

Tornado in a Jar

With a few household items you can create a tornado in a jar! The simplicity of this experiment is what makes it a great hands-on way to explore the physics behind vortexes and tornadoes with children.

What you need:

- A clear empty container such as an empty jar or a plastic bottle (or multiple types of containers)
- Water
- A small drop of dish soap
- Glitter
- Food colouring (optional)

What to do:

1. Add water to the clear container but leave space at the top
2. Drop in a SMALL drop of dish soap
3. Add some glitter
4. Close and tighten the lid
5. Then get shaking! Shake the container upside down, side to side or in a fast circular motion.
6. Hold the container up to light or in front of a window. The tornado is easier to see when it has light in the background.
7. Experiment with different container types, types of shaking and speed of shaking, size of the container and adding items like glitter and/or food colouring all are factors involved in the formation of the tornado.



Discussion:

When you swirl the water inside the jar, you're creating a rotating motion. As the liquid moves in a circular pattern, the water in the center is drawn toward the bottom and up the sides, creating a funnel shape. The spinning motion of the water is similar to how a real tornado forms

Questions to ask:

- "What happens if we shake the jar faster or slower? How does that change the tornado?"
- "Why do you think the tornado goes round and round when we shake it?"
- "Can you see the tornado shape in the water? What does it look like?"
- "If we added a little bit of food colouring, do you think the tornado would look different?"
- "Why do you think tornadoes spin? What makes them twist and swirl?"

weewatch.com

