



Kids STEAM - Science

CLOUD IN A JAR

Materials Needed:

- Glass Mason Jar and Lid
- Aerosol Hairspray
- Ice Cubes
- Hot Water

Instructions:

- 1 Pour hot water (not boiling) into the jar and swirl it around to warm the inside of the whole jar.
- 2 Turn the lid upside down, place several ice cubes on top of it, then place the lid onto the jar.
- 3 Quickly remove the lid, give a quick spray of aerosol hairspray into the jar, and replace the lid.
- 4 Remove the lid and watch as the cloud comes out of the jar.



STEAM Investigation Questions and Explanations

How did the cloud form?

Water vapor! Water vapor is an invisible gas that turns into liquid water droplets. The water droplets form on tiny particles, like dust, that float in the air.

Clouds form when the warm, moist air rises and condenses onto dust particles.

The cooler the air, the less water it can hold. When air cools, some of the water vapor condenses, or forms visible water droplets. The droplets form around tiny particles in the air, such as dust or sea salt. Near the ground, the condensed water vapor becomes fog. Up in the sky, it forms clouds.

During this experiment when you add warm water to the jar, it causes water vapor, and as the water vapor cools, it rises. We used ice to speed up the cooling process and the hairspray to be the particles for the water vapor to form a cloud.

STEAM Exploration Questions

Before the Experiment

What do you think will happen? (This is a scientific concept called prediction or hypotheses.)



During the Experiment

What happens to the water when we add it to the glass?

After the Experiment

What happened?

Describe what you see.

Draw a picture of what you observed.

Was your prediction accurate?