



Tornado in a Bottle

Materials:

- Two plastic bottles (try different sizes to make your tornado grow or shrink)
- Duct tape or a tornado adapter
- Water
- Food colouring (optional)

How to make it:

1. Fill a bottle just over halfway with water (and add your food colouring, if using).
2. Use the duct tape or tornado adapter to connect your two bottles (placing the empty bottle on top).
3. Flip the attached bottles so the bottle with water is now on top.
4. Move the bottle on top rapidly in a circular motion. After a few seconds, you should see the water begin swirling and a tornado form. Now let's enjoy the tornado as it moves through your bottles!

Have Fun! Try experimenting with more or less water. Does the amount of water in your bottle have any effect on the size and speed of the tornado?

Let's Learn Science: Similar to a tornado, the water moves in a circular motion, which is called the **centripetal force**—an inward-facing force that pulls an object or liquid toward the centre of its circular path. This movement creates a vortex. In the real world, this connects the storm cloud to the earth's surface to make a tornado.

Disclaimer: While every reasonable effort is made to provide experiments that are safe, adult supervision is recommended at all times when experiments are performed. Safety gear, such as gloves and glasses, may be required.