



ALIGNMENT WITH WASHINGTON STATE ESSENTIAL ACADEMIC LEARNING REQUIREMENTS (EALR) - APRIL 2009

FORESTS AND FINS	DESCRIPTION – IN-CLASS LESSON	DESCRIPTION – FIELD STUDY TRIP	ESSENTIAL LEARNINGS
Grade Level 5-8	How do healthy forests provide critical salmon spawning and rearing habitats? Students complete a mock stream survey exercise in which they investigate the various components of a healthy forest stream.	During a forest interpretive walk, students consider the importance of lake and stream riparian habitat to the overall health of a forest. Later, students complete a stream survey on a small creek to determine its health.	<p>SS-geography 2.1,2.2,2.3, 3.1</p> <p>SS-economics 1.1, 2.1, 3.1</p> <p>Reading 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2</p> <p>Communication 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3</p>
Grade Level 4-5			<p>Science EALR 1: SYS A, B, C, D Stewardship SYS A, B, C, D EALR 2: INQ A through I Stewardship INQ D, H, I EALR 3: APP D, F EALR 4: ES2 C, F Stewardship: ES2 C, F EALR 4: LS B, C Stewardship: LS B, C EALR 4: LS2 A, B, D, E, F Stewardship: LS2 A, B, D, E, F</p>
Grade Level 6-8			<p>EALR 1: SYS A, C, F Stewardship: SYS F EALR 2: INQ B, C, E, H EALR 3: Stewardship: APP B EALR 4: ES2G EALR 4: ES3 D EALR 4: LS2 A, D, E Stewardship: LS2 A, D, E</p>

EALRS – CONTINUED

FORESTS ON THE EDGE	DESCRIPTION – IN-CLASS LESSON	DESCRIPTION – FIELD STUDY TRIP	ESSENTIAL LEARNINGS
Grade Level 5-8	Students engage in a role-playing activity in which they explore the diverse values and demands placed on King County forestlands (such as wildlife habitat, air and water quality, recreation, timber harvesting and development).	After a forest exploration walk, students complete a forest transect study and decide which land uses are most appropriate for Tiger Mountain State Forest.	<p>SS-geography 1.1, 2.2, 3.1, 3.2</p> <p>SS-economics 1.1, 1.2, 1.3</p> <p>Reading 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2,</p> <p>Communication 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3</p>
Grade Level 4-5			<p>Science EALR 1: SYS A, B, C, D Stewardship SYS A, B, C, D EALR 2: INQ A,B,C, D, G, H, I EALR 3: APP B, C, D, F Stewardship: APP C, D EALR 4: ES2 A, D, E Stewardship: ES2 A, C, F EALR 4: LS2 A, D, E, F Stewardship: LS2 D, E, F EALR 1: SYS A, F</p>
Grade Level 6-8			<p>Stewardship: SYS A, F EALR 3: APP E, F Stewardship: APP E, F EALR 4: ES3 D EALR 4: LS1 F Stewardship: LS1 F EALR 4: LS2 D, E Stewardship: LS2 D, E</p>

EALRS – CONTINUED

SAVVY ABOUT SOIL	DESCRIPTION – IN-CLASS LESSON	DESCRIPTION – FIELD STUDY TRIP	ESSENTIAL LEARNINGS
Grade Level 5-8	The relationship between soil and water is explored through a hands on experiment. Samples of different textures of soil (sand, clay, silt, loam and biosolids) are provided for the students to measure water flow and pH.	Students examine multiple soil samples on mile long walk in the forest. Small teams use soil augers to gather and evaluate the soil for texture, fertility and pH. Students begin to understand how soil textures help determine the use of the land.	SS-geography 2.1, 3.1 SS-economics 1.1, 2.1, 3.1 Reading 1.1, 1.2, 2.1, 2.2, 2.3, 3.1, 3.2, Communication 1.1,1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3
Grade Level 4-5			Science EALR 1: SYS A, B, C, D Stewardship: SYS A, B, C, D EALR 2: INQ A.B, C, D, E, F, G, H, I EALR 4: PS1B EALR 4: ES2 A, B, C, D, E, F Stewardship: ES2 A, B, C, D, E, F EALR 4: LS1 C, D Stewardship: LS1 C, D EALR 4: LS2 A, B, C, D, E, F Stewardship: LS2 A, B, D, E, F EALR 4: LS3 A Stewardship: LS3 A
Grade Level 6-8			EALR 1: SYS A, C, E Stewardship: SYS A, C, E EALR 2: INQ A, B, C, D, E, H EALR 3: ES2 G Stewardship: ES2 G EALR 3: ES3 D Stewardship: ES3 D EALR 4: LS2 C, D, E Stewardship: LS2 D, E

EALRS – CONTINUED

GREENING UP THE GREENWAY	DESCRIPTION – IN-CLASS LESSON	DESCRIPTION – FIELD STUDY TRIP	ESSENTIAL LEARNINGS
Grade Level 5-10	How can King County forest soils be improved while addressing a regional environmental problem? Students examine the science, economic and health issues of recycling biosolids on forest land and compare it to another common fertilizer to promote tree growth.	After a forest exploration walk, students complete a transect studying which they decide whether biosolids should be applied to Tiger Mountain State Forest to increase tree growth.	SS-geography 2.2, 3.1, 3.2 SS-economics 1.1, 2.1, 3.1 Reading 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, Communication 1.1, 1.2, 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3
Grade Level 6-8			Science EALR 1: SYS A, C, E, F Stewardship: SYS A, C, E, F EALR 2: INQ F, H, I Stewardship: INQ I EALR 4: LS2 E Stewardship: LS2 E
Grade Level 9-12			EALR 1: SYS D Stewardship: SYS D EALR 2: INQ A, C, F, G Stewardship: INQ A, C, F, G EALR 3: APP E Stewardship: APP E EALR 3: ES2 D Stewardship: ES2 D EALR 4: LS2 A, C, D, E, F Stewardship: LS2 A, C, D, E, F

EALRS – CONTINUED

FOREST ECOSYSTEMS	DESCRIPTION: INTRODUCTORY LESSON AND IN-CLASS LESSON	DESCRIPTION: FIELD STUDY TRIP	DESCRIPTION: STEWARDSHIP EVENT	ENVIRONMENT & SUSTAINABILITY EDUCATION STANDARD	SCIENCE STANDARD CCA, D, BI & CC	READING COMMUNICATIONS SOCIAL STUDIES
Grade Level 4-5	Students will understand how systems are made up of parts and how those parts are related. They will understand abiotic and biotic elements and if those elements are producers, consumers or decomposers. Photosynthesis and the idea of how ecosystems change both naturally and through human intervention will be introduced.	Students will have an opportunity to observe and analyze a Pacific NW ecosystem at Tiger Mt. They will understand how the elements of the forest ecosystem are connected; how energy is transferred through the system through photosynthesis and how the forest is always changing either through natural or human impact. Close	Students will have the opportunity to analyze another ecosystem while they engage in restoration efforts on the landscape. Activities include: planting trees, removing invasive weeds and/or working in our native plant nursery.	Standard 1: Ecological, Social and Economic Systems Students develop knowledge of the interconnections and interdependency of ecological, social and economic systems. They demonstrate understanding of how the health of these systems determines the sustainability of natural and human communities at local, regional, national and global levels.	EALR 1: Systems (CCA) Complex Systems (CC) SYSA, SYSB, SYSC, SYSD EALR 3: Application EALR 4: Life Science (D) Ecosystems (BI) Food Webs (CC) PS3B, LS1C, LS1D, LS2C, LS2A, LS2D, LS2E, LS2F, LS3A	Reading EALR 1 The student understands and uses different skills and strategies to read. 1.2.1, 1.2.2, 1.2.1,1.3.1, 1.3.2, 1.4.3 EALR 2 The student understands the meaning of what is read. 2.1.3, 2.1.4, 2.1.6,2.1.7, 2.2.2, 2.4.1, 2.4.5 EALR 3 The student reads different materials for a variety of purposes. 3.2
Grade Level 4-5		observation is encouraged through drawing exercises. Presentations at the end of the trip allow for discussion on negative and positive ways humans affect the ecosystem.		Standard 2: The Natural and Build Environment Students engage in inquiry and systems thinking and use information gained through learning experiences in, about and for the environment to understand the structure, components and processes of natural and human-built environments.	EALR 4 Physical Science (D) Energy: Transfer, Transformation, and Conservation (BI) Heat, Light, Sound, and Electricity (CC) PS3A, PS3B, PS3E EALR 4 Life Science (D) Ecosystems (BI) Food Webs (CC) LS2A, LS2B, LS2C, LS2D, LS2E	Communications EALR 1 The student uses listening and observation Skills and strategies to focus attention. 1.1.1, 1.1.2, 1.2.1 EALR 2 The student uses communication skills and strategies to interact/work effectively with others. 2.1.1, 2.2.1, 2.2.2, 2.3.1, 3.1.1, 3.2.1 EALR 3 The student uses communication skills and strategies to effectively present ideas and one’s self in a variety of situations. 3.1.1, 3.2.1, 3.3.1

EALRS – CONTINUED

FOREST ECOSYSTEMS	DESCRIPTION: INTRODUCTORY LESSON AND IN-CLASS LESSON	DESCRIPTION: FIELD STUDY TRIP	DESCRIPTION: STEWARDSHIP EVENT	ENVIRONMENT & SUSTAINABILITY EDUCATION STANDARD	SCIENCE STANDARD CCA, D, BI & CC	READING COMMUNICATIONS SOCIAL STUDIES
Grade Level 4-5				<p>Standard 3: Sustainability and Civic Responsibility</p> <p>Students develop and apply the knowledge, perspective, vision, skills, and habits of mind necessary to make personal and collective decisions and take actions that promote sustainability.</p>		<p>Social Studies</p> <p>1.4 Understands civic involvement. 2.1 Understands how that people have to make choices between wants and needs and evaluate the outcome. 3.2 Understands human interaction with the environment. 4.3 Understands that there are multiple perspectives and interpretations of historical events. 5.1 Uses critical skills to analyze and evaluate possibilities. 5.3 Deliberates public issues.</p>
Grade Level 6-8				<p>Standard 1: Ecological, Social and Economic Systems</p> <p>Students develop knowledge of the interconnections and interdependency of ecological, social and economic systems. They demonstrate understanding of how the health of these systems determines the sustainability of natural and human communities at local, regional, national and global levels.</p>	<p>EALR 1 Systems (CCA) Inputs, Outputs, Boundaries & Flows (CC) SYSA, SYSB, SYSC, SYSD, SYSE, SYSF</p> <p>EALR 4 Life Science (D) Ecosystems (BI) Flow of Energy through Ecosystems (CC) LS2A, LS2B, LS2C, LS2D, LS2E</p>	<p>Reading</p> <p>EALR 1 The student understands and uses different skills and strategies to read. 1.2.1, 1.2.2, 1.2.1,1.3.1, 1.3.2, 1.4.3</p> <p>EALR 2 The student understands the meaning of what is read. 2.1.3, 2.1.4, 2.1.6, 2.1.7, 2.2.2, 2.4.1, 2.4.5</p> <p>EALR 3 The student reads different materials for a variety of purposes. 3.2</p>

* FOREST ECOSYSTEMS CONTINUED *

EALRS – CONTINUED

FOREST ECOSYSTEMS	DESCRIPTION: INTRODUCTORY LESSON AND IN-CLASS LESSON	DESCRIPTION: FIELD STUDY TRIP	DESCRIPTION: STEWARDSHIP EVENT	ENVIRONMENT & SUSTAINABILITY EDUCATION STANDARD	SCIENCE STANDARD CCA, D, BI & CC	READING COMMUNICATIONS SOCIAL STUDIES
Grade Level 6-8				<p>Standard 2: The Natural and Build Environment Students engage in inquiry and systems thinking and use information gained through learning experiences in, about and for the environment to understand the structure, components and processes of natural and human-built environments.</p>	<p>EALR 4 Physical Science (D) Interactions of Energy and Matter (CC) PS3A, PS3B, PS3C, PS3E</p> <p>EALR 4 Life Science (D) Ecosystems (BI) Flow of Energy through Ecosystems (CC) LS2A, LS2B, LS2C, LS2D, LS2E</p>	<p><u>Communications</u></p> <p>EALR 1 The student uses listening and observation Skills and strategies to focus attention. 1.1.1, 1.1.2, 1.2.1</p> <p>EALR 2 The student uses communication skills and strategies to interact/work effectively with others. 2.1.1, 2.2.1, 2.2.2, 2.3.1, 3.1.1, 3.2.1</p> <p>EALR 3 The student communication skills and strategies to effectively present ideas and one’s self in a variety of situations. 3.1.1, 3.2.1, 3.3.1</p>
Grade Level 6-8				<p>Standard 3: Sustainability and Civic Responsibility Students develop and apply the knowledge, perspective, vision, skills and habits of mind necessary to make personal and collective decisions and take actions that promote sustainability.</p>		<p><u>Social Studies</u></p> <p>1.4 Understands civic involvement. 2.1 Understands how that people have to make choices between wants and needs and evaluate the outcome. 3.2 Understands human interaction with the environment. 4.3 Understands that there are multiple perspectives and interpretations of historical events. 5.1 Uses critical skills to analyze and evaluate possibilities. 5.3 Deliberates public issues.</p>