



# Ecosystem Olympic!



ACTIVITY SUPPLEMENT

# Ecosystem Olympic!



Spring 2017

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 Next Generation Science Standards, Common Core State Standards, and Washington State EALRs and GREs 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](http://www.nps.gov/olym) or students may become a Webranger at: [www.nps.gov/webrangers](http://www.nps.gov/webrangers). Under the Every Kid in a Park initiative, all fourth graders and their families are entitled to a free annual pass into America's National Parks. Visit [www.everykidinapark.gov](http://www.everykidinapark.gov) for more information.

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 that you will receive during the ranger's visit.

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](mailto:Dean_Butterworth@nps.gov).

Sincerely,

*Olympic National Park Education Rangers*



# Ecosystem Olympic!



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# Ecosystem Olympic!



**Time Required:**  
20-30 minutes

**Materials:**  
Washington State Map or  
Olympic National Park  
online map:

<http://www.nps.gov/olymp/planyourvisit/upload/OLYMmap2012-1600x1100.jpg>

**Subjects:**  
Social Studies  
Science

**Skills:**  
Identifying  
Describing  
Finding Patterns

**Washington State  
Essential Academic  
Learning Requirements:**  
Social Studies:  
Geography 3.1  
History 4.1

## What is a National Park?

### Pre-Visit Activity

#### Student Outcomes:

Students will be able to...

- List different types of national parks in Washington.
- Name two national 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. Using a Washington State Map have the students look for and answer the following:
  - 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?
2. Using the online Olympic National Park Map have the students look for and answer the following:

<http://www.nps.gov/olymp/planyourvisit/upload/OLYMmap2012-1600x1100.jpg>

- 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?



## Animals of Olympic National Park for “Where’s My Habitat?”

<i>Animal</i>	<i>Habitat</i>	<i>Food</i>
Mountain Goat	Mountains	Leaves, lichens, moss, grasses
Marmot	Mountains	Grass, new buds, flowers
Bobcat	Forest	small mammals, birds, reptiles
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
Gray Whale	Coast	Plankton, amphipods, isopods, crab larvae
Sea Star	Coast	Barnacles, limpets, snails, mussels
Great Blue Heron	Coast	Fish
American Dipper	Coast and Forest	Insects, fish eggs, small fish

# Ecosystem Olympic!

**Time Required:**

23 minutes for video  
20 - 30 minutes for  
writing

**Materials:**

Mosaic of Diversity video\*  
paper  
pencils  
\*provided

**Subjects:**

Writing

**Skills:**

Recalling  
Creative Writing

**Common Core State  
Standards for English****Language Arts:**

R.4.5, W.4.10

**Habitat Haiku****Pre-Visit Activity****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.

# Ecosystem Olympic!



## Ecosystems Olympic Crossword Post-Visit Activity

**Time Required:**

20-30 minutes

**Materials:**

Ecosystems Olympic  
Crossword Puzzle\*  
pencils  
*\*provided*

**Subjects:**

Reading  
Science

**Skills:**

Spelling  
Reading

**Common Core State  
Standards for English  
Language Arts:**

RF.4.3.a, W.4.8, L.4.6

**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:**

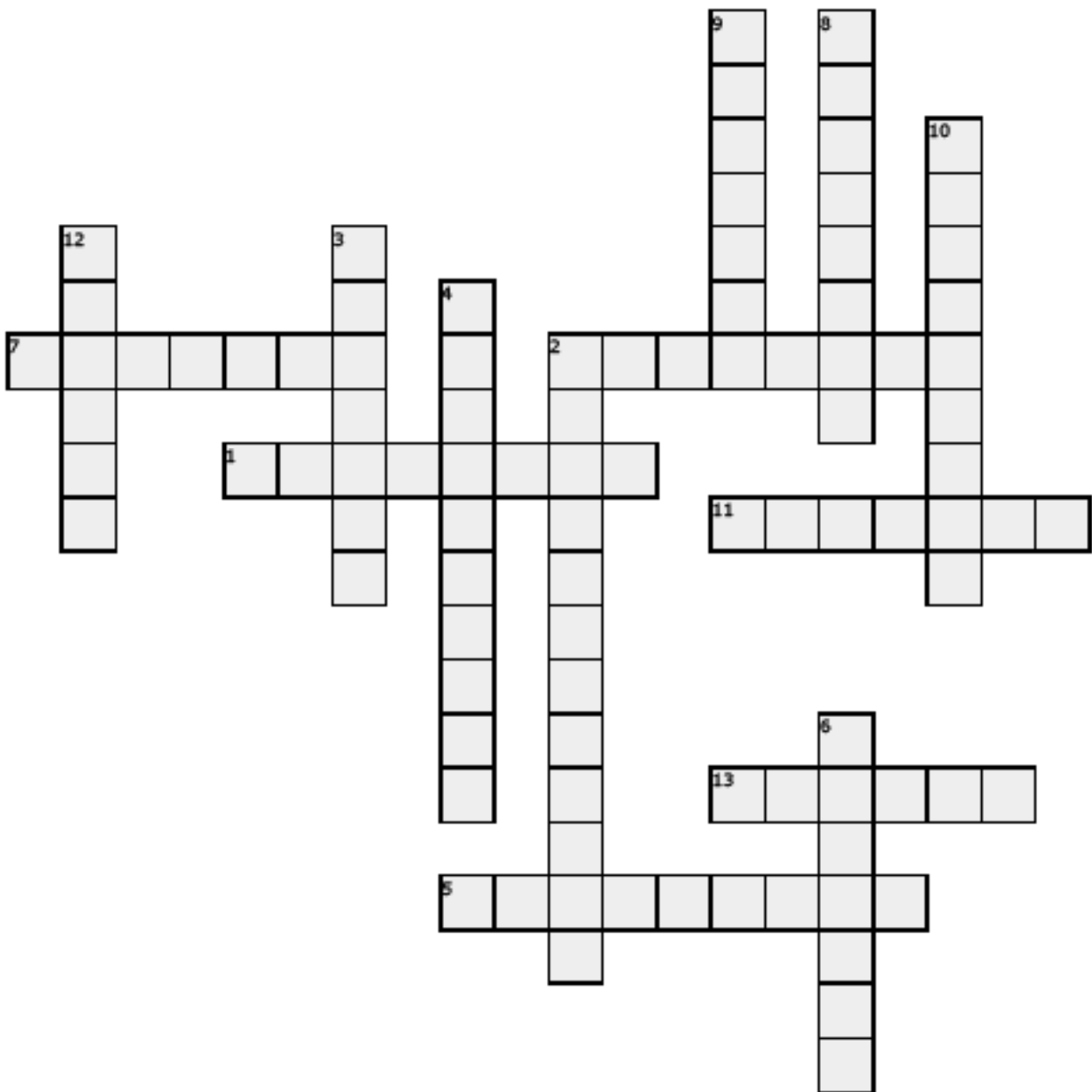
1. Make copies of the crossword puzzle for each student.
2. Explain how to complete the puzzle by placing one letter in each square for the word that fits with the clue.
3. Go over the answers together and discuss the meanings of the words.

**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 crossword puzzle.
3. Have students make their own crossword puzzle using new words they learn during the ranger's program or from other sources.



# Ecosystems Olympic Crossword



Ecosystem	Producer	Consumer	Interact	Abiotic	Ranger	Habitat	Extinct	Steward	Population
	Endemic	Adapts	Diversity	Preservation					

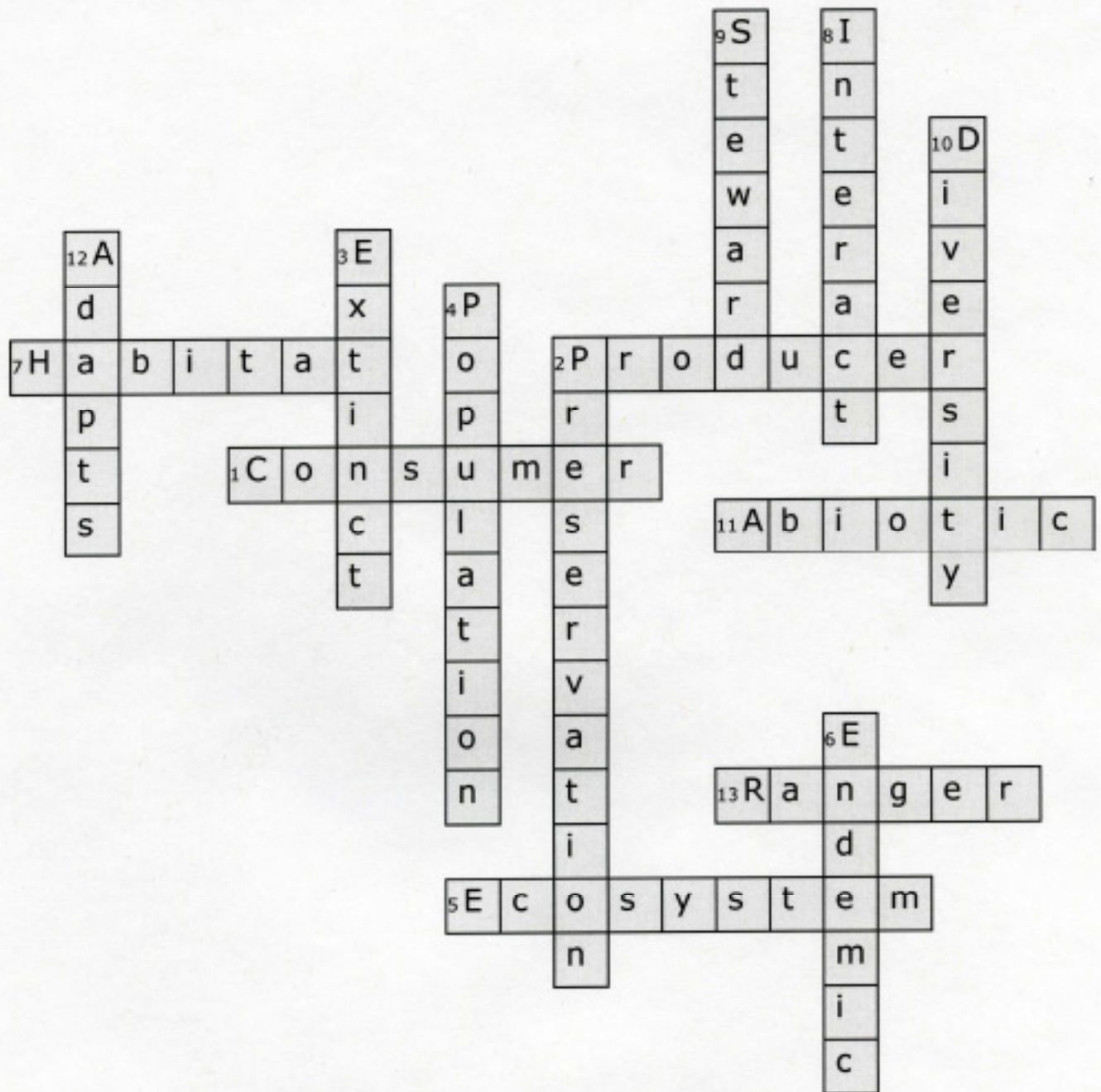
## Across:

- Must eat producers or other consumers in order to grow (animals)
- Uses light, air water and soil to make its own food (plants)
- The system where plants and animals interact with the environment
- The place where an animal finds its food, water, and shelter
- Things that are not alive and have never been alive (light, air, water, & soil)
- A person who informs others about the park and helps protect it

## Down:

- A person who takes care of the environment
- No longer alive
- Total number of animals in an area
- Plants and animals that are found in only one area
- To affect each other
- A person who takes care of the environment
- All different kinds of plants and animals
- What a plant or animal does to live in a new environment

# Ecosystems Olympic Crossword Key



## Across:

1. Must eat producers or other consumers in order to grow (animals)
2. Uses light, air water and soil to make its own food (plants)
5. The system where plants and animals interact with the environment
7. The place where an animal finds its food, water, and shelter
11. Things that are not alive and have never been alive (light, air, water, & soil)
13. A person who informs others about the park and helps protect it

## Down:

2. A person who takes care of the environment
3. No longer alive
4. Total number of animals in an area
6. Plants and animals that are found in only one area
8. To affect each other
9. A person who takes care of the environment
10. All different kinds of plants and animals
12. What a plant or animal does to live in a new environment

# Ecosystem Olympic!

**Time Required:**

20-30 minutes

**Materials:**

paper  
colored pencils or markers

**Subjects:**

Writing  
Science  
Art

**Skills:**

Recalling  
Analyzing  
Creating  
Drawing  
Describing

**Next Generation Science****Standards:**

3-LS4-2, 3 & 4  
4-LS1-1&2, 4-ESS2.E

**Common Core State  
Standards for English****Language Arts:**

W.4.2, W.4.3, SL.4.1,  
SL.4.4-5.

**Washington State  
Essential Academic  
Learning Requirements:**

Art: 2.1

## Create-a-Creature Post-Visit Activity

**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, what it eats and where it makes its home. How has it adapted to that ecosystem? How has it affected its ecosystem? 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!

# Ecosystem Olympic!



**Time Required:**  
15-20 minutes

**Materials:**  
Spring Break story\*  
*\*provided*

**Subjects:**  
Communication

**Skills:**  
Listening  
Describing

**Common Core State  
Standards for English  
Language Arts:**  
W.4.8, L.4.6

## Olympic Mad Libs! Post-Visit Activity

### 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 acquisition 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.

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## 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 \_\_\_\_\_ (**any 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.”

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Washington State Essential Academic Learning Requirements

## Common Core State Standards for English Language Arts

**SL4.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacherled) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.**

d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.

**SL4.2. Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.**

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Washington State Essential Academic Learning Requirements

## Next Generation Science Standards

### Performance Expectations

**2-LS4-1.** Make observations of plants and animals to compare the diversity of life in different habitats.

**2-ESS1-1.** Use information from several sources to provide evidence that Earth events can occur quickly or slowly.

**3-LS4-2.** Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.

**3-ESS2-2.** Obtain and combine information to describe climates in different regions of the world.

**3-LS4-3.** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

**3-LS4-4.** Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

**3-ESS3-1.** Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

**4-ESS2-1.** Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.

**4-ESS2-2.** Analyze and interpret data from maps to describe patterns of Earth's features.

### Disciplinary Core Ideas

**LS2.C: Ecosystem Dynamics, Functioning, and Resilience.** When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. (secondary to 3-LS4-4)

**LS4.C: Adaptation.** For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)

**LS4.D: Biodiversity and Humans.** Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4)

**ESS1.C: The History of Planet Earth.** Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)

**ESS2.A: Earth Materials and Systems.** Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms, and gravity break rocks, soils, and sediments into smaller particles and move them around. (4-ESS2-1)

**ESS2.B: Plate Tectonics and Large-Scale System Interactions.** Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2)

# Ecosystem Olympic!



Washington State Essential Academic Learning Requirements

## Next Generation Science Standards (continued).

### Disciplinary Core Ideas (continued)

**ESS2.C: The Roles of Water in Earth's Surface Processes.** Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)

**ESS2.D: Weather and Climate.** Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS2-1). Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2)

**ESS2.E: Biogeology.** Living things affect the physical characteristics of their regions. (4-ESS2-1)

**ESS3.B: Natural Hazards.** A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (3-ESS3-1) (Note: This Disciplinary Core Idea is also addressed by 4-ESS3-2.)

### Science and Engineering Practices

**Analyzing and Interpreting Data:** Analyze and interpret data to make sense of phenomena using logical reasoning. (4-ESS2-2)

### Crosscutting Concepts

**Patterns:** Patterns can be used as evidence to support an explanation. (4-ESS2-2)

**Cause and Effect:** Cause and effect relationships are routinely identified, tested, and used to explain change. (4-ESS2-1)

## 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.



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## Washington State Essential Academic Learning Requirements

### 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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## Olympic National Park Bibliography for Teachers

### OLYMPIC NATURAL HISTORY

1. Cascade – Olympic Natural History: A Trailside Reference, Second Edition, Daniel Matthews, 1999, Raven Editions
2. Olympic National Park: A Natural History, Tim McNulty, 2003, University of Washington Press
3. Olympic National Park Nature Guide, Larry and Nancy Eiffert, 2001, Estuary Press
4. Olympic: The Story Behind the Scenery, Henry C. Warren, 2004, KC Publications, Inc.
5. Olympic: The Continuing Story, Janet Scharf, 1993, KC Publications, Inc.

Olympic National Park, National Park Service. “Nature.” Last updated March 17, 2015. <http://www.nps.gov/olymp/learn/nature/index.htm>.

### PLANTS AND TREES

1. Cascade – Olympic Natural History: A Trailside Reference, Second Edition, Daniel Matthews, 1999, Raven Editions
2. Plants of the Pacific Northwest Coast, Jim Pojar and Andy MacKinnon, 1994, Lone Pine Publishing
3. Wildflowers of the Olympics and Cascades, Revised Edition, Charles Stewart, 1994, Nature Education Enterprises
4. Forest Giants of the Pacific Coast, Robert Van Pelt, 2001, Global Forest Society and University of Washington Press
5. Northwest Trees, Stephen F. Arno and Ramona P. Hammerly, 1977, The Mountaineers

King County. “Native Plant Guide.” Accessed March 25, 2015. <https://green2.kingcounty.gov/gonative/Plant.aspx?Act=list>.

Washington Native Plant Society. Last updated March 5, 2015. <http://www.wnps.org/education/index.html>.

### ANIMALS

1. Animal Tracks of Washington and Oregon, Ian Sheldon, 1997, Lone Pine Publishing
2. Cascade – Olympic Natural History: A Trailside Reference, Second Edition, Daniel Matthews, 1999, Raven Editions
3. National Audubon Society Field Guide to Mammals, Revised Edition, John O. Whitaker, Jr., 1996, Chanticleer Press, Inc.
4. Olympic National Park Nature Guide, Larry and Nancy Eiffert, 2001, Estuary Press
5. The Banana Slug, Alice Bryant Harper, 1988, Bay Leaves Press
6. Birds of the Pacific Northwest Mountains, Nancy Baron and John Acorn, 1997, Lone Pine Publishing
7. The Forest Elk, Bruce B. Moorhead, 1994, Northwest Interpretive Association

Forest Service, United States Department of Agriculture. “Pacific Northwest Wildlife.” Accessed March 25, 2015. [http://www.fs.usda.gov/photogallery/r6/plants-animals/gallery/?cid=2866&position=SubFeature\\*](http://www.fs.usda.gov/photogallery/r6/plants-animals/gallery/?cid=2866&position=SubFeature*).



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

<b>Pre-Visit Activities</b>	<b>Did you use the activity? Yes or No</b>	<b>Would you...? 3 = Definitely use it again 2 = Use it if time allows 1 = Not use it again</b>	<b>Comments</b>
What is a National Park?			
<i>Mosaic of Diversity</i> video			
Where's My Habitat?			
Habitat Haiku			

<b>Post-Visit Activities</b>	<b>Did you use the activity? Yes or No</b>	<b>Would you...? 3 = Definitely use it again 2 = Use it if time allows 1 = Not use it again</b>	<b>Comments</b>
Ecosystem Olympic Crossword			
Create-a-Creature			
Olympic Mad Libs!			

Thank you!