

Grade Eight Unit Plan

Introduction

This unit is designed to help students develop an understanding of the roles of organisms as part of interconnected communities and their interactions with the environment. Students will learn to assess the requirements for sustaining healthy ecosystems while evaluating human impacts on wildlife and the environment. The final lessons deal with personal responsibility and action toward developing sustainable healthy ecosystems. Linked activities have been provided for each lesson should you wish to further investigate a given topic.

How to use this Unit Plan

The Unit Plan was developed assuming **three 40 minute Science blocks per week.**

A 8-week implementation, broken down into 11 lesson plans, is outlined in the following Unit Plan Chart. The time line is variable based on the activities you choose. Teaching suggestions are given in the “Tips” section. The Dragonfly Symbol given in the “Lesson at a glance” section indicates that the lesson has a component of physical activity.



Resources used to develop unit plan:

Project WILD – this activity guide contains 121 activities focused on environmental and conservation education.

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.

Wild BC provides numerous publications and workshops for educators. Over 20 activity guides developed to increase environmental literacy are available. To obtain any of the publications listed above, please contact Wild BC at 250 356 7111 or 1 800 387 9853 or visit our website at www.hctf.ca/wild.htm

Your Notes Here

Grade Eight 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
<p>Lesson 1 <i>How Wet Is Our Planet?</i> Project WILD p. 50 One 40-min block Any Season Indoor</p>	<p>Goal: learning how much water is on the planet.</p> <p>How: students calculate water volumes using percentages.</p>	<p>Earth and Space Science</p> <ul style="list-style-type: none"> describe factors that affect productivity and species distribution in aquatic environments 	<p><i>Aqua Words</i> Project WILD p. 55</p>	<p>✓</p>	
<p>Lesson 2 <i>Water Wings</i> Project WILD p. 57 One 40-min block Any Season Indoor or Outdoor</p>	<p>Goal: reviewing the water cycle.</p> <p>How: students experience a guided imagery and then create artwork and poetry.</p>	<p>Earth and Space Science</p> <ul style="list-style-type: none"> describe how water and ice shape the landscape describe factors that affect productivity and species distribution in aquatic environments explain the development of continental drainage systems and the transport of materials to ocean basins 	<p><i>Riparian Retreat</i> Project WILD p. 105</p> <p><i>Blue Ribbon Niche</i> Project WILD p. 180</p>	<p>✓</p>	
<p>Lesson 3 <i>Where Does Water Go After School?</i> Project WILD p. 191 Two 40-min blocks Rainy Season Outdoor and Indoor</p>	<p>Goal: describing relationships between precipitation, runoff and aquatic habitats.</p> <p>How: students measure and calculate the area of the schoolground; calculate the volume and weight of water falling on the schoolground; determine specific and annual rainfall and runoff; and trace the course of that water to aquatic habitats.</p>	<p>Earth and Space Science</p> <ul style="list-style-type: none"> describe how water and ice shape the landscape describe factors that affect productivity and species distribution in aquatic environments explain the development of continental drainage systems and the transport of materials to ocean basins 	<p><i>Water's Going On?</i> Project WILD p. 332</p>	<p>✓</p>	

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Week 2/3

Week 3/4

Week 5

Lesson at a Glance

Summary

B.C. Min. of Education Learning Outcomes

Linked Activities

Assessment

Teaching Tips / Notes

Lesson 4

Watershed
Project WILD p. 376
Two-three 40-min blocks
Any Season
Indoor or Outdoor



Goal: describing the characteristics of watersheds and the role watersheds play in providing habitat for wildlife.

How: students measure the area of a small watershed, calculate the amount of water it receives each year and discuss the varied roles the watershed plays in human and wildlife habitat.

Earth and Space Science

- describe factors that affect productivity and species distribution in aquatic environments
- explain the development of continental drainage systems and the transport of materials to ocean basins

Watered Down History
Project WILD p. 262



Alice in Waterland
Project WILD p. 381

Lesson 5

Dragonfly Pond
Project WILD p. 354
Three 40-min blocks
Any Season
Indoor

Goal: evaluate the effects of different kinds of land use on aquatic environments.

How: students create a collage of human land use activities around an image of a pond.

Earth and Space Science

- describe factors that affect productivity and species distribution in aquatic environments

To Compromise or Not to Compromise
Project WILD p. 295



Ethi-Thinking
Project WILD p. 328

Lesson 6

Deadly Skies
Project WILD p. 319
Two 40-min blocks + growing time
Any Season
Indoor



Goal: making inferences about the effects of human activity on aquatic life.

How: through simulations and direct measurement, the students experience differing conditions of acidity in aquatic habitats and explore the consequences of acidic conditions on aquatic life.

Processes of Science

- demonstrate safe procedures
- perform experiments using the scientific method
- represent and interpret information in graphic form
- use models to explain how systems operate
- demonstrate ethical, responsible, cooperative behaviour

Earth and Space Science

- describe factors that affect productivity and species distribution in aquatic environments

Deadly Links
Project WILD p. 299



Plastic Jellyfish
Project WILD p. 368

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Week 5

Week 6

Week 7

Lesson at a Glance

Summary

B.C. Min. of Education Learning Outcomes

Linked Activities

Assessment

Teaching Tips / Notes

Lesson 7
Deadly Waters
Project WILD p. 322
One 40-min block
Any Season
Indoor

Goal: identifying major sources of aquatic pollution.

How: students analyze the pollutants found in a hypothetical river. They graph the quantities of pollutants and make recommendations about actions that could be taken to improve the habitat.

Processes of Science

- represent and interpret information in graphic form
- use models to explain how systems operate
- demonstrate ethical, responsible, cooperative behaviour

Earth and Space Science


- describe factors that affect productivity and species distribution in aquatic environments

Water Canaries
Project WILD p. 109



No Water Off a Duck's Back
Project WILD p. 230

Something's Fishy Here
Project WILD p. 371

Lesson 8 
Puddle Wonders
Project WILD p. 72
Three 40-min blocks
Rainy Season
Outdoor

Goal: observing organisms that live in or near puddles

How: students will observe water that accumulates in puddles on or near the school grounds as well as any associated wildlife. Students will also measure the depth, area and volume of the puddle.

Processes of Science

- represent and interpret information in graphic form
- use models to explain how systems operate
- demonstrate ethical, responsible, cooperative behaviour


Earth and Space Science

- describe factors that affect productivity and species distribution in aquatic environments

Pond Succession
Project WILD p. 135



Rainfall and the Forest
Project WILD p. 188

Lesson 9 
Hooks and Ladders
Project WILD p. 184
One 40 min block
Indoor and/or Outdoor

Goal: understanding some of the limiting factors affecting the life cycle of Pacific salmon.

How: students simulate Pacific salmon and the hazards faced by salmon in an activity portraying the life cycle of these aquatic creatures.

Earth and Space Science

- describe factors that affect productivity and species distribution in aquatic environments

Turtle Hurdles
Project WILD p. 363



To Dam or Not to Dam
Project WILD p. 312

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Week 7/8

Week 8

Lesson at a Glance	Summary	B.C. Min. of Education Learning Outcomes	Linked Activities	Assessment	Teaching Tips / Notes
<p>Lesson 10 <i>Where Have All the Salmon Gone?</i> Project WILD p. 245 Two-three 40-min blocks</p>	<p>Goal: analyzing the effects of human use and habitat changes on fish population.</p> <p>How: students graph and interpret actual fish population data in relation to historical events.</p>	<p>Earth and Space Science</p> <ul style="list-style-type: none"> describe factors that affect productivity and species distribution in aquatic environments 	<p><i>Net Gain, Net Effect</i> Project WILD p. 232</p>	<p>✓</p>	
<p>Lesson 11 <i>Aquatic Times</i> Project WILD p. 310 Varied</p>	<p>Goal: a culminating activity.</p> <p>How: students investigate, write and produce a newspaper that features aquatic information and issues.</p>	<p>Processes of Science</p> <ul style="list-style-type: none"> represent and interpret information in graphic form demonstrate scientific literacy demonstrate ethical, responsible, cooperative behaviour <p>Earth and Space Science</p> <ul style="list-style-type: none"> describe factors that affect productivity and species distribution in aquatic environments 	<p><i>Facts and Falsehoods</i> Project WILD p. 316</p>	<p>✓</p>	