

Cloud in a Jar Observation Worksheet



Student Name:



Instructions: Observe the "Cloud in a Jar" activity closely and write down your observations in the space provided.



Describe what you see happening inside the jar when the hot water is poured and the lid is covered quickly.



What do you notice about the temperature of the water and the lid of the jar?



What do you think these changes inside the jar represent in terms of cloud formation?



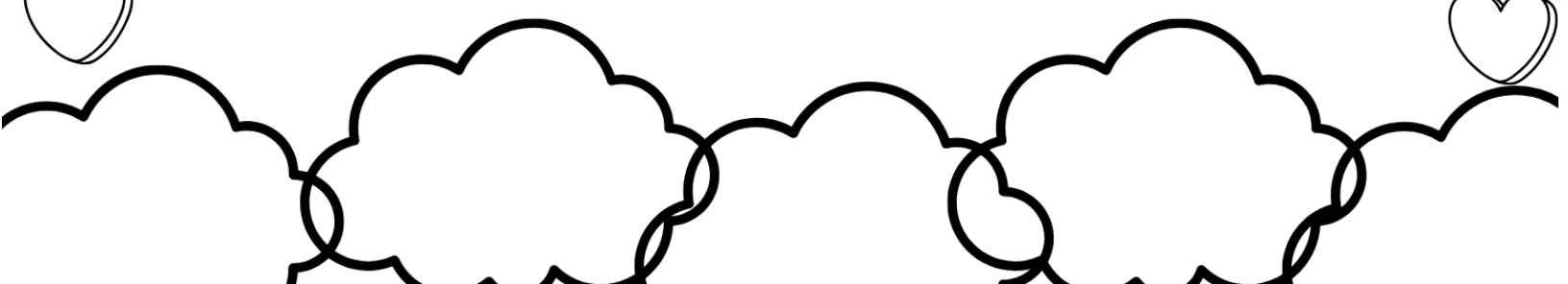
Can you make any connections between the activity and the process of cloud formation in the atmosphere?



What was the job of the hairspray in the experiment?



Any other observations?



Science Lesson One Page Write up: Cloud in a Jar!

Objective: Teach students about the water cycle in an engaging and in depth way.

Materials:

- Jars
- Ice
- Hairspray
- Kettle
- Water
- Observation Worksheets

Activity

First we did a demonstration of the experiment to get students excited and questioning about the water cycle (specifically condensation) and the experiment.

After the experiment, we went into detail providing information about condensation in the water cycle. Teaching and emphasizing vocabulary students can use in their experiment.

Provide students with step by step instructions for the experiment but allow room for creativity and wonder.

1. Fill a glass jar with $\frac{1}{3}$ of a cup with hot water, swirl it around the jar to warm it up.
2. Next add a quick spritz of hairspray to the jar and quickly place the lid on upside down.
3. Place some ice cubes on top. Let it sit.
4. Watch the cloud form! Make observations, take notes!
5. Once you've observed the cloud you can remove the lid to watch it escape the jar.
6. While doing the experiment fill out the observations worksheet.

Walk around to assist and observe students.

Once students have completed the experiment, have students volunteer to share what they observed, hypothesis they had, questions they came up with. Emphasize key vocabulary. Use their observations to reiterate information about the water cycle.

Experiment Explained: When you add the warm water to the jar, some of it turns to water vapor. The water vapor rises to the top of the jar where it comes into contact with cold air, thanks to the ice cubes on top. Water vapor condenses when it cools down. However, a cloud can only form if the water vapor has something to condense on to. In nature, water vapor may condense onto dust particles, air pollution, pollen, volcanic ash, etc. In the case of this activity, the water vapor condensed onto the hairspray.

References:

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