

Kindergarten Unit Plan

Introduction

This science-based unit has been designed to provide students with the opportunity to observe their surroundings by means of active exploration and discovery. Students will examine the occurrences, properties and uses of water by employing their five senses to describe the findings. By teaching this unit at the beginning of spring, students will get hands-on learning with water and “develop emotional empathy with the natural world through direct experiences in local environments” (Leap Into Action, pg 12). This unit begins with a review of the seasons with a focus on vocabulary related to water and spring, moving to an investigation into the properties of water through station work, to thinking about why living things need water. It concludes with activities to encourage critical thinking skills about how and why we can reduce the amount of water we waste in our day-to-day lives. Assessment for this unit is based on the creation of a water log (journal) by each student, and informal observations about work habits, group work etc.

How to use this Unit Plan

The Unit Plan was developed assuming **two 20 minute Science blocks per week.**



A 6-week implementation, broken down into 8 lesson plans, is outlined in the following Unit Plan Chart. Teaching suggestions are given in the “Tips” section. The Dragonfly Symbol indicates that the lesson has a component of physical activity. The Assessment column indicates that an Assessment Tool and Rubric is available and can be found on the Teacher CD.

Resources used to develop unit plan:

Leap Into Action! Simple Steps to Environmental Action – this resource will assist you and your students in choosing, planning and implementing action learning in your classroom.

Project WET – this activity guide contains 91 activities focused on the theme of water and water stewardship.

Wild BC provides numerous publications and workshops for educators. Over 20 activity guides developed to increase environmental literacy are available. Contact Wild BC at 250 356 7111 or 1 800 387 9853 or visit our website at www.hctf.ca/wild.htm to view or order these publications.

Your Notes Here

Kindergarten Unit Plan



Week 1

Week 1/2

Lesson at a Glance

Summary

B.C. Min. of Education Learning Outcomes

Linked Activities

Assessment

Teaching Tips / Notes

Lesson 1



The Thunderstorm
Project WET p. 196
One 20-min block
Any Season
Indoor

Goal: understanding that change occurs with each season.

How: students simulate the sounds of a thunderstorm through an aerobics activity.

Processes of Science

- Share with others information obtained by observing

Earth and Space Science

- Demonstrate the ability to observe surroundings

House of Seasons
Project WET p. 155



Warm Up

- Read *The Reasons for the Seasons* (Gibbons); discuss characteristics of each season and have students play out activities in each through partner charades.

- Read *Spring: Signs of the Season* (Gerard); create a class word web about spring

Wrap Up

- Have students imagine they are a small animal such as a rabbit. How would they feel if the thunderstorm happened in the wintertime? How would they feel if the thunderstorm happened in the springtime and the sun came out after the rain stopped? How is rain that falls in the springtime different from rain that falls in the winter?

Lesson 2



The Rainy Day Hike
Project WET p. 186
Two 20-min blocks
Any Season
Indoor

Goal: watching where the rain goes.

How: students are introduced to the concept of watersheds by collecting data about water flowing over school grounds.

Process of Science

- Use the five senses to make observations

Earth and Space Science

- Demonstrate the ability to observe their surroundings
- Describe features of the immediate environment

Branching Out!
Project WET p. 129



- Discuss the five senses before taking a "Rainy Day Hike" around your school and stop at sites of flowing water to review what students observe with their five senses.

- Talk about clean and dirty water and its effect on living things.

- Ask students where the water that is going down the storm sewers is going. Have them imagine all the rainwater running down into the sewer tunnels and gathering together to flow into the ocean, lake or river.

- Have your students use the sensory observation sheet on page 195 of the Project WET manual to record their observations.



Kindergarten Unit Plan



Week 2

Week 3

Week 4

Lesson at a Glance

Summary

B.C. Min. of Education Learning Outcomes

Linked Activities

Assessment

Teaching Tips / Notes

Lesson 3

Water Log
Project WET p. 19
One 20-min block
Any Season
Indoor

Goal: keeping track of learning about water.

How: students use a water log (journal) to illustrate their observations, feelings and actions related to water. The log serves as an assessment tool to monitor changes over time related to knowledge of water.

Processes of Science

- Share with others information obtained by observing

Earth and Space Science

- Demonstrate the ability to observe their surroundings

Water Messages in Stone
Project WET p. 454



- Have students create a cover page for their water log based on something they saw during the rainy day hike
- For their first log entry, have students draw a picture of themselves on the rainy day hike. Have them show how they felt by drawing a happy, sad, mad, etc, face

Lesson 4

A-maze-ing Water
Project WET p.219
Two 20-min blocks
Any Season
Outdoor or Indoor



Goal: following the flow of water.

How: students guide a drop of water through a maze of 'drainage pipes' to learn how actions in the home and yard affect water quality.

Processes of Science

- Share with others information obtained by observing

Physical Science

- Describe ways to rethink, refuse, reduce, reuse, recycle

Just Passing Through
Project WET p. 166



- Demonstrate Option 2 (omit Option 1) before having students try it
- You may wish to have students work in pairs to create their mazes

Lesson 5

Water in Motion
Project WET p. 452
Two 20-min blocks
Any Season
Outdoor or Indoor



Goal: discovering properties of and classifying water.

How: students explore water stations to learn more about water.

Processes of Science

- Use the five senses to make observations

Physical Science

- Describe properties of materials, including colour, shape, texture, size and weight

Water Match
Project WET p. 50



- Use the K-2 option found on p.453
- Set up 4 water stations with task cards to encourage discovery of water in motion; add objects that float/sink/splash etc.
- Play music and encourage students to do a water dance as they move between stations
- As a group discuss which objects could be classified in the same group; follow up this activity with a journal entry. For example have students draw 3 things that float, sink, or plunk in and bounce to the surface



Kindergarten Unit Plan



Week 4

Lesson at a Glance

Summary

B.C. Min. of Education Learning Outcomes

Linked Activities

Assessment

Teaching Tips / Notes

Lesson 6



Aqua Notes
Project WET p. 66
One to Two 40-min blocks
Any Season
Outdoor or Indoor

Goal: about how water is a basic human need.

How: while singing simple songs about water in the body, students gain an appreciation for the many ways they need water.

Physical Science

- Identify materials that make up familiar objects

Physical Science

- Describe ways to rethink, refuse, reduce, reuse, recycle

Aqua Bodies
Project WET p. 63



- Teach the students the “Aqua Notes” songs about how the body uses water. Have students create actions to the songs. Rehearse and sing for parents before home time
- Make a class graph about how students used water that day
- Have each student come up with five ways they use water in their lives and record them in their water logs

Lesson 7

Choices and Preferences, Water Index
Project WET p.367
Two 20-min blocks
Any Season
Outdoor or Indoor

Goal: understanding what’s important.

How: students rank and compare different uses of water. The class develops a water index, and indication of the group’s feelings and values about water and its uses.

Physical Science

- Identify materials that make up familiar objects
- Describe ways to rethink, refuse, reduce, reuse, recycle

Water Works
Project WET p. 274



- Before beginning the ranking, model how to prioritize e.g. “Which is most important to you: a book, a toy, a brush or water?”
- Use the handout on p.370 and have students cut and paste it into their water logs.
- Have students share how they made their decisions with a partner.

Lesson 8



The Long Haul
Project WET p. 260
One 20-min block
Any Season
Outdoor

Goal: appreciating water scarcity and abundance.

How: students work in teams to compete in a water hauling game.

Physical Science

- Describe ways to rethink, refuse, reduce, reuse, recycle

Water Concentration
Project WET p. 407



- In class discuss how the more water we have, the more we waste. Imagine if you had to carry all the water used every day!
- Brainstorm ways water is wasted and make a list of ways to save water
- Have students illustrate water being wasted and water being used wisely in their water journals.

