**Solids, Liquids, and Gases**

**February 10th**

**1st grade**

**“I Can” Statements:**

-Describe how the physical properties of water can change

-Explain that the sun is a source of energy

-Communicate about observations, investigations, and explanations

**Materials:**

* Balloons with ice, water, and air.
* Hot plate
* Beakers
* Colored ice cubes
* Plate to cover beakers
* Cold and hot water

Station 1: (30 minutes)

This station is more of a conceptual lab rather than an experiment. Begin this station by describing and giving examples of solids, liquids, and gases.

*\*Discuss with the students the difference between solids, liquids, and gases, and ask them if they can give any examples of each. A very basic description of a molecule will be helpful for the students to know for this station.*

* Have 5 – 6 students stand in a circle (or straight line) and link arms. Explain to them that this is what water molecules are doing when it is frozen. When water is frozen, the molecules do not move, and it becomes a solid. Ask the students to try to move while still linking arms. Then ask them if it was easy for them to move.
* Have another 5 – 6 students stand in a circle or line and have them hold hands this time. They will be representing liquid, or water. Have the students move around while continuing to hold hands. Then ask them how if it was easy for them to move.
* First very briefly explain to the students what a gas is. Have another 5 – 6 students stand separate from each other, and ask them to move around, and then ask how easy it was for them to move. Explain how their free movement is like water when it is evaporated and turned into a gas.

Allow the students to pass around the 3 different balloons, and see if they can guess which ones are solids, liquids, or gases.

Station 2: (30 minutes) \*\**Sun represents the heat source*

- Fill a little less than half of the jar with warm/hot water.

- Have a student place the pan on top, and another student to add cold water and ice cubes.

- It will take a few minutes for the water to start evaporating. This is a good time to discuss with the kids how the raindrops are forming.

1. The hot water at the bottom is evaporating and turning into a gas or water vapor. That water vapor rises in the air and hits the cold pan. The cold from the pan turns the water vapor back into raindrops.
2. The hot water represents water on the ground, and the cold tin represents clouds.

- After a few minutes have passed, lift the tin up and look at the bottom. There should be a few collected raindrops! You have made rain!

Have beakers filled with both hot water and cold water. Have the students place a red ice cube in the beakers with hot water, and a blue ice cubes in the beakers with cold water. Ask the students which ice cube is melting faster and why?