***Evaporation and Condensation***

***October 22, 2013***

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***Grade Level: 2 Subject: Science***

***Goal /Objective: Students will as a group distinguish between condensation and evaporation with 80% accuracy.***

***Students will tell what clouds are made of.***

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**Materials:**

|  |  |  |
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| 1.two clear glasses with ice  2.hot water  3.wet sponge  4.saucer | 5.worksheet  6.  7.  8. | 9.  10.  11.  12. |

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**Intro:**

*What are the four things that make weather?* (sun, wind, water, land)

*How is wind started?* (heat)

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**Lesson:**

Review vocab.

Introduce new vocab. (Evaporation—when a gas [air] becomes a liquid, Condensation—when a liquid becomes a gas [air])

Evaporation—going up. Condensation—coming down

Make a wet spot on the chalkboard with sponge.

Talk about water evaporating into the air.

*Is the water spot on the board getting less?*

Talk about water in the air, sometimes more, sometimes less—steam, water vapor, gas, humidity.

*Would you like to see the water in the air? We can condense some so that you can see it.*

Do experiment with ice water in cups showing condensation.

*Where does the water come from on the outside of the cup?* (from water in the air around the cup)

*Why? (*because the cold cup causes the water to condense, the molecules slow down, they stick together*)*

Ask other questions to get students to understand how the temperature difference causes condensation.

Do experiment with hot water in cup and ice on a saucer on top.

*Where did the water come from that sticks to the inside of the cup? What caused it to condense on the bottom of the saucer?*

Do experiment with sponge filled with water. Sponge is like the air, filled with water. Squeeze it—like cold air, to get water out. Dew—water condensing in the cool night. Fog—water condensing and staying in the air. Clouds—water condensing up high in the air, sticking together or condensing around a small piece of dirt or dust or pollen that the water vapor bumps into.

Explain how little tiny drops of water move more quickly and get farther apart during evaporation. Heat speeds them up. They move more slowly and come together during condensation. Cold slows them down.

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**Closing:**

Review condensation and evaporation with motions.

* Evaporation (hands together in two fists, open and spread out hands—poof, water is gone)
* Condensation (Opposite of evaporation, hands out, then come together in fists)

*What are clouds made of?* (water)

*What makes dew?* (cooler night time temperature condenses water in the air)

*How does the pavement dry off after a rainy day? Does it dry off faster in the summer or winter?* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Homework / Assignment:**

Worksheet for students from Purposeful Design blackline masters *Evaporation and Condensation.*

Have students work together in groups to complete the worksheet.

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Lesson plan taken from Purposeful Design Science, Level Two, Weather (a division of ACSI)