



Big Brothers Big Sisters

## Build a compass

### What you'll need:

- One clear plastic cup
- One pencil or pen
- One magnet
- Thread
- One dull pointed needle or small nail
- One cork or piece of foam



### How to build it:

- Rub one end of the magnet along a needle. Always rub in the same direction. Do this about 30 times to magnetize the needle. Test it by picking up a pin.
  - Option 1:
    - **FLOATING COMPASS.** Cut a small piece of cork off and push the magnetized needle through it. Fill the plastic cup with water. Carefully place the cork with magnetized needle into the cup so it is floating in the center.
  - Option 2:
    - **CHINESE HANGING COMPASS.** Tie one end of a short piece of thread to the center of your magnetized needle. Then attach the other end to a pencil and place it over the rim of the plastic cup.
- Once you've completed your compass, place it on a table and wait for the needle to come to rest. The thickest end of the needle will be pointing north. Now try moving the compass to a new place on the table. The needle will resettle and point north again. Try making both of the compasses above to see which one works best.

\* The needles may lose magnetism after a while, so you may need to magnetize it again.