

Water Cycle Unit Outline

Objectives and GLE's:

- ☺ Explore how raindrops form.
- ☺ Distinguish between the main processes of the water cycle.
- ☺ Discuss in sequence the main process of the water cycle.
- ☺ Recognize water evaporates (liquid water changes into a gas as it moves into the air)
- ☺ Measure and compare the temperature of water when it exists as a solid to its temperature when it exists as a liquid
- ☺ Investigate and recognize water can change from a liquid to a solid (freeze), and back again
- ☺ Evaporation: Water evaporates from the lake and changes to water vapor
- ☺ Condensation: Water vapor cools as it rises and tiny drops of water form clouds
- ☺ Precipitation: The water gets too heavy for the clouds and falls as rain or snow

Day	Activity
1	Water Cycle Video
2	Water Cycle Reader's Theatre
3	<p><i>FOCUS: What Makes Rain?</i></p> <p><i>Materials: Jar w/Lid, 2 small jars, water, ice cubes, tin cans, zip-loc gallon bags</i></p> <ol style="list-style-type: none"> 1. Pour warm water into the jar. Place lid upside down over the top of the jar. Sit for a few minutes. Add ice to the lid. Darken room and turn on overhead. 2. Students should be able to see wisps of clouds forming and moving upwards. 3. Zip-loc bags-Students create Water Cycle in a Bag (Recycle that Water).
4	<p><i>FOCUS: What is The Water Cycle?</i></p> <p><i>Materials: Lesson Outline</i></p> <ol style="list-style-type: none"> 1. Shared Reading: The Water Cycle pg D14-D21 2. Students will complete Lesson Outline following reading.
5	<p><i>FOCUS: What Goes Up Must Come Down?</i></p> <p><i>Materials: Interpret Illustrations, Water Cycle Sequence</i></p> <ol style="list-style-type: none"> 1. Shared Reading: The Water Cycle pg D18-D19 2. Students will complete Interpret Illustrations 3. Students will work in pairs to complete the water cycle sequence page and create water cycle posters.
	<p><i>FOCUS: Water Cycle Web Quest Project</i></p> <p><i>Materials: Water Cycle Web Quest</i></p> <ol style="list-style-type: none"> 1. Pass out web quest and explain extra credit options.

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6	<p><i>FOCUS: What conditions are needed for evaporation? Where did it all go?</i></p> <p><i>Materials: Wet sponges, chalkboard, dishes of water, food coloring, hair dryer</i></p> <ol style="list-style-type: none"> 1. Wipe wet sponges across boards. Where does the water go? 2. Discussion of conditions for evaporation. 3. We have 2 dishes (deep/shallow) of water. What will happen if we put the same amount of water into each dish? Will they evaporate at the same rate? How might the difference affect evaporation? Fill dishes and set by window. 4. What about food coloring? What is different about this water than the other water.
7	<p><i>FOCUS: What conditions are needed for evaporation? Where did it all go? Part 2</i></p> <p><i>Materials: Desk lamps, hair dryers, paper fans, salt, cups of water (one per group)</i></p> <ol style="list-style-type: none"> 1. What has happened to the shallow/deep dish? What has happened to the water with food coloring mixed in? What does this tell us about evaporation? 2. We notice that debris like food coloring doesn't evaporate with water. What other kinds of debris won't evaporate with water? Where can we see this in nature? (Salt in oceans) 3. Race to Evaporate: Groups will race to see whose group can evaporate first.
8	<p><i>FOCUS: What conditions are needed for evaporation? Where did it all go? Part 3</i></p> <p><i>Materials: Crayons, desk lamps, thermometers, cups, tap water</i></p> <ol style="list-style-type: none"> 1. Students will perform "Where Does It Go?" experiment.
9	<p><i>FOCUS: Why does Condensation Occur? Pulling Water from the Air!</i></p> <p><i>Materials: Hot water, ice cubes, pitchers, thermometers, cups, paper towels</i></p> <ol style="list-style-type: none"> 1. Students will perform "Pulling Water from the Air" experiment.

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10	<p><i>FOCUS: Condensation Fascination</i></p> <p><i>Materials: Cups, Water bottle, hot water, cold water, food coloring, water droppers, wax paper</i></p> <ol style="list-style-type: none"> 1. Drink Story 2. Can you make water appear on the outside of your glass? Where is it coming from? Is the cup leaking? Add food coloring to the water. Is the water on the outside the same color as the water on the inside? Where else might water be coming from? 3. Write student definitions on board 4. What about hot water? Pour hot water into water bottle and close lid. Is water condensing on the outside of the container? Is this still condensation? Did this occur faster or slower than cold water? How do you think temperature affects condensation? 5. Students will use eye droppers to place several drops of colored water on wax paper. What happens to the water drops? What happens when they come close to each other? How does this relate to condensation? What about clouds?
11	<p><i>FOCUS: Rain, Rain Go Away</i></p> <p><i>Materials: Sponges, dishes of water, salt shakers filled with water, glass jars, metal pie plates, ice, matches</i></p> <ol style="list-style-type: none"> 1. Using the sponges and water, how can you cause the water droplets inside the sponge (cloud) to fall into the dish as rain? At what point do the water droplets fall? 2. Discuss the 4 main ways of precipitation (rain, sleet, snow, and hail) 3. Students will write a friendly letter to a friend explaining how rain happens and why we should be thankful for it
12	<p><i>FOCUS: Creating the Water Cycle</i></p> <ol style="list-style-type: none"> 1. Students will be shown the rubric used on the common assessment and will practice creating their own water cycle 2. Students will create water cycle vocabulary flip book.
13	<p><i>FOCUS: Water Cycle Review</i></p>
14	<p><i>FOCUS: Water Cycle Common Assessment</i></p>