# Teacher Preparation Lesson Plan

**Subject Area:** Science
**Unit Title:** Water Cycle
**Grade Level:** 6-8
**Lesson Number:** 1 of 7

**Duration:** 45 minutes
**Date:** March 10, 2023
**Teacher:** Ms. Johnson
**Room:** Science Lab

## Curriculum Standards Alignment

**Content Standards:**

- Understand the water cycle and its processes
- Explain the importance of water in the environment

**Skills Standards:**

- Critical thinking and problem-solving
- Communication and collaboration

**Cross-Curricular Links:**

- Math: data analysis and graphing
- Language Arts: writing and presentation

## Essential Questions & Big Ideas

**Essential Questions:**

- What is the water cycle and how does it affect our environment?
- How can we conserve water and reduce waste?

**Enduring Understandings:**

- The water cycle is a continuous process that affects our daily lives
- Human actions can impact the water cycle and the environment

## Student Context Analysis



**Class Profile:**

- Total Students: 25
- ELL Students: 5
- IEP/504 Plans: 3
- Gifted: 2

**Learning Styles Distribution:**

- Visual: 40%
- Auditory: 30%
- Kinesthetic: 30%

## Pre-Lesson Preparation

**Room Setup:**

- Arrange desks in groups of 4-5
- Set up whiteboard and markers

**Technology Needs:**

- Computer and projector for presentation
- Internet access for research

**Materials Preparation:**

- Water cycle diagrams and handouts
- Whiteboard markers and eraser

**Safety Considerations:**

- Ensure students are aware of lab safety rules
- Provide gloves and goggles for experiments

## Detailed Lesson Flow

**Pre-Class Setup (15 mins before)**

- Set up room and materials
- Prepare technology and presentation

**Bell Work / Entry Task (5-7 mins)**

- Have students complete a water cycle diagram
- Ask students to share their prior knowledge

**Opening/Hook (10 mins)**

- Show a video on the water cycle
- Ask students to share their thoughts and questions

> **Engagement Strategies:**
>
> - Think-pair-share
> - Gallery walk



**Direct Instruction (20-25 mins)**

- Presentation on the water cycle
- Discussion on the importance of water conservation

> **Checking for Understanding:**
>
> - Formative assessments
> - Exit tickets

**Guided Practice (25-30 mins)**

- Group activity on water cycle processes
- Students create a diagram or model

> **Scaffolding Strategies:**
>
> - Graphic organizers
> - Sentence frames

**Independent Practice (20-25 mins)**

- Students research and create a presentation on a water cycle topic
- Students share their presentations with the class

**Closure (10 mins)**

- Review key concepts and vocabulary
- Ask students to reflect on their learning

## Differentiation & Support Strategies

**For Struggling Learners:**

- Provide extra support and scaffolding
- Offer one-on-one instruction

**For Advanced Learners:**

- Provide additional challenges and extensions
- Encourage independent research and projects

**ELL Support Strategies:**

- Provide visual aids and graphic organizers
- Offer bilingual resources and support

**Social-Emotional Learning Integration:**

- Encourage self-awareness and self-regulation
- Foster a growth mindset and perseverance

## Assessment & Feedback Plan

**Formative Assessment Strategies:**

- Quizzes and class discussions
- Observations and feedback

**Success Criteria:**

- Students can explain the water cycle and its processes
- Students can identify ways to conserve water and reduce waste

**Feedback Methods:**

- Verbal and written feedback
- Peer review and self-assessment



## Homework & Extension Activities

**Homework Assignment:**

Have students research and create a presentation on a water cycle topic

**Extension Activities:**

- Conduct a water audit at home or school
- Create a public service announcement on water conservation

**Parent/Guardian Connection:**

Encourage parents to ask their child about their learning and provide support at home

## Teacher Reflection Space

**Pre-Lesson Reflection:**

- What challenges do I anticipate?
- Which students might need extra support?
- What backup plans should I have ready?

**Post-Lesson Reflection:**

- What went well?
- What would I change?
- Next steps for instruction?

## Introduction to Visual Thinking Routines

**What are Visual Thinking Routines?**

Visual Thinking Routines are a set of strategies that help students develop their critical thinking and problem-solving skills

**Why Use Visual Thinking Routines?**

Visual Thinking Routines help students to think critically, solve problems, and communicate effectively

## 20 Visual Thinking Routines

**Routine 1: See-Think-Wonder**

Have students observe an image or object, think about what they see, and wonder about its significance

**Routine 2: Claim-Support-Question**

Have students make a claim, support it with evidence, and ask questions to clarify their thinking

## Water Cycle Unit

**Unit Overview:**

The water cycle unit will cover the processes of the water cycle, including evaporation, condensation, and precipitation

**Unit Goals:**

- Students will understand the water cycle and its processes
- Students will be able to explain the importance of water conservation

## Lesson 1: Introduction to the Water Cycle

**Lesson Overview:**

Students will be introduced to the water cycle and its processes through a presentation and discussion

**Lesson Goals:**

- Students will understand the basic processes of the water cycle
- Students will be able to identify the importance of water in the environment

## Lesson Plans

**Lesson 2: Water Cycle Processes**

Students will learn about the different processes of the water cycle, including evaporation, condensation, and precipitation

**Lesson 3: Water Conservation**

Students will learn about the importance of water conservation and ways to reduce water waste

## Assessment and Feedback

**Formative Assessments:**

- Quizzes and class discussions
- Observations and feedback

**Summative Assessments:**

- Unit test
- Project presentation

## Conclusion

**Conclusion:**

The water cycle unit will help students understand the importance of water conservation and the processes of the water cycle

**Future Plans:**

Future plans include expanding the unit to include more hands-on activities and real-world applications

## References

**References:**


- Project Zero. (n.d.). Visual Thinking Routines.
- National Geographic. (n.d.). Water Cycle.