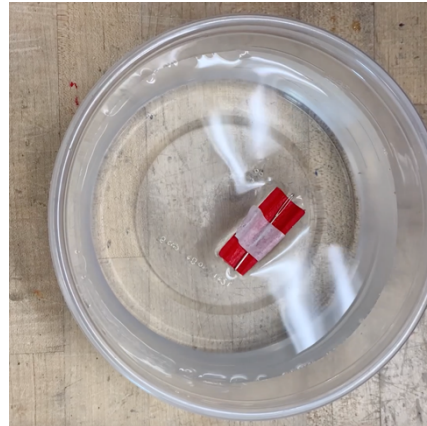
## DIY Compass

**Introduction:** Get ready to be pulled in, as today we are using a magnet to create our own homemade compass.

**Approximate Time:** 10-15 minutes

**Materials:**

- Scissors
- Large bowl
- Pen
- Needle (ex. sewing needle)
- Magnet
- Cork or nerf dart
- Tape
- Water



**Procedure:**

1. Cut out 4 pieces of tape and label each with the one of the letters N, S, E, and W, for north, south, east, and west.
2. Place them equally spaced around your bowl. Clockwise, your bowl should read North, East, South, West.
3. Stroke the needle from eye to tip using a magnet at least 30 times, making sure to stroke it in the same direction each time.
4. Cut the cork/nerf dart lengthwise down the middle. Lay the cork so that its new flat/cut surface faces upwards.
5. Tape the needle to the flat surface, facing it in the same direction as the cork/nerf dart.
6. Fill the bowl almost fully with water.
7. Place the cork on the water's surface and let it orient itself. Then, arrange the bowl so that the needle is pointing from north to south. The eye faces north, and the tip faces south.
8. Try out your compass and compare it with the results of a real compass. You can also look at a map of your area and compare magnetic north and geographic north to see how different they are from each other.

**Tips & Tricks:**

- If your compass is not working, try stroking your needle again.
- Make sure the needle does not get stuck on the rim of the bowl.