

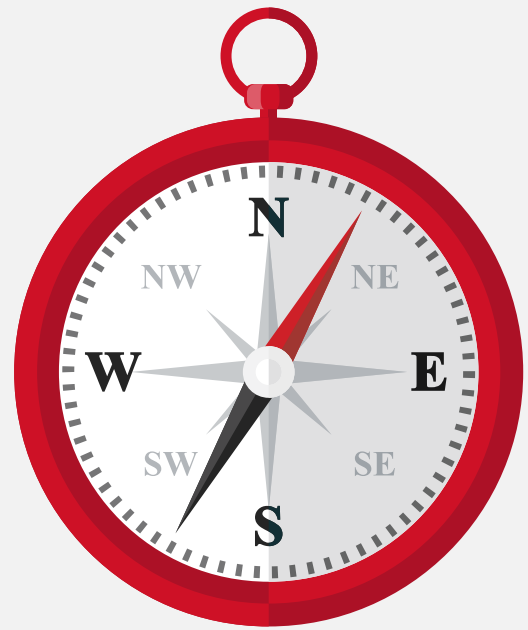
## Learn about: How magnetism works in compasses

# Make your own Compass

The magnetic compass is an ancient navigational tool used to indicate north, south, east and west. It's composed of a magnetised needle that aligns itself with the earth's magnetic field to point north.

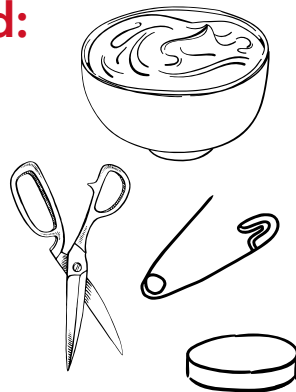
In the Navy they use different navigational tools and systems to precisely track a ship's position and course across the ocean.

If you find yourself lost without a compass, you can easily make your own using a piece of magnetised metal and a bowl of water.



## You will need:

- Ferromagnet
- Needle/Safety Pin
- Paper
- Bowl of Water
- Scissors
- Adult Supervision



## Instructions

1. Rub one end of the needle on one side of the magnet 30 times (the north pole if your magnet is labelled). Rub in one direction, not back and forth.
2. Flip the magnet over and rub the other end of the needle on this other side 30 times. Again, rub in the same direction.
3. Cut a circle about 2 inches in diameter out of the paper.
4. Carefully thread the needle through the paper circle twice, but not all the way through, so that the needle lays flat on the paper.
5. Carefully place the paper and needle on the surface of the water. Both ends of the needle should be above the floating paper circle.
6. Watch it slowly rotate and then stop.
7. Check the directions with a compass. One end of the needle (the one that you rubbed on the north pole of the magnet) should point to north and the other south.
8. Label the circle with the corresponding N (north) and S (south) directions. You now have a homemade compass!

Source: <https://www.rookieparenting.com/make-your-own-compass/>