Olympic National Park

Ecosystem Olympic!

ACTIVITY SUPPLEMENT

Ecosystem Olympic!

Spring 2012

Dear Educator,

Thank you for participating in *Ecosystem Olympic*! We are looking forward to visiting your classroom to share our interactive program that introduces students to the three main ecosystems of Olympic National Park.

This packet contains pre- and post-visit materials designed to help you prepare your class for our visit and to deepen students' understanding of the concepts presented. It also contains a reference guide for the Washington State Science, Social Science, Communication and Writing EALRs and GLEs covered in the program.

You and your students can learn more about Olympic National Park by visiting our web site at: www.nps.gov/olym. Click on In Depth then Discover Olympic. Or students may become a Webranger at: www.nps.gov/webrangers.

We are always working to improve our presentation and really appreciate receiving your comments and completed evaluations. Thank you in advance for returning the evaluation form in the stamped envelope included with this packet.

Please contact us with questions, comments or to schedule a ranger-guided walk at (360) 565-3146 or you may send an e-mail to Dean_ Butterworth@nps.gov.

Sincerely,

Olympic National Park Education Rangers

Washington's National Park Fund

Table of Contents

What is a National Park?
Pre-Visit Activity

Time Required:
20-30 minutes

Materials:
Washington State Map*
Olympic National Park
Brochure Map *
**provided*

Subjects:
Social Studies
Science

Skills:
Identifying
Describing
Finding Patterns

Washington State Essential Academic Learning Requirements:
Science: Systems
SYSA,SYSB,SYSC,SYSD
Social Studies:
Geography 3.1
History 4.1

Student Outcomes:
Students will be able to...
- List different types of national parks in Washington.
- Name two parks in Washington.
- Name a river and a mountain in Olympic National Park.

Background:
The National Park System in the United States preserves many amazing places, valued for their intact ecosystems, biodiversity, beautiful landscapes, history and recreation potential. Park rangers work in each of these sites educating visitors, protecting the resource and researching. In Washington state there are National Parks, National Recreation Areas, National Historic Sites, National Monuments and designated Wilderness Areas. Each of these is protected for a unique purpose.

Activity:
1. Divide the class into small groups. Hand out the maps, one per group. Trade maps halfway through the activity so that all students look at both maps.
2. Using the Washington State Map have the students look for and answer the following: (Hint: National Parks are dark green on these maps.)
   - Find three National Parks. What are their names?
   - Find one National Historic Park and one National Recreation Area. Why do you think they were protected as parks?
   - Find one Wilderness Area. What does wilderness mean to you?
   - Which park is the closest to where you live?
   - Have you ever visited that park?
   - Why do you think it is important to preserve so many parks?
3. Using the Olympic National Park Brochure Map have the students look for and answer the following:
   - Find the Pacific Ocean, a river, a forest and a mountain. What are their names?
   - Find a place named after an animal.
   - Find a trail you would like to walk on.
   - Find a place you could talk to a ranger.
   - List three questions you might want to ask a ranger.
   - Besides answering questions, what other kinds of jobs do park rangers do?
   - List two regulations of Olympic National Park. Why do parks have regulations?
   - Why do you think Olympic National Park was protected as a park?

Time Required:
One to two class periods

Materials:
Olympic National Park
Reader's Digest video*
worksheet*
pencils
**provided*

Subjects:
Communication
Science

Skills:
Listening
Observing
Writing

Washington State Essential Academic Learning Requirements:
Communication: 1.1, 2.1,2.2
Science: Systems
SYSA,SYSB,SYSC,SYSD

Olympic National Park Video Worksheet
Pre-Visit Activity

Student Outcomes:
Students will be able to...
- Name the three main ecosystems of Olympic National Park.
- Tell why ecosystems are important to plants, animals and people.

Background:
Olympic National Park, established in 1938, protects and preserves a vast wilderness where many organisms survive as they have for thousands of years. In 1976 the park was designated a Biosphere Reserve and recognized internationally by UNESCO for its unmatched scientific significance and scenic beauty. Later, in 1981, it gained further distinction as a World Heritage Site ranking it with areas of cultural and natural importance such as Mesa Verde in Colorado, the Great Barrier Reef of Australia, and the ancient pyramids in Egypt.

Olympic National Park is renowned for the diversity of its ecosystems. Glacier-clad peaks interspersed with alpine meadows are surrounded by an extensive old growth forest, among which is the best example of intact and protected temperate rain forest in the Pacific Northwest. Eleven major river systems drain the Olympic mountains, offering some of the best habitat for anadromous fish species in the country. The park also includes 63 miles (100 km) of wilderness coastline, the longest undeveloped coast in the contiguous United States, and is rich in native and endemic animal and plant species, including critical populations of the endangered northern spotted owl, marbled murrelet and bull trout.

All together, this nearly million-acre park holds some of the last wilderness in the United States. The 32 minute video "Olympic" from Reader's Digest Great National Parks series gives a comprehensive overview of Olympic National Park and the cultural and natural history found there.

Activity:
1. Make copies of the *Olympic* Video worksheet for your class.
2. Have the students watch the video and complete the worksheet. (Answers are provided for the teachers.)
3. Discuss answers with class after viewing the video.

Option:
1. Prior to viewing the video, read the following statement aloud: "Olympic National Park is three parks in one." Have students come up with 3 - 5 questions about this statement. See if these are answered in the video. If not, ask them how they may go about finding the answers.

Ecosystem Olympic!

Olympic Video Worksheet

1. What are the three main ecosystems of Olympic National Park?

   a)_____

   b)_____

   c)_____

2. On average it can rain _____ inches per year in the Hoh Rainforest.

   a) 10 to 20
   b) 80 to 90
   c) 140 to 150

3. How does the amount of rainfall affect the ecosystem?

   _____

4. Name one of the many large types of trees found in Olympic National Park:

   _____

5. Describe how other organisms interact with that tree species.

   _____

6. Name one of the proposed names for Olympic National Park that refers to a species of animal.

   _____

7. What are some skills the settlers needed to survive in the forest ecosystem?

   _____

8. Where could you go to visit a mountain ecosystem in Olympic National Park?

   _____

What is an Ecosystem?

It is a system formed by the interaction of a community of organisms (all living things) with their physical environment (air, water, rocks.) Ecosystems can be big like a continent, or small like a puddle. Your school yard is an ecosystem.

9. Circle the animals that move between ecosystems.

Bears Deer River Otters Great Blue Heron Elk

10. Why do animals move between ecosystems?

_____

11. Which animal, found in the Olympic Mountains, whistles to warn one another of danger?

_____

12. Are those animals found anywhere else in the world? (Circle one) YES or NO

(Please circle "True" or "False" for the following three questions.)

13. True or False: Hay stacks are large landforms found in the ocean that were once part of the coastal land.

14. True or False: Sea stars will eat just about anything found in a tidepool.

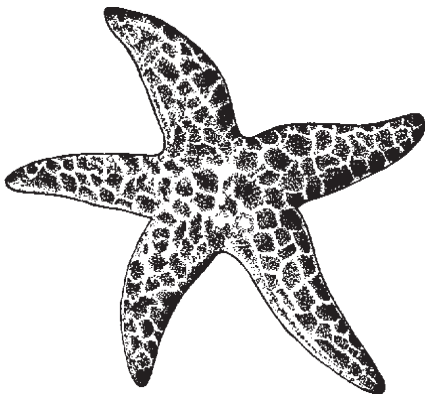
15. True or False: American Indian tribes have lived on the Olympic Peninsula for over 1000 years.

16. Name three animals that find their food in tidepools:

_____

_____

_____



Some more things to think about:

17. How long has your family lived on the Olympic Peninsula?

_____

18. What are some of the things we use from the ecosystems today?

_____

Olympic Video Worksheet Answers

1. Although Olympic has many different ecosystems, the park is often defined as having three very distinct and diverse "landscapes" or ecosystems: the **COAST**, the **FOREST**, and the **MOUNTAINS**. An ecosystem is a place where plants, animals (including people) and the environment interact. Ecosystems come in many shapes and sizes, from those as small as a crack in the sidewalk to ecosystems the size of the Sahara desert.

2. On average, it can rain up to **140 to 150** inches of rain in the Hoh Rain Forest.

3. The amount of rain and other factors **DETERMINES WHAT SPECIES OF PLANTS WILL GROW IN THE AREA.** Two other rain forest valleys are located in the park: the Queets and Quinault, which receive similar amounts of rain. The temperate rain forests of Olympic National Park are characterized by having Sitka spruce trees, nurse logs upon which seedlings of trees grow, colonnades of trees standing in a row as a result of getting their start on nurse logs, trees standing on stilts, a profusion of mosses and lichens, and Bigleaf maples with clubmoss draperies.

4. There are many extremely large trees found in Olympic National Park. Olympic contains several world record trees including, the world's largest western hemlock and the world's largest subalpine fir. In addition, the biggest Douglas-fir in the park is 298 feet in height and the biggest western redcedar has a circumference of 761 inches! The video, however, focuses on several large trees which are found in the rain forest valleys. The most prevalent of the big trees in the rain forest valleys is the **SITKA SPRUCE**. Sitka spruce trees are evergreen conifers and can grow up to 300 feet tall. Other large evergreen conifers that can be found in the rain forests are **DOUGLAS-FIR, WESTERN HEMLOCK**, and **WESTERN REDCEDAR**. Deciduous trees are also found in the temperate rain forest. **BIGLEAF MAPLE, VINE MAPLE, ALDER** and **BLACK COTTONWOOD** are all trees that can thrive in the rain forest's moist environment.

5. Organisms interact with the trees by using them for **HOMES, PLACES FOR PLANTS TO GROW** (both epiphytes and seedlings on nurse logs), and as a **SOURCE OF FOOD.**

6. Because the elk played a significant role in the creation of the Park, officials almost named the park **ELK NATIONAL PARK.** Elk once populated the entire United States by the millions. By 1905 the elk population in the area soon to be called Olympic National Park, dropped to fewer than 2000 elk; the elk were nearly hunted to extinction. President Theodore Roosevelt created Mt. Olympus National Monument in 1909, to protect the elk and their habitat. Elk hunting returned to the area in 1936 and 1937. The great amounts of elk killed in these hunts proved a powerful argument for the creation of Olympic National Park in 1938.

7. The settlers needed to be able to **HUNT, FISH, SHOOT, TRACK AND TRAP** to be able to survive in the forest ecosystem. They also learned which native plants could be used for food and established gardens to grow vegetables. Most settlers had livestock to help with the work and to add variety to their diets like chicken, milk and pork. They had to know how to make butter and bread and how to store food for the winter months. Settlers also had to have logging and building skills to erect a cabin and out buildings. They had to build furniture and tools. It was a rough life with few frills.

8. **HURRICANE RIDGE** is a place in Olympic National Park where one may visit a mountain ecosystem. Hurricane Ridge was named for the near hurricane-force winds (greater than 74 mph defines hurricane-force winds) that can blast the Ridge during winter storms.

9. **BEAR, DEER, RIVER OTTER, GREAT BLUE HERON, AND ELK** all move between ecosystems.

10. Animals, such as bear, deer, river otter, great blue heron and elk, move between ecosystems **TO FIND FOOD.** All animals have the same basic needs: food, water, shelter and space. Sometimes animals need to travel beyond their typical habitat to find enough food for survival. Other times, as animals mature, they find their own territories and may travel to a different ecosystem to find their basic needs.

11. The **OLYMPIC MARMOT** is found in mountain meadows and hillsides across the park.

12. **NO.** These animals are not found anywhere else in the world; they are found only in the Olympic Mountains. During past ice ages, ice sheets nearly surrounded the Olympic Peninsula. The glacial environment meant some plants and animals evolved isolated on the Olympic Peninsula. Species found only in one place, like Flett's violet and the Olympic marmot, are called endemics. The ice sheets also kept out plants and animals that lived in the areas surrounding the Olympic Peninsula. Although animals like lynx, porcupine, and picas are found in the Cascade Mountains, you won't find them in Olympic National Park. Marmots live in burrows in the meadows of the Olympic high-country. They are very sociable animals. You can often see them wrestling with each other, or sharing a lupine lunch. When danger appears, whether it comes in the form of golden eagle, cougar, or human, one marmot will perch on a rock and whistle to the other marmots in its colony. This warning sends marmots scurrying into their burrows.

13. **FALSE**. Sea stacks, NOT HAY STACKS, were once part of the land lying along the coast. Over time, this land was pounded with wind and water. Much of the land was eroded away. Some of the land was only partially eroded away, leaving standing pieces called sea stacks. Sea stacks provide a variety of homes for sea life. Animals or birds that visit the coastal ecosystem looking for food can also use the sea stacks for breeding areas.

14. **TRUE**. Sea stars will eat practically anything that comes their way. They feed on zooplankton, barnacles, limpets and snails, but prefer mussels. The sea star has an interesting digestive system. The sea star can insert its stomach into the slightly cracked shell of a mussel and digest it inside the shell!

15. **TRUE.** Eight American Indian tribes have lived on the Peninsula for over thousand years, the Elwha Klallam, Jamestown S'Klallam, Port Gamble S'Kallam, Skokomish, Quinault, Hoh, Quileute, and Makah. They maintain a connection to their past through their unique languages, customs, songs, dances and stories.

16. **SEA STARS, SEA URCHINS, ACORN AND GOOSENECK BARNACLES, KEYHOLE LIMPETS, MUSSELS AND BIRDS SUCH AS THE OYSTER CATCHER** find their food in tidepools.

17. **ANSWERS WILL VARY.** Students may need out-of-classroom time to discover the answer to this question.

18. **ANSWERS WILL VARY.** People use ecosystems to obtain what they need to survive including water, food, shelter and space. What is important is for students to discover how everything people need for survival comes from the various ecosystems and that other life is also dependent on having those same things available.

Where's My Habitat?
Pre-Visit Activity

Time Required:
20-30 minutes

Materials:
Olympic National Park
Reader's Digest video*
black board
paper
pencils
habitat key*
**provided*

Subjects:
Science

Skills:
Recalling
Identifying
Categorizing
Analyzing

Washington State Essential Academic Learning Requirements:
Science: Systems
SYSA
Life Science
LS2A, LS2C

Student Outcomes:
Students as a group will be able to...
- Recall at least ten animals from the video.
- Categorize those animals into their appropriate habitats.
- Recognize that some animals may live in more than one habitat.

Background:
A **habitat** is a plant or animal's home—the place where it gets food, water, shelter, and space. The animals of Olympic National Park make their habitats in three main **ecosystems**: the coast, the forest, and the high mountains. An **ecosystem** is a place where plants, animals, and the environment interact.

Some animal habitats are very specific within an ecosystem. For example the Olympic marmot lives in the mountains, but in sub-alpine meadows—not in the crevasses of glaciers! In the case of the marmot, its habitat is much smaller than its ecosystem. On the other hand, the Roosevelt elk has a very large habitat. It lives in the forest ecosystem and the mountain ecosystem, migrating through the two areas in order to find food.

Students do not have to be able to distinguish the subtle differences between ecosystems and habitat. For the purpose of this activity, they just need to understand what a habitat is and be able to say whether an animal lives on the coast, in the forest, or in the mountains.

Activity:
1. The students will generate a list of the animals they remember seeing from the video. Help them get a list of about ten animals on the board.
2. The students will generate a list of the three different areas of Olympic National Park on the board: Coast, Forest, and Mountains. Try to write them in that order. (If they want to include rivers, they can write "rivers" as a wavy line crossing into each area.)
3. The students will write the name of each animal in its habitat area. Notice that the habitat key shows animals in more than one habitat. Many of the animals in Olympic National Park move from one area to another in search of seasonal food sources. Conclude with discussion of animal movement between ecosystems. Food sources are listed for your reference.

Animals of Olympic National Park for "Where's My Habitat?"

Animal	*Habitat*	*Food*
Mountain Goat	Mountains	Leaves, lichens, moss, grasses
Marmot	Mountains	Grass, new buds, flowers
Blue Grouse	Mountains	Berries, insects, conifer needles
Roosevelt Elk	Forest and Mountains	Young saplings, ferns, lichen, bark, bushes
Black Tailed Deer	Forest and Mountains	Young saplings, ferns, lichen, bark, bushes
Black Bear	Forest and Mountains	Insects, roots, bark, berries, fish
Douglas Squirrel	Forest	Seeds, cones, mushrooms
River Otter	Coast and Forest	Fish, shellfish
Bald Eagle	Coast and Forest	Fish, rodents, waterfowl, carrion
Salmon	Coast and Forest	Zooplankton, insects, fish
Black Oystercatcher	Coast	Fish, shellfish
Sea Urchin	Coast	Algae, kelp, micro-organisms
Sea Star	Coast	Barnacles, limpets, snails, mussels
Great Blue Heron	Coast	Fish
Mussels	Coast	Algae, micro-organisms

Habitat Haiku
Pre-Visit Activity

Time Required:
32 minutes for video
20 - 30 minutes for writing

Materials:
Olympic National Park Reader's Digest video*
paper
pencils
**provided*

Subjects:
Writing

Skills:
Recalling
Creative Writing

Washington State Essential Academic Learning Requirements:
Writing: 2.2, 2.3

Student Outcomes:
The students will be able to...
- Create a haiku poem based on images and ideas they recall from the video or from nature.

Background:
Haiku is a Japanese art form that expresses feelings about nature. It is written with a fixed number of syllables per line, and does not necessarily rhyme. The poet expresses in words his or her reactions to observations. Poems are intended to appeal to the senses and use a minimum of words to convey a thought or mood.

The format is:

Line One:	5 syllables
Line Two:	7 syllables
Line Three:	5 syllables

Example: *Great snow flakes falling.*
Forming a warm white blanket,
For the sleeping ground.

Activity:
1. Introduce Haiku poetry and its format and show the students an example.
2. Have each student brainstorm topics from the video *Olympic*, such as "the ocean floor," "a bird's nest," and "the treeline."
3. Let the students find a quiet place to sit alone and give the students 15 minutes to write a Haiku poem on scratch paper. As they write, walk around the room and make sure they use the correct number of syllables.
4. Have the students copy their poems onto construction paper.
5. Conclude the exercise by reading some of the poems to the class and respond to them. Hang the work on a bulletin board. Add artwork to the poetry.

Ecosystems Olympic Crossword
Pre-Visit Activity

Time Required:
20-30 minutes

Materials:
Ecosystems Olympic Crossword Puzzle*
pencils
**provided*

Subjects:
Reading
Science

Skills:
Spelling
Reading

Washington State Essential Academic Learning Requirements:
Reading: 1.2, 1.3
Writing: 2.2, 2.3
Science: Life Science LS2A

Student Outcomes:
The students will be able to...
- Understand some of the vocabulary used in describing ecosystems.

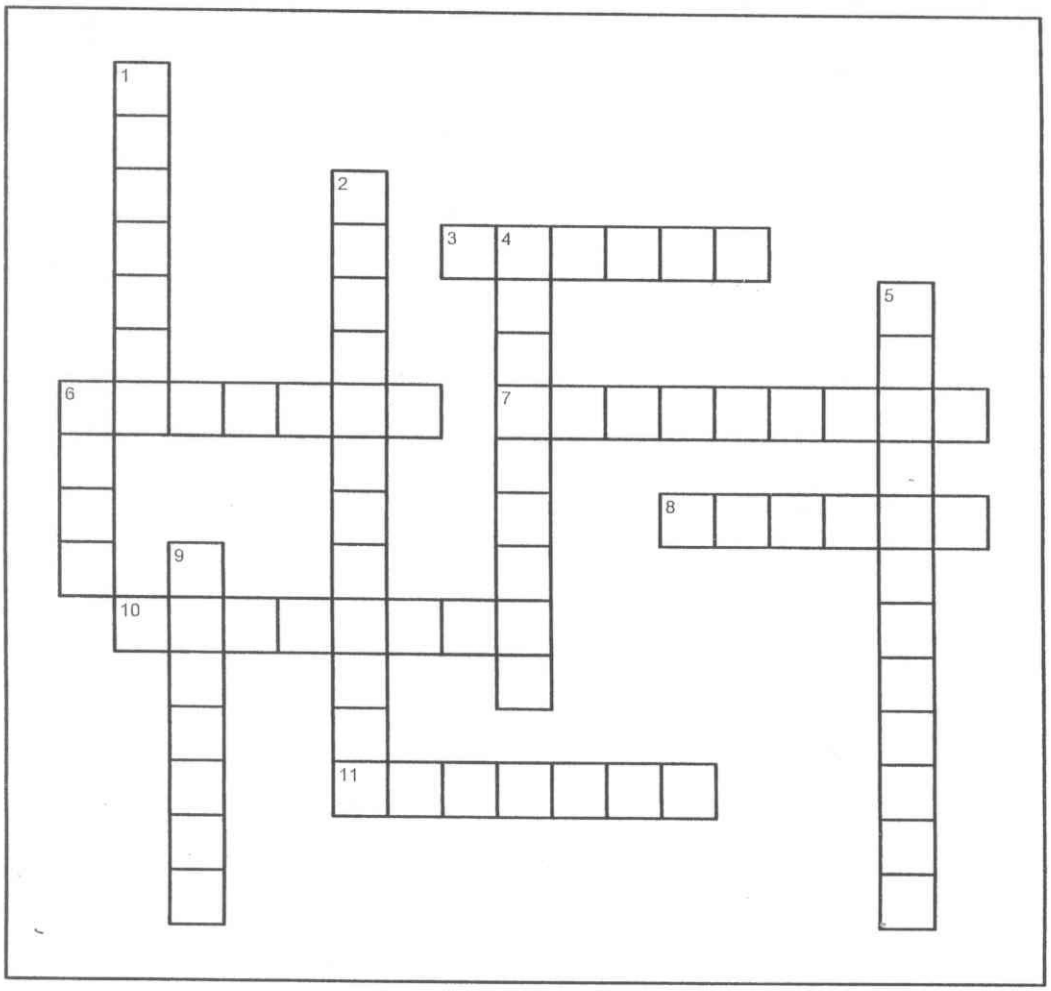
Background:
The major purpose of this activity is to increase students' familiarity with terms that are important in understanding ecosystems. By having a common vocabulary students will be able to better express their ideas and knowledge about ecosystems.

Activity:
1. Make copies of the crossword puzzle for each student.
2. Explain how to complete the puzzle by placing one letter in each square for the word that fits with the clue.
3. Go over the answers together and discuss the meanings of the words.

Extensions:
1. Add the words to the spelling list or vocabulary list for additional study.
2. Have the students write a report or story using the words from the cross word puzzle.
3. Have students make their own crossword puzzle using new words they learn during the ranger's program or from other sources.

Name _____

Ecosystems Olympic Crossword



ecosystem	diversity	snag	endemic	habitat
interact	steward	invertebrate	extinct	ranger
preservation	adapts			

Across

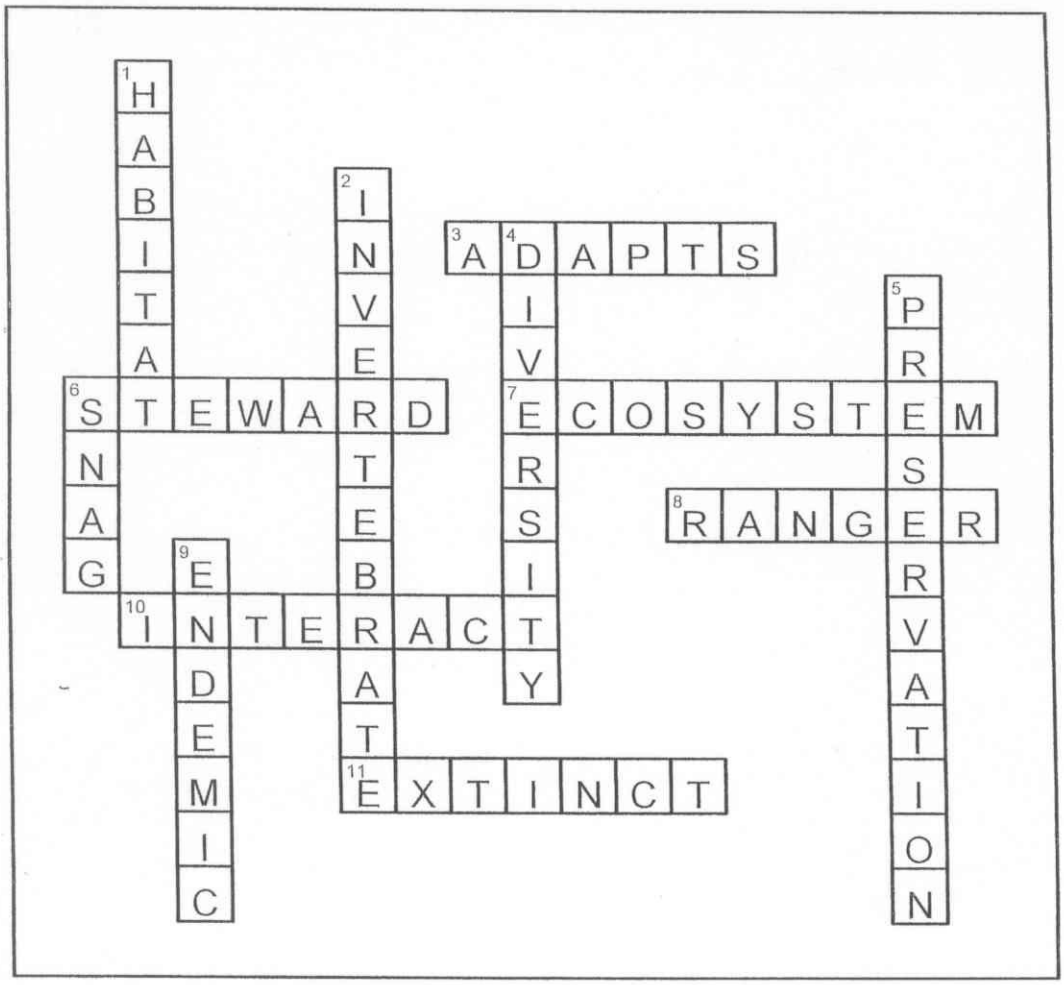
3. what a plant or animal does to live in a new environment
6. a person who takes care of the environment
7. the system where plants and animals interact with the environment
8. a person who tells others about a park and how to enjoy it safely
10. to affect each other
11. no longer alive

Down

1. the place where an animal finds its food, water, and shelter
2. an animal without a backbone or skeleton inside
4. all the different kinds of plants and animals
5. the act of keeping an area safe for plants, animals and other natural things
6. a standing, dead tree where birds, insects and other animals can live
9. plants and animals that are found only in one area

Name _____

Ecosystems Olympic Crossword



ecosystem	diversity	snag	endemic	habitat
interact	steward	invertebrate	extinct	ranger
preservation	adapts			

Across

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6. a person who takes care of the environment
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Down

1. the place where an animal finds its food, water, and shelter
2. an animal without a backbone or skeleton inside
4. all the different kinds of plants and animals
5. the act of keeping an area safe for plants, animals and other natural things
6. a standing, dead tree where birds, insects and other animals can live
9. plants and animals that are found only in one area

Ecosystem Collage
Post-Visit Activity

Time Required:
One class period

Materials:
old magazines
scissors
glue
construction Paper
tape
push pins

Subjects:
Science
Art

Skills:
Discussing
Creating
Analyzing

Washington State Essential Academic Learning Requirements:
Art: 1.2, 2.1, 3.1, 3.2
Science: Systems
SYSA,SYSB,SYSC,SYSD
Life Science
LS2A

Student Outcomes:
Students will be able to...
- Define the parts of an ecosystem.
- Explain how different parts of an imaginary ecosystem might relate to each other.

Background:
An ecosystem is a place where plants, animals, and the environment interact with each other. It includes things: plants, animals, water, soil, rocks, wind, weather, etc. The three main ecosystems of Olympic National Park are coast, forest (including low-land and rain forest), and mountains (sub-alpine and alpine).

Activity:
1. Go over the definition of ecosystem.
2. Tell the students that they are going to build their own ecosystem. Review the three main ecosystems of Olympic National Park and let them decide which kind of ecosystem to have. The class may choose to combine them.
3. Choose a descriptive name for your ecosystem. Let the students be creative.
4. For 10 minutes, let each student search through the magazines for pictures of one or two things (plants, animals, water, soil, rocks, wind, weather, etc.) that they want to contribute to the class ecosystem. They might choose very silly things, but that's part of the fun. This is an imaginary ecosystem. It need not be realistic.
5. Have the students cut out the pictures they want and glue them onto construction paper.
6. The teacher will collect the papers and tape or tack them up on a wall or bulletin board in a collage format. As the pictures go up, the students must say how each of their contributions to the ecosystem relates to other parts. The relationships don't have to be scientific or in any way accurate, yet the students should realize that an ecosystem isn't merely scenery, but rather a place where there are important connections between every member. All the members interact and connect to make an ecosystem.
7. Conclude by writing the name of your ecosystem on construction paper at the top of the collage and discuss how well all the elements would work together.

Create-a-Creature
Post-Visit Activity

Time Required:
20-30 minutes

Materials:
paper
colored pencils or markers

Subjects:
Writing
Science
Art

Skills:
Recalling
Analyzing
Creating
Drawing
Describing

Washington State Essential Academic Learning Requirements:
Art: 2.1
Science: Life Science LS2A, LS2C
Writing: 2.2, 2.3

Student Outcomes:
Students will be able to...
- List the three ecosystems of Olympic National Park
- Explain different ways that an animal interacts with its environment within the ecosystem.

Background:
An ecosystem is a place where plants and animals interact with the environment. The three main ecosystems of Olympic National Park are coast, forest (including low-land and rain forest) and mountains. Animals are adapted to live in one or more of these ecosystems.

Activity:
1. Review the three main ecosystems of Olympic National Park.
2. Tell the students they are going to create an imaginary animal that lives in one of these three ecosystems.
3. Either in groups or individually have students draw and write about an imaginary animal that could live in one of the ecosystems of Olympic National Park. They should describe what their animal looks like, how it moves, what it eats and where it makes its home. Have them make up a name for their animal.
4. Have students verbally describe their animal to a small group of students, or to the entire class if time permits.
5. Display the creatures!

Walk Lightly on Your Park
Post-Visit Activity

Time Required:
One to two class periods

Materials:
construction paper
magazines
markers or crayons

Subjects:
Science
Social Studies

Skills:
Recalling
Listing
Researching
Discussing
Analyzing

Washington State Essential Academic Learning Requirements:
Science: Inquiry
INQA
Application
APPA
Life Science
LS2
Social Studies: Geography
3.1, 3.2

Student Outcomes:
Students will be able to...
- Generate a list of outdoor activities that might be harmful to the organisms of Olympic National Park and their environment.
- Discuss why these activities are harmful.
- Name alternate activities that are not harmful.

Background:
Stewardship is the concept of responsible caretaking. This concept is based on the premise that we do not own natural or historic resources but are merely managers for the future. We are responsible for protecting these resources for the enjoyment and benefit of future generations.

Activity:
1. Ask the students to think of some activities that might harm the plants and animals in Olympic National Park. Make a list of these activities. For example: littering, carving initials in a tree, cutting down a tree, picking wildflowers or removing plants from the environment, picking up baby animals, hunting wildlife, etc.
2. At this point, the activity continues in one of several ways:
   a) Students make discussion cards using art materials. The cards illustrate a harmful activity. Students work in groups or separately.
   OR
   b) Students get into small groups and prepare dramatizations about harmful activities using short skits, commercials, or songs.
3. After completing one of the above activities, introduce the concept of stewardship. Make reference to the ranger program. Remind the students that Olympic National Park is everyone's park and it is their park to take care of now and in the future.
4. Have the students get into groups to talk about their cards or present their skits. Have them discuss with the class:
   - Their activity.
   - How their activity is harmful.
   - As stewards, how they feel about their activity.
   - An alternative activity which would not harm the wildlife or the environment.

Olympic Mad Libs!
Post-Visit Activity

Time Required:
15-20 minutes

Materials:
Spring Break story*
**provided*

Subjects:
Communication

Skills:
Listening
Describing

Washington State Essential Academic Learning Requirements:
Communication: 1.1, 2.1

Student Outcomes:
Students will be able to . . .
- Name many of the animals and habitats found in Olympic National Park.
- Describe with a variety of adjectives the three ecosystems of Olympic National Park.
- Recognize and develop humor!

Background:
The written word is important to the acquistion of knowledge about the world. By developing the use of adverbs and adjectives, students can learn how to vividly describe the experiences they had during the ranger presentation. By having the students supply the words throughout the story without knowing the story beforehand, a fun and new type of learning experience will occur.

Activity:
1. Have the students brainstorm words to describe what they learned and experienced during the ranger presentation.
2. Ask the students for the requested words (see story sheet) without letting the students know the story.
3. Fill in the blanks, then read the story to everyone.

SPRING BREAK
Olympic Mad Libs

I went for a walk in the forest with my _____ **(any adjective for a person)** brother _____ **(name of a boy in the class)**. We were _____ **(action verb + ing)** along the trail, when suddenly we found a _____ **(name of coast animal found in tide pools)** in the middle of the path.

"What's this doing here?" my brother said, and he picked it up. It was _____ **(adjective for coast)** and _____ **(adjective for coast**).

The creature looked up at my brother, and in a _____ **(adjective for a beach)** voice said, "Hey, dude, your hands are _____ **(adjective for the mountains).** Put me back down and leave me alone."

So my brother did, but we were surprised to say the least. We walked on under the shade of many _____ **(kind of trees found in forest).** We forgot all about the _____ **(any adj.)** animal. We followed the path and started exploring. We looked under a rotting nurse log for _____ **(something bears eat)** because we were getting hungry. But under the nurse log we found a _____ **(animal from the mountains)** and boy, were we surprised.

"This is weird," I said. "This animal belongs in the mountains."

"Mind your own business," said the _____ **(any adj.)** animal. "I'm tired of the _____ and the _____ **(two things you find in the mountains.)** His voice was _____ and _____ **(adjectives for the mountains).** If you two _____ **(and adj.)** kids don't mind, I'm in the middle of _____ **(any activity).**

We left him and continued on the trail, but the whole business made us wish we had gone hiking in _____ **(a near-by city)** instead. "At least they have a _____, _____ **(two adjectives for forest)** mall there.

Up ahead we met with a _____ **(any adj.)** ranger who was _____ **(verb + ing)** by. Her name was _____ **(name of girl).**

"Are we glad to see you!" my brother shouted. "There are some _____ **(any adj.)** and _____ **(any adj.)** animals in this park."

"Have you by any chance met any talking animals today?" the _____ **(adj.)** ranger asked. She had a funny look on her _____ **(part of the face).**

"Yes!" I shouted. I _____ **(adverb)** told her what we had seen.

"Oh, them!" the ranger laughed _____ **(adverb).** "No, they don't belong in this ecosystem. You'll have to excuse them. They're on spring break.

Washington State Essential Academic Learning Requirements

Art

EALR 1 The student understands and applies arts knowledge and skills in dance, music, theatre and visual arts.

1.2 Develops arts skills and techniques.

EALR 2 The student demonstrates thinking skills using artistic processes of creating, performing/presenting and responding, in dance, music, theatre and visual arts.

2.1 Applies a creative process in the arts (dance, music, theatre and visual arts.) (Identifies, explores, gathers, interprets, uses ideas, implements, reflects, refines, presents)

EALR 3 The student communicates through the arts (dance, music, theatre and visual arts).

3.1 Uses the arts to express and present ideas and feelings.
3.2: Uses the arts to communicate for a specific purpose.

Washington State Essential Academic Learning Requirments

Communication, Reading and Writing

Communication

EALR 1 The student uses listening and observation skills and strategies to gain understanding.

1.1 Uses listening and observation skills and strategies to focus attention and interpret information.
1.1.1 Applies a variety of listening strategies to accommodate the listening situation.
1.1.2 Applies a variety of listening and observation skills/strategies to recall and interpret information.

EALR 2 The student uses communication skills and strategies to interact/work effectively with others.

2.1. Uses language to interact effectively and responsibly in a multicultural context.

2.2. Uses interpersonal skills and strategies in a multicultural context to work collaboratively, solve problems, and perform tasks.

Reading

EALR 1 The student understands and uses different skills and strategies to read.

1.1 Use word recognition skills and strategies to read and comprehend text.

1.2 Use vocabulary (word meaning) strategies to comprehend text.
1.2.1 Apply reference skills to define, clarify, and refine word meanings.
- Use dictionaries, thesauruses, and glossaries to find or confirm word meanings, pronunciations, syllabication, synonyms, antonyms, and parts of speech of words.

1.3 Build vocabulary through wide reading.
1.3.1 Understand and apply new vocabulary.
- Usenewvocabularyfrominformational/expositorytextandliterary/narrativetext,includingtextfroma variety of cultures and communities, in oral and written communication.

Writing

EALR 2 The student writes in a variety of forms for different audiences and purposes.

2.2. Writes for different purposes.
2.2.1. Demonstrates understanding of different purposes for writing.
2.3 Writes in a variety of forms/genres.

Washington State Essential Academic Learning Requirments

Science

EALR 1 Systems

4-5 SYSA Systems contain subsystems.

- Identify at least one of the subsystems of an object, plant, or animal.

4-5 SYSB A system can do things that none of its subsystems can do by themselves.

- Specify how a system can do things that none of its subsystems can do by themselves.

4-5 SYSC Systems have inputs and outputs. Changes in inputs may change the outputs of a system.

- Describe what goes into a system (input) and what comes out of a system (output).

4-5 SYSD One defective part can cause a subsystem to malfunction, which in turn will affect the system as a whole.

- Predict what might happen to a system if a part in one or more of its subsystems is missing, broken, worn out, mismatched, or misconnected.

EALR 2 Inquiry

4-5 INQA Scientific investigations involve asking and answering questions and comparing the answers with evidence from the real world.

- Identify the questions being asked in an investigation. Gather scientific evidence that helps to answer a question.

EALR 3 Application

4-5 APPA Technology involves changing the natural world to meet human needs or wants.

- Describe ways that people use technology to meet their needs and wants.

EALR 4 Life Science

4-5 LS2A An ecosystem includes all of the plant and animal populations and nonliving resources in a given area. Plants and animals depend on one another and the nonliving resources in their ecosystem to help them survive.

- Identify the living and nonliving parts of an ecosystem.
- Give examples to show how the plants and animals depend on one another for survival.
- Describe how the plants and animals in an ecosystem depend on nonliving resources.

- Describe ways that humans can harm the health of ecosystems.

Science (continued)

EALR 4 Life Science

4-5 LS2C Plants and animals are related in food webs with producers (plants that make their own food), consumers (animals that eat producers and/or other animals), and decomposers (primarily bacteria and fungi) that break down wastes and dead organisms, and return nutrients to the soil.

- Draw a simple food web given a list of three common organisms. Draw arrows properly and identify the producers and consumers.
- Compare the roles of producers, consumers, and decomposers in an ecosystem.

4-5 LS2F People affect ecosystems both positively and negatively.

- Describe ways that humans can improve the health of ecosystems.

Social Studies

EALR 3 GEOGRAPHY The student uses a spatial perspective to make reasoned decisions by applying the concepts of location, region, and movement and demonstrating knowledge of how geographic features and human cultures impact environments.

3.1 Understands the physical characteristics, cultural characteristics, and location of places, regions, and spatial patterns on the Earth's surface.

3.1.1 Constructs and uses maps to explain the movement of people.

3.1.2 Understands the physical, political, and cultural characteristics of places, regions, and people in the Pacific Northwest, including the difference between cities, states, and countries.

3.2 Understands human interaction with the environment.

3.2.3 Understands that the geographic features of the Pacific Northwest have influenced the movement of people.

EALR 4 HISTORY The student understands and applies knowledge of historical thinking, chronology, eras, turning points, major ideas, individuals, and themes in local, Washington State, tribal, United States, and world history in order to evaluate how history shapes the present and future.

4.1 Understands historical chronology.

4.1.1 Understands and creates timelines to show how historical events are organized into time periods and eras.

4.1.2 Understands how the following themes and developments help to define eras in Washington State history from time immemorial to 1889:

- Growth of northwest coastal and plateau tribes prior to treaties (time immemorial to 1854).
- Maritime and overland exploration, encounter, and trade (1774—1849).
- Immigration and settlement (1811—1889).
- Territory and treaty-making (1854—1889).

4.2 Understands and analyzes causal factors that have shaped major events in history.

4.2.1 Understands and analyzes how individuals caused change in Washington State history.

4.4 Uses history to understand the present and plan for the future.

4.4.1 Understands that significant historical events in Washington State have implications for current

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Ecosystem Olympic!

Olympic National Park Resource Education
Program Evaluation

Your comments are greatly appreciated! Thanks for taking the time to fill out this short form, and assisting us in improving our program. Please mail it back in the self-addressed stamped envelope provided (600 E. Park Ave, Port Angeles, WA 9832, attn: Dean Butterworth) or e-mail comments to: dean_butterworth@nps.gov.

Teacher _____ School _____ No. of Students_____

Ranger _____ Program Length _____

Did your students enjoy the program? Did they stay involved during the program? What did they learn during the program?

Do you have any suggestions on how to make the components of the program more active?

How do you incorporate this program into your curriculum?

What are the strengths and weaknesses of the program?

Looking at learning requirements, in your opinion is this program better suited for another grade level?

Do you have any other comments (consider logistics, notification, materials, etc.)?

Continued on the other side

Please rate the pre- and post-visit activities and make comments.

Pre-Visit Activities	**Did you use the activity? Yes or No**	**Would you…?** **3 = Definitely use it again** **2 = Use it if time allows** **1 = Not use it again**	**Comments**
What is a National Park?			
Olympic Video and Worksheet			
Where's My Habitat?			
Habitat Haiku			
Ecosystem Crossword			

Post-Visit Activities	**Did you use the activity? Yes or No**	**Would you…?** **3 = Definitely use it again** **2 = Use it if time allows** **1 = Not use it again**	**Comments**
Ecosystem Collage			
Create-a-Creature			
Walk Lightly on Your Park!			
Olympic Mad Libs!			

Thank you!