# WICKED WIND



4-H STEM

# Wicked Wind

## OVERVIEW

Tornados are the epitome of wicked windstorms. The state of Oklahoma resides in a region of the United States referred to as Tornado Alley. In Oklahoma, especially during the spring, we expect this type of weather to take place.

A tornado is a violently rotating column of air that extends between the Earth's surface and a cloud. Tornadoes are created from a **supercell thunderstorm**. A supercell thunderstorm occurs when warm moist air is ascending and cool dry air is descending, thus swirling together to form a vortex. Tornadoes can have wind speeds of up to 300 mph!

**Cold front**- the boundary of an advancing mass of cold air; in particular the trailing edge of the warm sector of a low-pressure system

**Warm front**- the boundary of an advancing mass of warm air; in particular the leading edge of the warm sector of a low-pressure system

**Supercell thunderstorm**- the presence of a mesocyclone: a deep, persistently rotating updraft

**Vortex**- a mass of whirling fluid or air; especially a whirlpool or whirlwind

**Updraft**- an upward current of air

**Rotation**- the action of rotating around an axis or center

**Moisture**- water or other liquid diffused in a small quantity as vapor, within a solid, or condensed on a surface

**Ascending**- go up or climb

**Descending**- move or fall downward

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# ACTIVITY

## SUGGESTED MATERIALS

Two 1 liter water or soda bottles

A metal washer

Blue food coloring

Duct tape

## STEPS

**IT'S TORNADO TIME!**

Step 1: Fill the bottom bottle 3/4 full of water and add 5 or 6 drops of blue food coloring to your water

Step 2: Place the washer on the top of the bottle neck

Step 3: Put your second empty bottle upside down on top of the washer and tape the two bottle necks together

Step 4: The washer should fit on the bottle's top without being larger than the bottle opening and not so small that it will fall in. Be sure to wrap the duct tape around the bottlenecks at least 3-4 times to seal them together

Step 5: Once you have the bottles taped together, be sure all the water is in the bottom bottle

Step 6: While firmly holding the bottles, quickly flip them over so the water drains out of the top bottle into the bottom bottle.

**Watch as the water descends and creates a tornado, with a noticeable vortex!**

Resources: National Geographic and Edventures with Kids

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