

HOW DOES WATER CYCLE?

PART 6 – Two 60 minute sessions

OVERVIEW

Students read a one-page information sheet about the water cycle. After reading the information, the class will discuss different ways that water cycles. Each student draws the water cycle and illustrates how their schoolyard is included and where there is impact on the water cycle based on what they learned during their investigations.

Standards: 3a, 3b, 3c, 3d, 3e

Materials

- Information Sheet C – How Does Water Cycle? – 1 per student
- Poster paper
- Drawing/writing materials
- Information Sheets A & B

Vocabulary Words

- Condensation
- Evaporation
- Groundwater
- Precipitation
- Runoff

Other Resources

See Teacher Resources, page 116 for additional activities that relate to the water cycle.

Helpful Hints

- When discussing cycles it is important that students visualize the unending circle.
- After reading the Information Sheet, depending on the level of comprehension, you can ask students to figure out one way that water cycles. They can begin with clouds and rain, or for a more difficult level, water from a drinking fountain. Be sure that if they start out at one place, that they end at that same place – to complete the cycle. For example:
 - Drinking fountain to drain
 - Drain to sewer pipe
 - Sewer pipe to wastewater treatment plant
 - Wastewater treatment plant to river
 - River to ocean

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PART 6: HOW DOES YOUR WATER CYCLE?

- Ocean to clouds
 - Clouds to rain
 - Rain to river
 - River to reservoir
 - Reservoir to water pipes
 - Water pipes to drinking fountain
- If students have trouble linking the water cycle to their school, have them look at their Schoolyard Review and their indications of where water comes from and where it goes.
 - When students are working independently on their own diagrams, allow them to use Information Sheets A and B as resources.



PROCEDURE

1. Have each student read Information Sheet C – How Does Water Cycle?
2. As a group, discuss what they read and the important steps in the water cycle – evaporation, condensation, and precipitation.
3. As a class or in student groups, illustrate different ways that water cycles.
4. To represent their understanding of the water cycle and its link to water quality, have students work independently to illustrate the water cycle and include their schoolyard as one of the steps. Have them include some form of land pollution as part of their diagram and where it is introduced in the cycle. For each step of the process, students should write a paragraph explaining what is happening.

GUIDED QUESTIONS



- Why is the majority of Earth's water not available for humans to drink?
- Liquid water changes to water vapor through what process?
- What are rain, sleet, and snow called as part of the water cycle?
- How is the sun part of the water cycle?
- What are some examples of how humans depend on the water cycle for their needs?
- How do humans impact the water cycle?

HOW DOES WATER CYCLE?

While observing your school grounds, you probably noticed that during a sunny day water that landed on a concrete surface soon disappeared. Or, water that landed on grass seeped into the soil. Perhaps on a rainy day you observed the flow of water moving across the parking lot and into the street. All this movement of water is part of its cycle.

Most of the Earth's water supply is salt water. Only a tiny fraction of Earth's water is usable fresh water. People depend on fresh water for their everyday health and uses. This water is limited, but it never runs out because water is constantly moving and renewed by the water cycle.

Every day the sun warms salty ocean water, causing water particles to evaporate and enter the air as water vapor, leaving behind the salt. Water from rivers, lakes, plants, and other sources also give off water vapor. High in the atmosphere, water vapor condenses into tiny liquid drops of water, forming clouds. Finally, droplets of fresh water fall to Earth as rain or snow, called precipitation.

When water reaches the Earth, it will either seep into the ground to become groundwater, run off the land and return to lakes or the ocean, or if fallen on a hard surface, evaporate back into the air – all part of the cycle of water.

The water cycle is at work everyday! In fact, rain water that falls in San Francisco today, may someday become snow falling in the mountains over Alaska. The water you use to brush your teeth today may someday end up watering someone's garden.

Where does the water that flows across the school playground go? At what stage is it in the water cycle? What can be done to ensure that enough of that water stays clean and is allowed to make its way through the cycle naturally?

