

TECHNOLOGY

The Port of Los Angeles is America's premier gateway for international commerce. Our thriving seaport is recognized for record-setting cargo operations, environmental stewardship, community partnership, progressive security measures, historical landmarks, and the LA Waterfront. Behind the scenes of this bustling operation are STEM careers making it happen. The Port of Los Angeles is leading the way internationally to reduce air emissions, improve water quality, and cultivate new technologies that ensure good jobs and a brighter future.

BUILD A COMPASS

Materials Needed:

- Sewing Needle
- Magnet (You can magnetize your needle using a variety of methods: rubbing it with a magnet, or rubbing it on another item that magnetizes it with static electricity.)
- Coin-sized cross section of cork
- A bowl of water

Your Challenge:

BUILD A COMPASS

1. Rub one end of the needle on one side of the magnet 30 times (the north pole if your magnet is labeled). Always rub in the same direction.
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. Center needle on cork.
4. Place the cork and needle on the surface of the water. Both ends of the needle should extend beyond the cork's edge and above the water.
5. Watch it slowly rotate and then stop.
6. 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.

