

The Water Cycle Lesson Plan

OBJECTIVES

- Explain the stages of the water cycle
- Understand how water is reused and recycled through Earth's systems
- Observe and record evidence of the water cycle

CLASS TIME

45 minutes

MATERIALS

- Pens, pencils, colored pencils, crayons or markers
- Quart-size resealable plastic bags
- Water
- Blue food coloring
- Permanent markers
- Tape
- The Water Cycle Worksheet (*included*)

Procedure

1. The day before the lesson, prepare several quart-size resealable plastic bags by adding a small amount of water tinted with blue food coloring. Seal the bags and tape them to a sunny window so they're ready for the activity.
2. On the day of the lesson, begin by asking students, **"Where does rain come from?"** Some answers might include: clouds, the sky, storms.
3. Next, ask students, **"Have you ever seen a puddle disappear when it's sunny? Where does the puddle go?"** Some answers might include: it dries up, it soaks into the ground.
4. Then, ask students, **"What happens to water after it rains?"** Some answers might include: it goes into rivers, it goes into lakes, it goes to the oceans, we drink it, plants drink it.
5. Next, explain that water on Earth moves through a continuous cycle made up of four main stages: **evaporation, condensation, precipitation and collection**. Collection is also known as runoff.
6. Then, break students into pairs or small groups and assign each pair or group one of the four stages. Have groups use the *Water Cycle Worksheet* to learn about their stage of the water cycle. Use reliable research sources, such as: <https://water.usgs.gov/edu/watercycle-kids-beg.html>

7. As students progress through the worksheet, they will need to observe the water cycle model bags taped to the window. Help them identify each stage of the water cycle, such as the evaporated water they can't see, the mist condensing on the bag and the water collected at the bottom. They may even get lucky enough to see some precipitation! Encourage students to talk to other pairs and groups about their stage of the water cycle and make observations together.
8. After twenty minutes, or once everyone has completed the worksheet, gather the class back together. Using the *Critical Thinking Questions* as a guide, discuss what the class has learned about the four stages of the water cycle, letting each group talk about their research. Cross off each question the students can now answer.

Links

<https://water.usgs.gov/edu/watercycle-kids-beg.html>

CRITICAL THINKING QUESTIONS

1. What are the four stages of the water cycle, and what happens during each one?

Possible answers:

- During **evaporation**, the sun heats water in oceans, lakes and rivers, turning it into water vapor that rises into the air.
- During **condensation**, water vapor cools as it rises and turns back into tiny liquid droplets, forming clouds.
- During **precipitation**, water falls back to Earth as rain, snow, sleet or hail.
- During **collection**, water gathers in oceans, lakes, rivers and underground, where the cycle can begin again.

2. How are the four stages of the water cycle connected to each other?

Possible answers:

- Each stage leads directly into the next one, so the cycle keeps repeating.
- Water that collects in oceans and lakes is the same water that will eventually evaporate again.
- If one stage sped up or slowed down, it would change how the other stages happen too.

CRITICAL THINKING QUESTIONS (CONT.)

3. Why is the water cycle important to life on Earth?

Possible answers:

- *It provides fresh water for plants, animals and people to drink.*
- *It helps shape weather and climate patterns around the world.*
- *It moves water from oceans to land, refilling lakes, rivers and groundwater that living things depend on.*

The Water Cycle

Name_____

Water is always moving through the world around us, changing from a liquid to a gas and back again. This journey is called the water cycle. Today, you will become an expert on one stage of the water cycle and build a model to watch it happen for yourself. Research your stage and organize your notes below.

My stage of the water cycle is:	
What happens in my stage is:	
Some places I might see my stage are:	

Now, draw a picture of your stage of the water cycle in action!

It's time to watch the water cycle in action! Observe the water cycle models taped to the window and answer the questions below:

Is your stage of the water cycle present in the models? Where?

How is your stage of the water cycle interacting with your classmates' stages?

Why do you think the bag needs to be taped to the window?

If something changed with your stage of the, or if your stage didn't happen at all, how would that affect the rest of the water cycle?

Water is always on the move! Follow a single drop of water on its amazing journey through the water cycle. Imagine you're a tiny drop of water floating in the ocean. The sun warms you up, and you rise into the sky as water vapor. What happens next? Continue tracing your drop's adventure as it moves through each stage of the water cycle until it falls as rain and lands in a puddle outside your school.

Draw your water drop's journey below, and label each stage of the water cycle along the way. Remember—even after your drop lands in the puddle, its journey isn't over. The water cycle never ends!

