

Science Experiment
TORNADO IN a BOTTLE

Problem/Question

Can I make a tornado form inside of a bottle?

Hypothesis

What i think will happen experiment when i shake the bottle the tornado it will form into a small, medium size tornado.

Procedure

- 1. Fill the plastic bottle with water until it reaches around three quarters full.*
- 2. Add a few drops of dishwashing liquid*
- 3. Sprinkle in a few pinches of glitter (this will make my tornado easier to see)*
- 4. Put the cap on tightly*
- 5. Turn the bottle upside down and hold it by the neck . Quickly spin the bottle in a circular motion for a few seconds, stop and look inside to see if you can see a mini tornado forming in the water.*

Materials

In my experiment I will be using the following tools:

- * water*
- * a clear plastic bottle with a cap (that won't leak)*
- * glitter*
- * dish washing liquid*

Results/Observation

What I found out when I did my experiment was that when I shook the bottle a couple of times I could see the tornado forming slowly in the water/ in my experiment.

Conclusion

What I learned from my science experiment is that vortexes are in the center of whirlpools, tornadoes whirlwinds, and much much more. My hypothesis was correct but instead of the tornado forming slowly it formed sort of quick (quickly).

Research

Vortex

In my experiment, I will see a vortex. A vortex is air or water that spins in a circular motion. We often see a water vortex when we empty a bath tub. When it drains, it can cause a vortex around the drain. A water vortex is what causes a whirlpool to spin. The vortex of a tornado forms a tunnel as it nears to the ground. The water vortex is water that people can get sucked in to. In my experiment, the water tornado will be caused by the vortex.

Severe Storms: Colin Kong

Centripetal Force

In my experiment, I will be seeing a centripetal force. A centripetal force is a force that moves in a circular path and forms a whirlpool. The whirlpool starts at the center and moves in a circular motion outward. An example of where we see centripetal force would be a rollercoasters. When you are on rollercoaster and you go through the loops, centripetal force from the loop pushes the your body weight down so that you don't fall out. The force allows you to go through that loop without falling. In my experiment, we will see the centripetal force in the tornado when the water is pushed outward.

www.weatherwizkids.com

www.wikipedia.org

dictionary.com

Facts: Tornadoes

- Tornadoes are formed by a mixture of hot and cold weather.*
- The hot and cold air mixes together and forms this dramatic storm.*

Definitions

Centripetal force: is a force that moves in a circular path and forms a whirlpool

Vortex: A vortex is air or water that spins in a circular motion

Whirlpool: When water that is moving in opposite directions hit each other, friction occurs which causes the water to spin.

