

Name: _____

WEATHER A JAR - OBSERVATION JOURNAL

Rain - Snow - Cloud - Frost - Tornado - Rainbow



1. In a small cup, mix the food coloring with some water.
2. Fill the clear jar with water until it is about 3/4 full.
3. Place the jar and the cup of colored water on the table.
4. Place a pipette in the cup of colored water.
5. Right before you are ready to do the experiment, spray a bunch of shaving cream in the jar until it is just below the top of the jar - there's our cloud.
6. Use pipette to drop colored water on the "cloud" and watch it start to rain.



I Think:

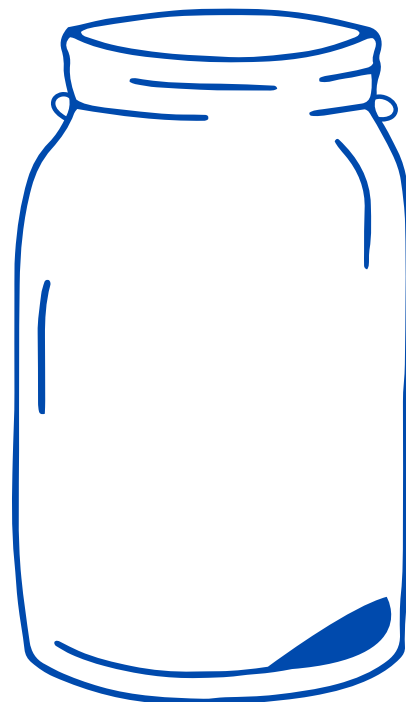
It will take _____ drops for it to start raining in the jar.

Draw what you see in the jar.



I saw:

It took _____ drops for it to start raining in the jar.



Fill in the blanks.

I Learned:

The shaving cream represents the clouds and the **W**_____ represents the **A**__. The colored water represents rain. As the colored water soaks into the "**C**_____", it gets heavy and eventually is so heavy that it can no longer hold the water. It "**R**_____" down into the jar - through the "air." It is just like real rain falls through the air.

Word Bank: Air Clouds Water Rains

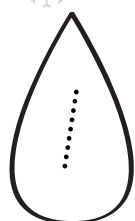
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1. Add 1/4 cup of baking soda and equal parts of shaving cream to a jar.
2. Cover tightly and shake until combined. You will start to see through the jar again when it's combined and feel it "thump" around.
3. Make a snowball! The snow will feel cold from the menthol/aloe shaving cream.



I Think:

It will take _____ seconds for the ingredients to turn into snow.



I saw:

It took _____ seconds for the ingredients to turn into snow.

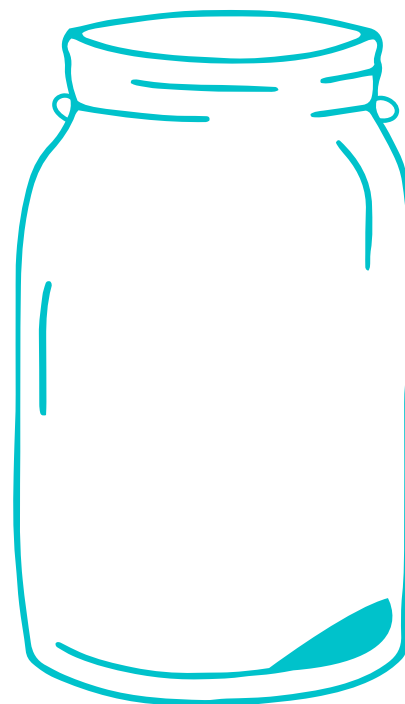


Fill in the blanks.

I Learned:

Snow is simply a bunch of **I**__ **C**_____. A lot of them! When you make a **S**_____, you push together the crystals with enough pressure, that some of the crystals **M**_____. When you pull your hands away and release the pressure, the water refreezes and holds the ball together. In this experiment, you're not making actual ice crystal snow, but the shaving cream holds the baking soda together. And the menthol in the shaving cream gives you a **C**_____ sensation.

Draw what you see in the jar.



Word Bank: Ice Crystals Cold Snowball Melt

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Rain - Snow - **Cloud** - Frost - Tornado - Rainbow



1. In a jar, fill it 3/4 of the way full with water.
 - a. Add food coloring if desired.
2. Spray hairspray into the jar and quickly close the lid.
3. Place a few ice cubes on top of the lid.
4. Watch the cloud form.

Draw what you see in the jar.



I Think:

It will take _____ seconds for the cloud to form.



I saw:

It took _____ seconds for the cloud to form.

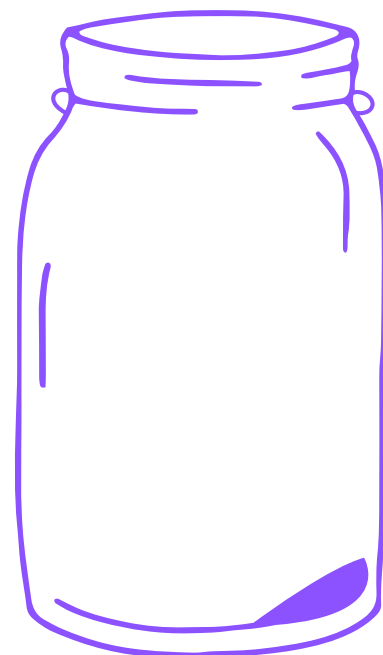


Fill in the blanks.

I Learned:

A **C** _____ is a grouping of tiny ice crystals or water droplets in the sky. Clouds form when warm, humid air rises and then cools, causing the **W** _____ vapor to condense into liquid droplets. If it's **C** _____ enough, the liquid droplets will solidify into ice crystals, too.

In this experiment, the hair spray seeds the water vapor and helps it condense into water droplets faster. What's the difference between **F** _____ and other types of clouds? Fog forms at ground level while other clouds form above the ground.



Word Bank: Cloud Water Fog Cold

Name: _____

WEATHER A JAR - OBSERVATION JOURNAL

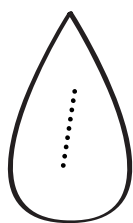
Rain - Snow - Cloud - **Frost** - Tornado - Rainbow



Frost in a Jar

1. Fill jar with ice and sprinkle salt on top.
2. Let sit for five minutes or until frost appears on glass.

Draw what you see in the jar.



I Think:

It will take _____ minutes for the jar to get frost on it.



I saw:

It took _____ minutes for the jar to get frost on it.

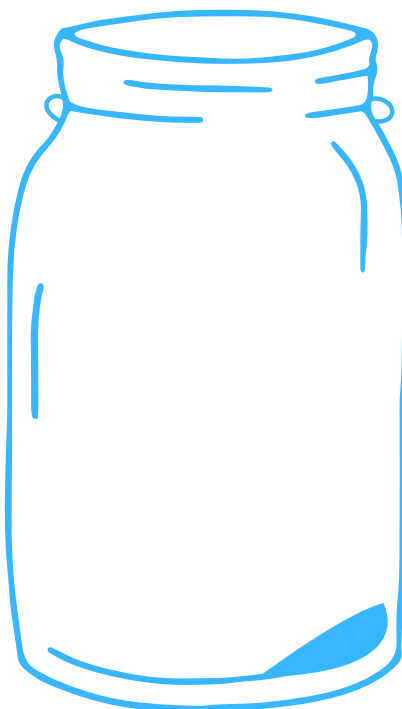


Fill in the blanks.

I Learned:

Ever walked outside to find your grass glistening or a thin sheet of soft **I**_____ on your car windshield? This is frost. It forms when **W**_____ vapor in the air is above the freezing point and then touches a surface that is below the freezing point like the ground or your car.

In this experiment, the ice chills the surface of the glass **J**_____ to below the freezing point and the water vapor in the air freezes on the glass, forming **F**_____.



Word Bank: Ice Water Jar Frost

Name: _____

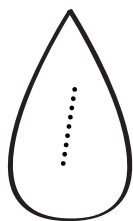
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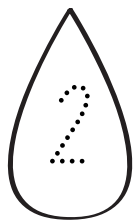
1. Add water, vinegar, and food coloring to jar and mix until color is combined.
2. Add dish soap and stir gently until combined.
3. Close the jar tightly and swirl until you see the vortex.

Draw what you see in the jar.



I Think:

It will take _____ seconds before the tornado in the jar stops spinning.



I saw:

It took _____ seconds before the tornado in the jar stopped spinning.



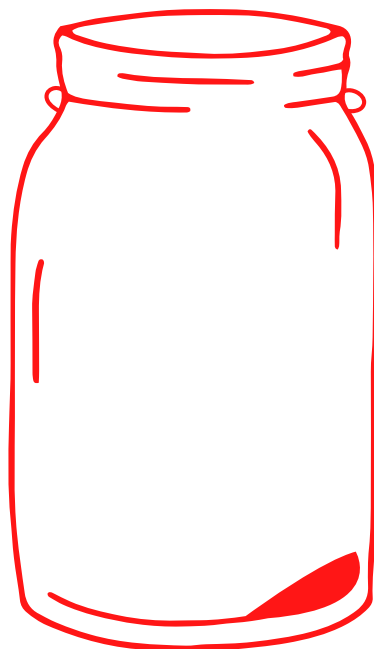
Fill in the blanks.

I Learned:

A **T**_____ is a rotating column of air that forms between a cumulonimbus cloud and the ground. Inside a giant super cell thunderstorm **C**____ is a rotating vortex of air that pulls warm, humid air from the ground and pushes cold, dry **A**____ towards the ground.

This creates a spinning funnel cloud that eventually is forced down to the ground and a tornado is born. **W**_____ speeds inside tornadoes can reach well over 300 mph for the most destructive, but rare F5 category tornadoes.

Word Bank: Tornado Cloud Air Wind



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1. Fill the jar with water.
2. Place jar on white paper in a sunny spot or shine a flashlight on it.
3. Adjust the angle of the light and jar until you can see the rainbow on the paper.

Draw what you see in the jar.



I Think:

I will see _____ colors of the rainbow inside of the jar.



I saw:

I saw _____ colors of the rainbow inside of the jar.

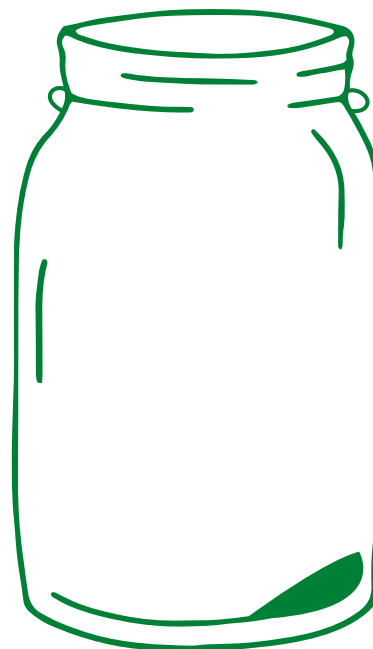


Fill in the blanks.

I Learned:

You may have the good fortune of seeing a rainbow when there's both **S**____ and **R**_____ in the forecast. When **S**_____ shines through droplets of rain, the light refracts (bends) back and then reflects inside the raindrop.

Red is always on the top of a rainbow in the **S**____ because red bends the least when refracted. Violet bends the most and creates the bottom of the arc. This is why you see the colors in an arc at different positions.



Word Bank: Rain Sun Sky Sunlight