WASHINGTON STATE LASER

Alignment of Washington 6-8 Science Standards by Lesson Number for

SEPUP

Evolution

November 1, 2010

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 89

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
APPE	Scientists and engineers often work together to generate creative solutions to problems and decide which ones are most promising.	• Collaborate with other students to generate creative solutions to a problem, and apply methods for making tradeoffs to choose the best solution.	SG pp F-4-9; TG pp F-1-8; Student Sheet 89.2	**Aligned as designed**	Teachers need to emphasize Analysis Questions 3 and 4.
LS3F	Extinction occurs when the environment changes and the adaptive characteristics of a species, including its behaviors, are insufficient to allow its survival.	• Given an ecosystem, predict which organisms are most likely to disappear from that environment when the environment changes in specific ways.	SG pp F-4-9; TG pp F-1-8	**Aligned as designed**	Teachers need to emphasize Analysis Questions 1 and 2.

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 90

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. • Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. • Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.	SG pp F-10-11; TG pp F-13-19; Student Sheet 90.1	**Aligned as designed**	
LS3G	Evidence for evolution includes similarities among anatomical and cell structures, and patterns of development make it possible to infer degree of relatedness among organisms.	Infer the degree of relatedness of two species, given diagrams of anatomical features of the two species (e.g., chicken wing, whale flipper, human hand, bee leg).	SG pp F-10-11; TG pp F-13-19; Student Sheet 90.1	**Aligned as designed**	Teachers need to emphasize Analysis Question 1.

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 91

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQA	Scientific inquiry involves asking and answering questions and comparing the answer with what scientists already know about the world.	• Generate a question that can be answered through scientific investigation. This may involve refining or refocusing a broad and ill-defined question.	SG pp F-12-15; TG pp F-27-34; Student Sheet 91.1	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 92

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQE	Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.	• Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.	SG pp F-16-20; TG pp F-37-43; Student Sheet 92.1, 92.2	**Aligned as designed**	Teachers need to emphasize background information, p F-39, Transparency 92.1, p F-45, and how student model relates to geologic time scale.
INQE	Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.	• Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.	SG-36, Question 3, TG-G-72	**Aligned as designed**	Question 3 on p SG-36 asks students to explain their reasoning and can demonstrate their level of conceptual understanding of models and this standard.

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 93

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. • Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. • Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.	SG pp F-21-23; TG pp F-51-54; Student Sheet 93.1; Transparency 93.1	**Aligned as designed**	Teachers need to emphasize TG "Follow-Up" p F-54.
ES3B	Thousands of layers of sedimentary rock provide evidence that allows us to determine the age of Earth's changing surface and to estimate the age of fossils found in the rocks.	• Explain how the age of land forms can be estimated by studying the number and thickness of rock layers, as well as fossils found within rock layers.	SG pp F-21-23; TG pp F-51-56; Student Sheet 93.1	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 94

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS3A	The scientific theory of evolution underlies the study of biology and explains both the diversity of life on Earth and similarities of all organisms at the chemical, cellular, and molecular level. Evolution is supported by multiple forms of scientific evidence.	• Explain and provide evidence of how biological evolution accounts for the diversity of species on Earth today.	SG pp F-24-29; TG pp F-63-71; Student Sheet 94.1	**Aligned as designed**	Teachers need to emphasize "Evolution-Related Misconceptions", TG p F-66.

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 95

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQE	Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.	• Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.	SG pp F-30-32; TG p F-78	**Aligned as designed**	Teachers need to emphasize Analysis Question #5, SG p F-32.
LS3E	Adaptations are physical or behavioral changes that are inherited and enhance the ability of an organism to survive and reproduce in a particular environment.	• Give an example of a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change.	SG pp F-30-32; TG pp F-75-82; Student Sheet 95.1	**Aligned as designed**	Teachers need to emphasize Background Information, TG p F-77.
LS3F	Extinction occurs when the environment changes and the adaptive characteristics of a species, including its behaviors, are insufficient to allow its survival.	• Given an ecosystem, predict which organisms are most likely to disappear from that environment when the environment changes in specific ways.	SG pp F-30-32; TG pp F-75-82; Student Sheet 95.1	**Aligned as designed**	Teachers need to emphasize Analysis Question #4. The Unit/Lesson is an integral part of the learning progression students are asked to demonstrate conceptual understanding of standards in Activities 95-97.

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 96

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQE	Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.	• Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.	SG pp F-33-36; TG pp F-85-93; Student Sheet 96.1	**Aligned as designed**	Teachers need to emphasize Analysis Question 3, 5-6, TG p F-92.
LS3E	Adaptations are physical or behavioral changes that are inherited and enhance the ability of an organism to survive and reproduce in a particular environment.	• Give an example of a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change.	SG pp F-33-36; TG pp F-75-82; Student Sheet 95.1	**Aligned as designed**	Teachers need to emphasize Background Information, TG p F-87 and Analysis Questions #1, 2 & 4.

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 97

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS3A	The scientific theory of evolution underlies the study of biology and explains both the diversity of life on Earth and similarities of all organisms at the chemical, cellular, and molecular level. Evolution is supported by multiple forms of scientific evidence.	• Explain and provide evidence of how biological evolution accounts for the diversity of species on Earth today.	SG pp F-37-42; TG pp F-97-102	**Aligned as designed**	Teachers need to emphasize "Stopping to Think" segments of reading in SG.
LS3F	Extinction occurs when the environment changes and the adaptive characteristics of a species, including its behaviors, are insufficient to allow its survival.	• Given an ecosystem, predict which organisms are most likely to disappear from that environment when the environment changes in specific ways.	SG pp F-37-42; TG pp F-97-102	**Aligned as designed**	Teachers need to emphasize "Stopping to Think" segments of reading in SG.

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 98

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS3A	The scientific theory of evolution underlies the study of biology and explains both the diversity of life on Earth and similarities of all organisms at the chemical, cellular, and molecular level. Evolution is supported by multiple forms of scientific evidence.	• Explain and provide evidence of how biological evolution accounts for the diversity of species on Earth today.	SG pp F-43-47; TG pp F-105-113; Student Guide 98.1	**Aligned as designed**	Teachers need to emphasize Follow-Up, TG p F-109, and Reflection, TG p F-111.

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 99

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS3G	Evidence for evolution includes similarities among anatomical and cell structures, and patterns of development make it possible to infer degree of relatedness among organisms.	Infer the degree of relatedness of two species, given diagrams of anatomical features of the two species (e.g., chicken wing, whale flipper, human hand, bee leg).	SG pp F-48-50; TG pp F-121-135	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 100

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS3G	Evidence for evolution includes similarities among anatomical and cell structures, and patterns of development make it possible to infer degree of relatedness among organisms.	Infer the degree of relatedness of two species, given diagrams of anatomical features of the two species (e.g., chicken wing, whale flipper, human hand, bee leg).	SG pp F-51-55; TG pp F-139-163	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Evolution ~ Activity 101

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
APPE	Scientists and engineers often work together to generate creative solutions to problems and decide which ones are most promising.	• Collaborate with other students to generate creative solutions to a problem, and apply methods for making tradeoffs to choose the best solution.	SG pp F-56-60; TG pp F-165-175; Student Sheet 101.2	**Aligned as designed**	Teachers need to emphasize Analysis Questions 4-5.
LS3F	Extinction occurs when the environment changes and the adaptive characteristics of a species, including its behaviors, are insufficient to allow its survival.	• Given an ecosystem, predict which organisms are most likely to disappear from that environment when the environment changes in specific ways.	SG pp F-56-60; TG pp F-165-175	**Aligned as designed**	Teachers need to emphasize Analysis Questions 1-3.