

LESSON PLAN

The Water Cycle Adventure

Students will observe and explore the water cycle using a jar experiment to simulate evaporation, condensation, and precipitation. They will discuss real-world applications and identify key phases in a fun and interactive way.

**Recommended
age for this game**

**6-9
years old**

**45 - 60
min** **Duration**

Learning Objectives

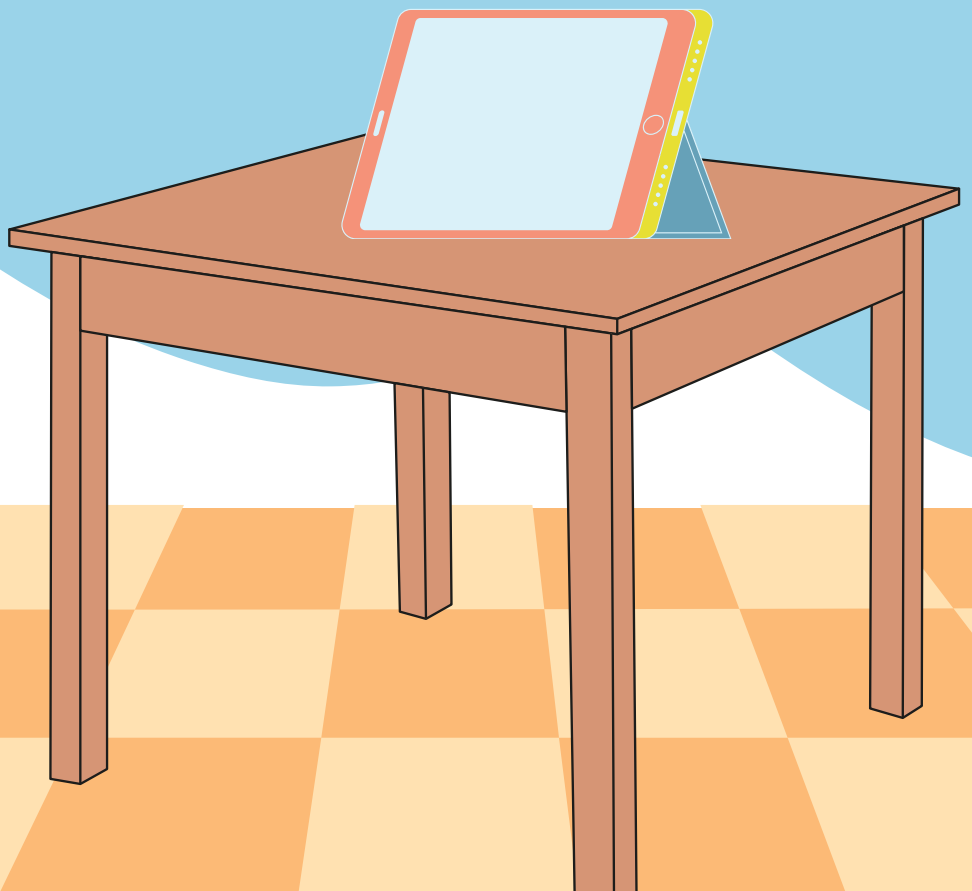


- Understand the four main stages of the water cycle: evaporation, condensation, precipitation, and collection.
- Observe and analyze real-world applications of the water cycle by linking it to natural phenomena (e.g., rainfall, cloud formation, puddles drying).



Materials and tools needed

- Warm water
- Ice cubes
- Clear jar or plastic container with a lid
- Small plate or plastic cover
- Food coloring (optional)
- Printable water cycle diagram (see [references](#))



Guidance for Teachers

Activity description

1. Introduction & Demonstration: The teacher leads a discussion on the water cycle and demonstrates how evaporation, condensation, and precipitation work using a simple jar experiment.
2. Hands-on Experimentation: Students conduct their own water cycle in a jar experiment, observing condensation and precipitation in action.
3. Water Cycle Diagram Activity: Students draw and label the different stages of the water cycle on a worksheet, reinforcing their understanding.
4. Technology Integration: Students watch a short animation on the water cycle to visualize how water moves through different stages in nature.
5. Discussion & Reflection: A group discussion on real-world examples of the water cycle, followed by a quiz to review key concepts (See Annex 1 for quizz questions).



Guidance for Teachers



Preparation

- Gather materials and ensure all students have access to jars and water.
- Prepare a short video or simulation about the water cycle.
- Set up the classroom for hands-on experimentation.
- Create simple worksheets for students to draw and label the water cycle stages.

Implementation steps

Introduction

- Discuss where water comes from and where it goes after rain.
- Show a short animated video of the water cycle.
- Ask students to share what they already know about rain, clouds, and water.





Guidance for Teachers

Implementation steps

Hands-on Experiment - Water Cycle in a Jar

- Fill a clear jar with warm water (about halfway full).
- Cover the jar with a plastic plate or lid.
- Place ice cubes on top of the cover.
- Observe: After a few minutes, students will notice condensation forming inside the jar (like a cloud!).
- Discuss how warm water evaporates, cools down, and turns into condensation before falling back as precipitation.

OPTIONAL

- Add food coloring to the water to visualize movement better.





Guidance for Teachers

Implementation steps

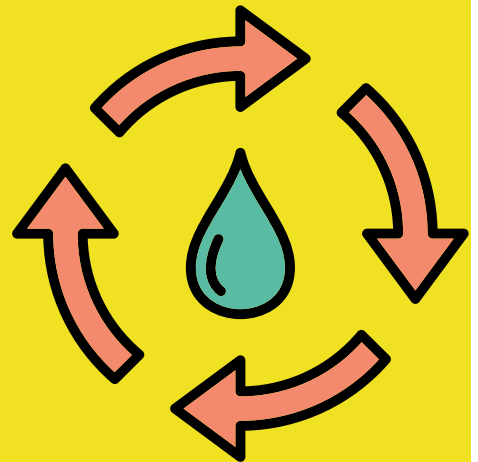
Reflection and discussion

- Ask students questions like:

???????

- **What happens when the sun shines on a lake?**
- **What happens when clouds get too heavy?**

- Have students discuss the importance of the water cycle in nature.



Follow-up and reflection



1. Expected Outcome:

- Students understand how the water cycle works and can explain it in their own words.
- Students can identify the four main stages using a diagram or experiment observations.

2. Student Activities:

- Interactive quiz: Use Kahoot! or Google Forms to check their understanding (Questions in [Annex 1](#))
- Draw and label their own water cycle diagram.

◦ **Discussion**

What would happen if the water cycle stopped?

Where do we see this cycle in real life?

Student Activities

Activity description	Expected outcome	Technology integration
Create a Mini Water Cycle	Students will understand how the water cycle functions by observing evaporation, condensation, and precipitation.	Use a short educational video to illustrate water cycle stages.
Hands-on Jar Experiment	Students will see condensation and precipitation in action.	Take photos of the experiment and create a presentation.
Labeling Water Cycle Diagram	Reinforce knowledge of water cycle stages through visual learning.	Use an interactive quiz (e.g., Kahoot) to test understanding.
Discussion & Reflection	Students will articulate how the water cycle affects the environment.	Conduct a class discussion and use a digital whiteboard for brainstorming.



Reflective questions for students

- What did you learn about the water cycle that surprised you?
- How can you apply what you learned today to real-world situations?
- Where does this happen in nature?
- What happens when a puddle disappears on a hot day?



Differentiation ideas

- **For advanced students:** Ask them to predict what would happen if the water cycle changed (e.g., what if there was no sun or no condensation?).
- **For students with special needs:** Use visual aids like large, color-coded labels and provide extra guidance in small groups.



Tips

- Adjust explanations to the students' age level by using relatable terms like "water disappearing" instead of "evaporation."
- Before the experiment, ask students what they think will happen when the warm water meets the ice.
- Allow students to take turns pouring water, placing ice, and making observations to keep them engaged.
- Relate the water cycle to everyday examples like puddles drying after rain or steam from a kettle.
- Draw or print a large water cycle diagram to reinforce the concept.
- Offer hands-on activities for kinesthetic learners, discussions for verbal learners, and videos for visual learners.
- Set clear time limits for each activity to ensure all steps are completed within the lesson.
- Guide students in discussing their observations and linking them to the water cycle stages.

Additional materials and references

Video “The Water Cycle”

<https://www.youtube.com/watch?v=ncORPosDrjI>

Interactive Water Cycle

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

Examples of the worksheets for kids to draw themselves or for teacher to print and ask to fill in

<https://worksheetzone.org/science/water-cycle-worksheet>

Kahoot: <https://create.kahoot.it/auth/register>



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ANNEX 1

Questions for the quizz

1. Which stage of the water cycle happens when water changes from a liquid to a gas?

- A) Condensation
- B) Precipitation
- C) Evaporation**
- D) Collection

2. What causes condensation in the water cycle?

- A) The Sun heating up the water
- B) Water vapor cooling down**
- C) Rain falling from clouds
- D) Water soaking into the ground

3. What is precipitation?

- A) Water turning into vapor
- B) Water falling from clouds as rain, snow, or hail**
- C) Water collecting in lakes and oceans
- D) Water moving underground

4. Where does most of the Earth's water collect?

- A) Rivers
- B) Lakes
- C) Clouds
- D) Oceans**

5. What happens when the sun heats up water in a lake?

- A) It turns into ice
- B) It evaporates into the air**
- C) It forms clouds immediately
- D) It disappears forever