

## Creating Your Own Homemade Compass

If you don't have a compass, you can create your own in much the same way people did hundreds of years ago. To create your own compass, you will need the following materials:

- A needle or some other wire-like piece of [steel](#) (a straightened paper clip, for example)
- Something small that floats such as a piece of cork, the bottom of a Styrofoam [coffee](#) cup, a piece of plastic or the cap from a milk jug
- A dish, preferably a pie plate, 9 to 12 inches (23 - 30 cm) in diameter, with about an inch (2.5 cm) of water in it

The first step is to **turn the needle into a magnet**. The easiest way to do this is with another magnet -- stroke the magnet along the needle 10 or 20 times as shown below.

If you are having trouble finding a magnet around the house, two possible sources include a can opener and an [electromagnet](#) that you make yourself (see [How Electromagnets Work](#)).

Place your float in the middle of your dish of water as shown below.

The "float on water" technique is an easy way to create a nearly frictionless [bearing](#). Center your magnetic needle on the float. It very slowly will point toward north. You have created a compass!

### How Compasses Work Making a Simple Compass

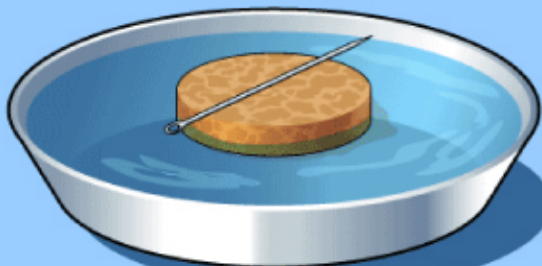
#### Step 1 Magnetize a needle



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#### Step 2 Float the needle in a dish of water.



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