

Cincinnati Public Schools
Remote Learning Plan
Grade 7
SCPA - 7 Science Moraga
Week 2- Hydrocycle

Student Name _____ **Bell** _____

Weekly Outcomes:

- **Learning Outcome -Week 2: Hydro Cycle - Explain the different parts of the hydrologic cycle. Explain how water is used and even wasted in our society.**
- **Directions** - Do your Reading and Questions for the week. Then select and complete activities from the menu for that week. **OR** go one Schoology
- **Task** - Complete Reading Comprehension and the Read and Respond Non Fiction for the week and 100 points worth of work from the menu **for the week.**
- **How do I know if my work is good?**
 - Information is accurate.
 - All parts of the question are answered completely.
 - Work is detailed and completes the required task.
 - If applicable, work is colorful and visually appealing.
- **What if I need help?**
 - Visit www.discoveryeducation.com and read the Engage and Explore tabs for the following lessons (Do this through Schoology on the left hand side bar)
 - 6.2 (Water Cycle)
 - Visit www.studyjams.scholastic.com and explore the slide shows/videos listed below. Once finished, complete the "Test Yourself" activity.
 - Weather & Climate: Water Cycle

Reading Comprehension Week 2: Hydro Cycle - Explain the different parts of the hydrologic cycle. Explain how water is used and even wasted in our society.

Water Cycle

This text is from the U.S. National Oceanic and Atmospheric Administration: National Weather Service.

The hydrologic cycle involves the continuous circulation of water in the Earth-Atmosphere system. At its core, the water cycle is the motion of the water from the ground to the atmosphere and back again. Of the many processes involved in the hydrologic cycle, the most important are...

- Evaporation
- Transpiration
- Condensation
- Precipitation
- runoff

Evaporation

Evaporation is the change of state in a substance from a liquid to a gas. In meteorology, the substance we are concerned about the most is water. For evaporation to take place, energy is required. The energy can come from any source: the sun, the atmosphere, the earth, or objects on the earth such as humans. Everyone has experienced evaporation personally. When the body heats up due to the air temperature or through exercise, the body sweats, secreting water onto the skin. The purpose is to cause the body to use its heat to evaporate the liquid, thereby removing heat and cooling the body. It is the same effect that can be seen when you step out of a shower or swimming pool. The coolness you feel is from the removing of bodily heat to evaporate the water on your skin.

Transpiration

Transpiration is the evaporation of water from plants through stomata. Stomata are small openings found on the underside of leaves that are connected to vascular plant tissues. In most plants, transpiration is a passive process largely controlled by the humidity of the atmosphere and the moisture content of the soil. *Of the transpired water passing through a plant only 1% is used in the growth process of the plant. The remaining 99% is passed into the atmosphere.*



Condensation

Condensation is the process whereby water vapor in the atmosphere is changed into a liquid state. In the atmosphere condensation may appear as clouds or dew. Condensation is the process whereby water appears on the side of an uninsulated cold drink can or bottle.

Condensation is not a matter of one particular temperature but of a difference between two temperatures; the air temperature and the dew point temperature. At its basic meaning, the dew point is the temperature where dew can form. Actually, it is the temperature that, if the air is cool to that level, the air becomes saturated. Any additional cooling causes water vapor to condense. Foggy conditions often occur when air temperature and dew point are equal.

Condensation is the opposite of evaporation. Since water vapor has a higher energy level than that of liquid water, when condensation occurs, the excess energy in the form of heat energy is released. This release of heat aids in the formation of hurricanes.



Precipitation

Precipitation is the result when the tiny condensation particles grow too large, through collision and [coalescence], for the rising air to support, and thus fall to the earth. Precipitation can be in the form of rain, hail, snow or sleet. Precipitation is the primary way we receive fresh water in earth. On average, the world receives about 38½" (980 mm) each year over both the oceans and land masses.

Runoff

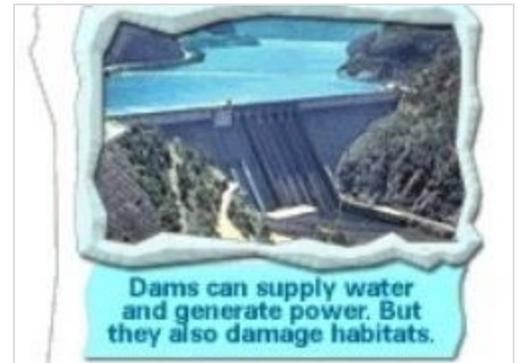
Runoff occurs when there is excessive precipitation and the ground is saturated (cannot absorb any more water). Rivers and lakes are results of runoff. There is some evaporation from runoff into the atmosphere but for the most part water in rivers and lakes return to the oceans.

If runoff water flows into the lake only (with no outlet for water to flow out of the lake), then evaporation is the only means for water to return to the atmosphere. With evaporation only pure water [is] evaporated, and therefore any contaminants and salts are left behind. The result is the lake becomes salty as in the case of the Great Salt Lake in Utah or Dead Sea in Israel. Evaporation of this runoff into the atmosphere begins the hydrologic cycle over again. Some of the water percolates into the soil and into the ground water only to be drawn into plants again for transpiration to take place

Humans Put Water to Work

You've probably had a drink of water or washed your hands today. But people use water for so many other purposes, like cleaning stuff, transportation, and generating hydroelectric power. Just as nothing can live without water, not much can be made without it, from cotton candy to cotton T-shirts.

Because water is so useful, most people live along coastlines, rivers, and lakes. Where fresh water is limited, people have used many technologies—like wells, dams, and canals—to store and move it. Sometimes these technologies damage habitats. Other species have to compete with humans for water. This may help explain why so many creatures that live in fresh water are endangered. We need to be smarter and more careful about how we use water in order to make sure that there's enough for all life on Earth.



We Need to Take Care of the Water Planet

Water is precious. We can't get more. How do we make sure there is enough clean, fresh water to share with all living things? Remember that every drop we use—or waste—continues through the water cycle. Stuff we put down the drain ends up in someone—or something—else's water. Chemicals like fertilizers and pesticides pollute lakes and oceans, harming the organisms that live in them.

We need to protect swamps and riverbanks. These wetlands clean water naturally and provide important habitats for many wild birds, fish, and other species. People are working to restore damaged or lost wetlands. We can use water more wisely. For example, it takes a lot of energy to produce bottled water, and not everyone recycles the plastic bottles. We can use less, too, in simple ways like drinking tap water and turning off the faucet while we brush our teeth.

Together, we can protect fresh water now and for the future.

Read and Respond NONFICTION

Article/Author: _____

Three Important Facts or Statistics:

1. _____
2. _____
3. _____

One Opinion From the Article:

My Opinion About the Article:

Main Idea:

Supporting Detail 1:

Supporting Detail 2:

Supporting Detail 3:

Author's Purpose

- Persuade
- Inform
- Entertain
- Explain
- Describe

Text Structure

- Description
- Problem & Solution
- Order & Sequence
- Cause & Effect
- Compare & Contrast

Water Cycle ?'s

1. Which is an example of condensation?

- A. 12 inches of snow fall on December 12th.
- B. On a hot day, water on the sidewalk quickly disappears.
- C. During a hurricane, 3 inches of rain fall in an hour.
- D. A layer of water appears on the outside of a cup of ice water soon after it was poured.

2. What is the source of energy for all parts of the water cycle?

- A. Wind
- B. The Ocean
- C. Soil
- D. The Sun

3. Mark notices a puddle of water on his way home from school. The next day the puddle is gone. What most likely happened to the puddle of water?

- A. It melted.
- B. It condensed
- C. It precipitated
- D. It evaporated

4. The water that was around when many hundreds of years ago:

- A. Is gone, and has been for a long time
- B. Is about halfway gone
- C. Is the same water we use today
- D. Would be really dirty if it were still around

5. As time goes by, and water goes through the water cycle again and again, the amount of water on Earth _____.

- A. Increases
- B. Decreases
- C. Stays the same
- D. Goes up and down

6. Snow and hail are examples of _____.

- A. Runoff
- B. Precipitation
- C. Condensation
- D. Water vapor



7. The picture shows a glass of cold water. There are water drops on the outside of the glass. Where did the water come from?

- A. It leaked through the glass.
- B. It was sweat from a person.
- C. The glass was tipped over by someone.

D. It condensed from the warmer air meeting the cold glass

8. Once water makes it all the way through the water cycle, the water _____.

- A. Starts the cycle over again
- B. Has finished that cycle and moves onto a different cycle
- C. Disappears
- D. Stays in the stage at which it finished

Comprehension Question

1. People use water for many purposes, like drinking, washing their hands, and cleaning stuff. What is one other purpose for which people use water? Support your answer with at least two pieces of information from the text.

Name _____ Date _____ Period _____

The Water Cycle

1. The water cycle is

2. Evaporation occurs when

Water evaporates from _____

3. Transpiration refers to _____

4. Evapotranspiration occurs when

5. Condensation occurs when

Condensation results in _____

6. Precipitation occurs when

7. Groundwater refers to

8. Runoff refers to

9. Infiltration occurs when

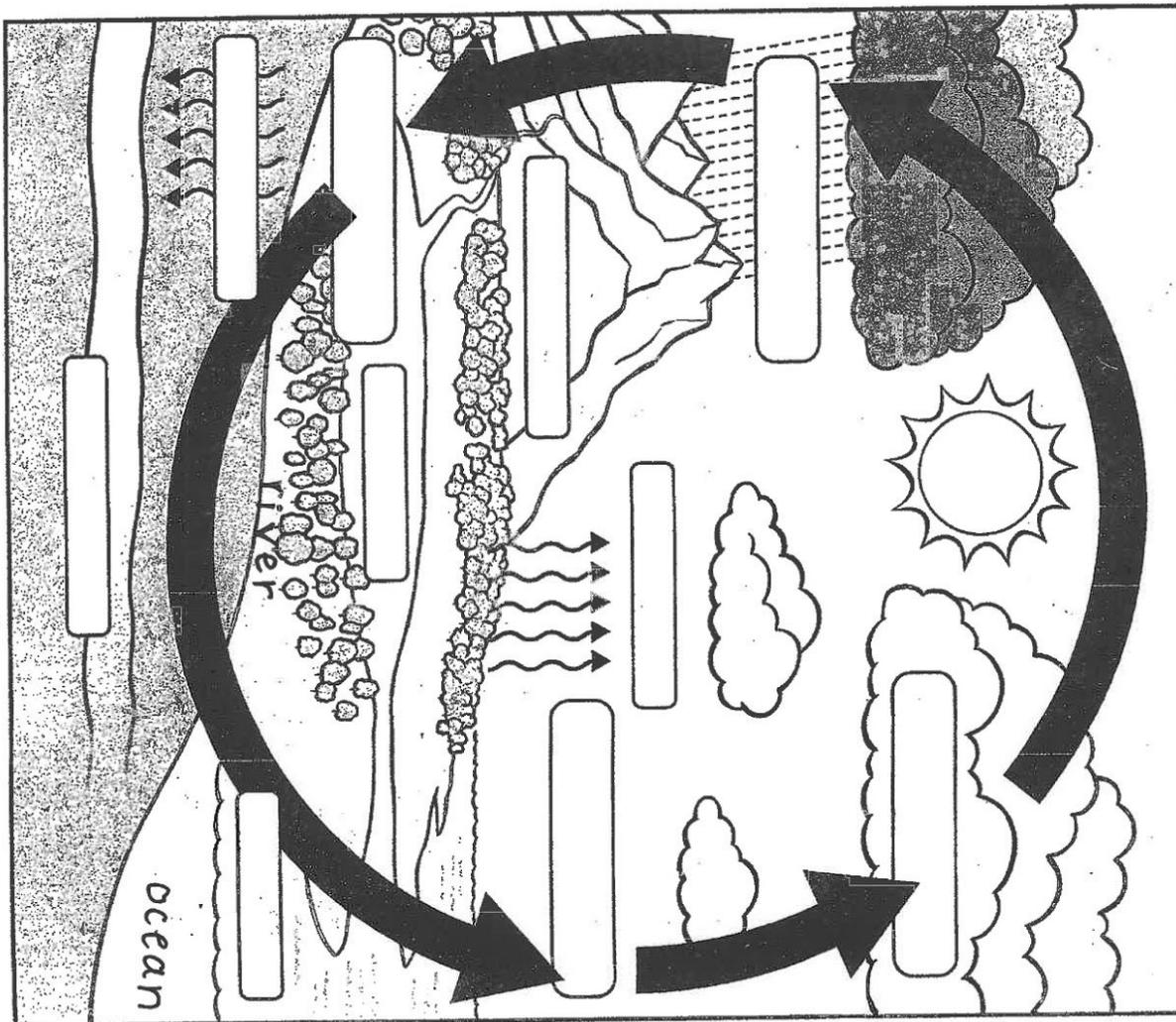
Most rainwater and snow _____

10. **Label your diagram on the other side of this sheet.** Use the following terms:

Precipitation, collection, groundwater, infiltration, salt water, evaporation, transpiration, fresh water, condensation, surface runoff.

Labeling the Water Cycle

Fill in the blanks with the correct parts of the water cycle.



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Tides Menu

Directions: Choose activities from the menu below after finishing your Reading Comprehension and worksheets for the week. You should have a total of 100 points.

25 POINTS

Week 2: Hydro Cycle - Explain the different parts of the hydrologic cycle. Explain how water is used and even wasted in our society.

- Describe in words or pictures the different parts of the hydrologic cycle and how you use water.
- Create a or Fib/Fact about the different parts of the hydrologic cycle and how society water

50 POINTS

Week 2: Hydro Cycle - Explain the different parts of the hydrologic cycle. Explain how water is used and even wasted in our society.

- Make a flowchart to illustrate the sequence of events of the hydrologic cycle
- Make a positive/ negative collage of pictures of how society uses water

75 POINTS

Week 2: Hydro Cycle - Explain the different parts of the hydrologic cycle. Explain how water is used and even wasted in our society.

- Prepare a list of criteria to judge a poster that depicts the different parts of the water cycle.
- Design a questionnaire to gather information on how people use water in our society.

Hydrocycle Menu Work -Create a one pager. For each box not used color it in

