5th Grade - Lesson 1.4 **Name: _____**

Activity Sheet

Evaporation, Condensation and the Water Cycle **Date: _____**

Safety: Wear safety glasses or goggles, and be sure to follow all safety instructions given by your teacher. Wash your hands after completing the activity.

ACTIVITY

Question to investigate:

What are the main processes in the water cycle that make it rain?

Materials

- Clear plastic container, such as a medium-size deli container
- Water
- Plastic wrap
- Rubber band
- Snack size zip-closing plastic bag
- Ice cubes (2–3)

Procedure

1. Pour room-temperature water into the clear plastic container so it is about ¼ full.
   This is a model of a lake or ocean.
2. Place a piece of plastic wrap over the container. With the help of a partner, use a rubber band to hold the plastic wrap on the container.
   This is a model of the level of the sky where most of the weather happens.
3. Put 2 or 3 ice cubes in a zip-closing plastic snack bag. Place the snack bag on the plastic wrap as shown.
   This needs to be cold because the area of the sky where weather happens is cold.

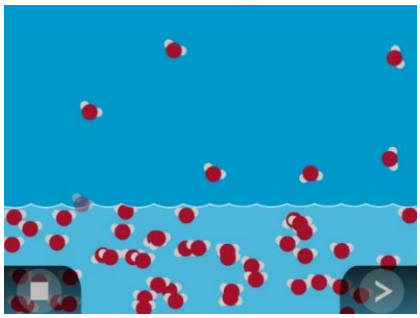
4. If you have a lamp, follow your teacher's instructions to shine it on your model. If you don't have a lamp, carefully bring your model over to a window where it can receive light from outside. The light is a model of the sun.

Let your model sit for about 15 minutes. During this time, answer the questions about the animations that showed the processes of evaporation and condensation.

5. Remove the plastic bag with ice from the plastic wrap on top of the container.

EXPLAIN IT WITH ATOMS AND MOLECULES

1. You saw an animation of water evaporating. Explain what happens to water molecules during the process of evaporation.



Water molecules break away from other water molecules in the water. They go up into the air. This is evaporation.

2. You saw an animation about condensation. Explain how water forms on the outside of a cold cup. Be sure to use water molecules in your explanation.

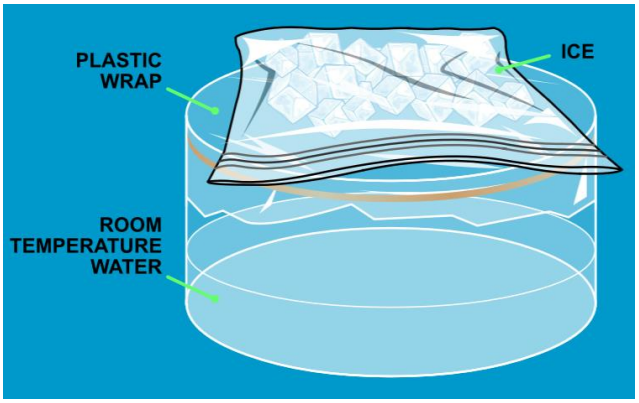
In condensation, water molecules in the air that are near the cold cup slow down and come together. Also, water molecules touch the cold cup and join together. When water molecules in the air change to liquid water, this is condensation.

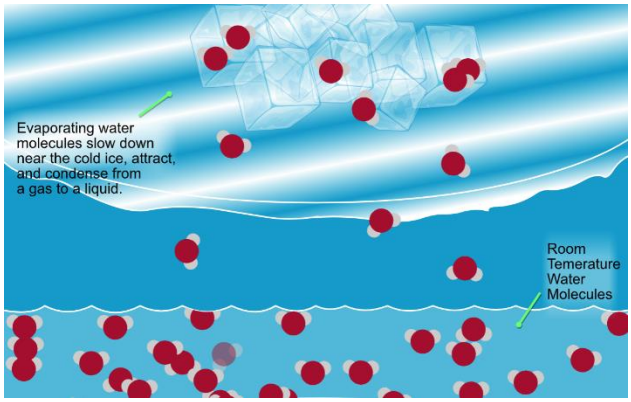
WHAT DID YOU OBSERVE?

3. When you look at your water cycle model after about 15 minutes, what do you notice about the inside of the plastic wrap?
   There are drops of water on the side of the plastic wrap that is facing the water.

4. Where do you think these water drops came from?
   Water molecules evaporated from the water, and moved up and touched the cold plastic wrap. These molecules slowed down and connected together to become liquid water.

5. You saw an animation of what happens in the water cycle model.
   Make a drawing of the molecules evaporating and condensing as part of the water cycle. Label and describe each step with as much detail as you can.





TAKE IT FURTHER

6. You saw a device that can change salt water into fresh water. Describe how this device uses evaporation and condensation to make salt water into fresh water.

Water molecules evaporate from the salt water and leave the salt behind. The water vapor continues to evaporate and contacts the inside of the cone where it condenses and drips down and collects in a ring as fresh water.