



COLUMBUS DAY STEM QUEST

Make Your Own Compass!

Find north the way sailors did in 1492

Explorer's name: _____

Date: _____

YOU'LL NEED

- ☐ A sewing needle or straight pin
- ☐ A strong magnet
- ☐ A slice of cork, bottle cap or leaf
- ☐ A shallow bowl of water

THE BIG IDEA

The Earth acts like a giant magnet! When you magnetize a needle, it lines up with Earth's magnetic pull and points north and south. Sailors in Columbus's time used a magnetized needle the same way to keep their ships on course.

STEPS

- 1 Magnetize.** Stroke the needle along the magnet 30–50 times, always in the same direction. Lift the magnet away between strokes.
- 2 Float it.** Lay the needle on the cork, then gently float it in the middle of the bowl so it doesn't touch the sides.
- 3 Watch.** Wait a moment. The needle slowly spins until it lines up north and south.
- 4 Check it.** Use a phone compass to find which end of your needle points north. Spin the cork and see if it turns back!

EXPLORER'S LOG

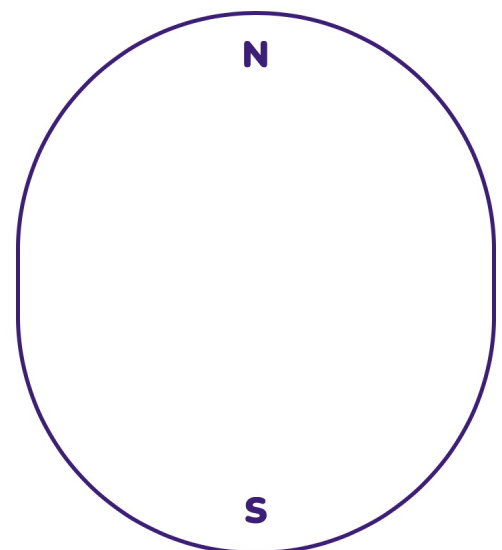
I predict my needle will point toward:

What happened when I brought the magnet close to my compass?

Circle the direction you're facing right now:



Draw your compass here



Grown-up tip: Handle the needle for younger explorers, and keep small magnets away from little ones who might put them in their mouths.