WASHINGTON STATE LASER

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

SEPUP

Erosion & Deposition

November 1, 2010

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 24

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 p C-5; TG p C-9; Student Sheet 24.1	**Aligned as designed**	The activity aligns to the content standard. Does not use statistical procedures to analyze data.
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.	TG p C-9; Student sheet 24.1; SG p C-4	**Aligned as designed**	The activity uses a land form model. The unit/lesson contains many opportunities to discuss how the model is and is not like the actual land forms and would better meet the P.E.
APPD	The process of technological design begins by defining a problem and identifying criteria for a successful solution, followed by research to better understand the problem and brainstorming to arrive at potential solutions.	• Define a problem that can be solved by technological design and identify criteria for success. • Research how others solved similar problems. • Brainstorm different solutions.	SG p C-5	**Aligned as designed**	The activity contains multiple opportunities for student use the technological design process as students engage in a research project or developing a model. This activity is an integral part of the learning progression and should be completed by all students.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 25

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 C-9-11	**Aligned as designed**	This activity is a part of a conceptual sequence.
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 C-9-11	**Aligned as designed**	This unit/lesson is a part of a conceptual sequence. Teachers need to emphasize analysis questions 3 and 4 in SG pp C-10-11 to support students in meeting displaying and analyzing diagrams and data.
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 C-9-10	**Aligned as designed**	This activity is a part of a conceptual sequence and should be completed by all students.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 25

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	• Generate a scientific conclusion from an investigation using inferential logic, and clearly distinguish between results (e.g., evidence) and conclusions (e.g., explanation). • Describe the differences between an objective summary of the findings and an inference made from the findings.	SG pp C-10-11	**Aligned as designed**	This activity is a part of a conceptual sequence.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 26

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSF	The natural and designed world is complex; it is too large and complicated to investigate and comprehend all at once. Scientists and students learn to define small portions for the convenience of investigation. The units of investigation can be referred to as “systems.”	• Given a complex societal issue with strong science and technology components (e.g., overfishing, global warming), describe the issue from a systems point of view, highlighting how changes in one part of the system are likely to influence other parts of the system.	SG pp C-12-14	**Aligned as designed**	
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 C-12-14	**Aligned as designed**	The activity is an integral part of a learning progression and supports student understanding of patterns. It does not include the statistical procedures.
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 C-13-14; Student Sheet 26.1a, 26.1b, 26.2a, 26.2b 26.3a, 26.3b	**Aligned as designed**	The activity is an integral part of a learning progression and allows students to work with a land form model.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 27

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSF	The natural and designed world is complex; it is too large and complicated to investigate and comprehend all at once. Scientists and students learn to define small portions for the convenience of investigation. The units of investigation can be referred to as “systems.”	• Given a complex societal issue with strong science and technology components (e.g., overfishing, global warming), describe the issue from a systems point of view, highlighting how changes in one part of the system are likely to influence other parts of the system.	SG pp C-17-18	**Aligned as designed**	The activity contains opportunities for the use of terms systems, input and output but it requires the intentional use by teachers.
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 C-15-18; TG pp C-36-37	**Aligned as designed**	The teacher must be intentional about sharing how to calculate the mean, mode, and median.
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 C-15-18; TG pp C-41, C-43	**Aligned as designed**	The teacher must be intentional about sharing how to calculate the mean, mode, and median.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 27

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	• Generate a scientific conclusion from an investigation using inferential logic, and clearly distinguish between results (e.g., evidence) and conclusions (e.g., explanation). • Describe the differences between an objective summary of the findings and an inference made from the findings.	SG pp C-17-18	**Aligned as designed**	The teacher needs to intentionally take advantage of multiple opportunities to assess student understanding of the content standard in Analysis Question 4 on page C-18.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 28

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSF	The natural and designed world is complex; it is too large and complicated to investigate and comprehend all at once. Scientists and students learn to define small portions for the convenience of investigation. The units of investigation can be referred to as “systems.”	• Given a complex societal issue with strong science and technology components (e.g., overfishing, global warming), describe the issue from a systems point of view, highlighting how changes in one part of the system are likely to influence other parts of the system.	SG p C-22	**Aligned as designed**	
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 C-19-22; Student Sheet 28.1	**Aligned as designed**	
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 C-19-22; Student Sheet 28.1	**Aligned as designed**	The teacher must be intentional about having the students completing the extension on SG p C-22 to fully meet this standard.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 28

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	• Generate a scientific conclusion from an investigation using inferential logic, and clearly distinguish between results (e.g., evidence) and conclusions (e.g., explanation). • Describe the differences between an objective summary of the findings and an inference made from the findings.	SG pp C-22	**Aligned as designed**	
ES2G	Land forms are created by processes that build up structures and processes that break down and carry away material through erosion and weathering.	• Explain how a given land form (e.g., mountain) has been shaped by processes that build up structures (e.g., uplift) and by processes that break down and carry away material (e.g., weathering and erosion).	SG pp C-19-22; Student Sheet 28.1	**Aligned as designed**	The teacher must be intentional about use of the terms weathering, erosion and sediment.
ES2G	Land forms are created by processes that build up structures and processes that break down and carry away material through erosion and weathering.	• Explain how a given land form (e.g., mountain) has been shaped by processes that build up structures (e.g., uplift) and by processes that break down and carry away material (e.g., weathering and erosion).	SG pp C-21-22; TG pp C-48-49	**Aligned as designed**	The activity is an integral part of a learning progression and fully meets the standard when taught with Activity 29.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 28

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES3D	Earth has been shaped by many natural catastrophes, including earthquakes, volcanic eruptions, glaciers, floods, storms, tsunami, and the impacts of asteroids.	• Interpret current land forms of the Pacific Northwest as evidence of past geologic events (e.g., Mount St. Helen's and Crater Lake provide evidence of volcanism, the Channeled Scablands provides evidence of floods that resulted from melting of glaciers).	SG pp C-21-22; TG pp C-46-49; Student Sheet 28.1	**Aligned as designed**	The activity is strong in the area of the content standard and current land forms found in the Pacific Northwest must be added to fully meet the P.E.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 29

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSF	The natural and designed world is complex; it is too large and complicated to investigate and comprehend all at once. Scientists and students learn to define small portions for the convenience of investigation. The units of investigation can be referred to as “systems.”	• Given a complex societal issue with strong science and technology components (e.g., overfishing, global warming), describe the issue from a systems point of view, highlighting how changes in one part of the system are likely to influence other parts of the system.	SG pp C-27	**Aligned as designed**	The teacher needs to be intentional about discussing the earth processes within the parameters of a system with boundaries, inputs and outputs.
ES2G	Land forms are created by processes that build up structures and processes that break down and carry away material through erosion and weathering.	• Explain how a given land form (e.g., mountain) has been shaped by processes that build up structures (e.g., uplift) and by processes that break down and carry away material (e.g., weathering and erosion).	SG pp C-23-26, C-28; TG pp C-56-57; Student Sheet 29.1; TR 29.1	**Aligned as designed**	
ES3A	Our understanding of Earth history is based on the assumption that processes we see today are similar to those that occurred in the past.	• Describe Earth processes that we can observe and measure today (e.g., rate of sedimentation, movement of crustal plates, and changes in composition of the atmosphere) that provide clues to Earth’s past.	SG pp C-26-28; TG pp C-58-59; TR 29.1	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 30

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSC	The output of one system can become the input of another system.	• Give an example of how output of matter or energy from a system can become input for another system	SG pp C-29-35	**Aligned with modifications (see comments)**	The teacher must be intentional about use of the terms systems, inputs and outputs and the relationship one to another.
APPA	People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.	• Describe how a technology has changed over time in response to societal challenges.	SG pp C-29-35; TG pp C-69-70; Student Sheet 30.1	**Aligned as designed**	
APPB	Scientists and technological designers (including engineers) have different goals. Scientists answer questions about the natural world; technological designers solve problems that help people reach their goals.	• Investigate several professions in which an understanding of science and technology is required. Explain why that understanding is necessary for success in each profession.	SG pp C-29-35; TG pp C-69-70; Student Sheet 30.1	**Aligned as designed**	The teacher must be intentional about sharing extension on SG p C-35.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 30

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
APPC	Science and technology are interdependent. Science drives technology by demanding better instruments and suggesting ideas for new designs. Technology drives science by providing instruments and research methods.	• Give examples to illustrate how scientists have helped solve technological problems (e.g., how the science of biology has helped sustain fisheries) and how engineers have aided science (e.g., designing telescopes to discover distant planets).	SG pp C-29-35; TG pp C-69-70; Student Sheet 30.1	**Aligned as designed**	
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 C-29-35; TG pp C-69-70; Student Sheet 30.1	**Aligned as designed**	The activity is an integral part of the learning progression students are asked to demonstrate conceptual understanding of standards in Activities 24- 35.
ES2G	Land forms are created by processes that build up structures and processes that break down and carry away material through erosion and weathering.	• Explain how a given land form (e.g., mountain) has been shaped by processes that build up structures (e.g., uplift) and by processes that break down and carry away material (e.g., weathering and erosion).	SG pp C-29-35; TG pp C-69-71	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 30

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES3E	Living organisms have played several critical roles in shaping land forms that we see today.	• List several ways that living organisms have shaped land forms (e.g., coral islands, limestone deposits, oil and coal deposits).	SG pp C-29-35; TG pp C-69-71	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 31

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 C-36-39	**Aligned with modifications (see comments)**	Students are asked to change the Challenge question to a testable scientific question to better meet this standard.
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 C-38-39	**Aligned as designed**	
INQD	For an experiment to be valid, all (controlled) variables must be kept the same whenever possible, except for the manipulated (independent) variable being tested and the responding (dependent) variable being measured and recorded. If a variable cannot be controlled, it must be reported and accounted for.	• Plan and conduct a controlled experiment to test a hypothesis about a relationship between two variables. Determine which variables should be kept the same (controlled), which (independent) variable should be systematically manipulated, and which responding (dependent) variable is to be measured and recorded. Report any variables not controlled and explain how they might affect results.	SG pp C-36-39; TG pp C-82-83	**Aligned with modifications (see comments)**	The teacher must be intentional about use of the terms of controlled variable, responding variable, and manipulated variable as replacements for the terms on p C-39 question 2.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 31

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 C-36-39; TG p C-83	**Aligned as designed**	
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	• Generate a scientific conclusion from an investigation using inferential logic, and clearly distinguish between results (e.g., evidence) and conclusions (e.g., explanation). • Describe the differences between an objective summary of the findings and an inference made from the findings.	SG pp C-39; TG pp C-83-84	**Aligned with modifications (see comments)**	The teachers need to discuss the development of experimental conclusions and ask students to explain why question 5 on p C-39 asks for a conclusion that uses evidence as the basis of their thinking.
ES2G	Land forms are created by processes that build up structures and processes that break down and carry away material through erosion and weathering.	• Explain how a given land form (e.g., mountain) has been shaped by processes that build up structures (e.g., uplift) and by processes that break down and carry away material (e.g., weathering and erosion).	SG pp C-36-39	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 31

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES3A	Our understanding of Earth history is based on the assumption that processes we see today are similar to those that occurred in the past.	• Describe Earth processes that we can observe and measure today (e.g., rate of sedimentation, movement of crustal plates, and changes in composition of the atmosphere) that provide clues to Earth's past.	SG pp C-36-39, TG pp C-82-84	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 32

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSC	The output of one system can become the input of another system.	• Give an example of how output of matter or energy from a system can become input for another system	SG pp C-40-43; TG p C-87	**Aligned as designed**	Teachers need to emphasize the Extension in SG p C-43.
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 C-43	**Aligned with modifications (see comments)**	Teachers need to emphasize part B SG p C-43 as an opportunity for students to develop a well defined testable question.
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 C-43	**Aligned as designed**	Teachers need to emphasize data collection as a part of an investigation in part B SG p C-43.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 32

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQD	For an experiment to be valid, all (controlled) variables must be kept the same whenever possible, except for the manipulated (independent) variable being tested and the responding (dependent) variable being measured and recorded. If a variable cannot be controlled, it must be reported and accounted for.	• Plan and conduct a controlled experiment to test a hypothesis about a relationship between two variables. Determine which variables should be kept the same (controlled), which (independent) variable should be systematically manipulated, and which responding (dependent) variable is to be measured and recorded. Report any variables not controlled and explain how they might affect results.	SG pp C-43; TG p C-88	**Aligned with modifications (see comments)**	Teachers need to emphasize manipulated, responding, and controlled variables in terms of experimental validity in part B SG p C-43.
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 C-40-42	**Aligned with modifications (see comments)**	Teacher must be intentional about asking students to compare the model with the actual phenomenon.
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	• Generate a scientific conclusion from an investigation using inferential logic, and clearly distinguish between results (e.g., evidence) and conclusions (e.g., explanation). • Describe the differences between an objective summary of the findings and an inference made from the findings.	SG pp C-40-43	**Aligned with modifications (see comments)**	Teachers need to emphasize Part B SG p C-43 compared to part A SG pp C-41-42.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 32

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQG	Scientific reports should enable another investigator to repeat the study to check the results.	• Prepare a written report of an investigation by clearly describing the question being investigated, what was done, and an objective summary of results. The report should provide evidence to accept or reject the hypothesis, explain the relationship between two or more variables, and identify limitations of the investigation.	SG pp C-43	**Aligned with modifications (see comments)**	Teachers need to emphasize Part B SG p C-43 as a full lab report with peer review.
APPA	People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.	• Describe how a technology has changed over time in response to societal challenges.	SG pp C-40-43	**Aligned as designed**	Teachers need to emphasize part B in SG p C-43.
APPD	The process of technological design begins by defining a problem and identifying criteria for a successful solution, followed by research to better understand the problem and brainstorming to arrive at potential solutions.	• Define a problem that can be solved by technological design and identify criteria for success. • Research how others solved similar problems. • Brainstorm different solutions.	SG pp C-40-43	**Aligned as designed**	Teachers need to emphasize part B in SG p C-43.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 32

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES2G	Land forms are created by processes that build up structures and processes that break down and carry away material through erosion and weathering.	• Explain how a given land form (e.g., mountain) has been shaped by processes that build up structures (e.g., uplift) and by processes that break down and carry away material (e.g., weathering and erosion).	SG pp C-40-43	**Aligned as designed**	Teachers need to emphasize analysis questions 1-4 SG p C-43 to assess student ability to explain earth processes.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 33

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
APPA	People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.	• Describe how a technology has changed over time in response to societal challenges.	SG pp C-44-48; TG p C-91	**Aligned as designed**	The activity is an integral part of the learning progression students are asked to demonstrate conceptual understanding of standard in this activity and activities 34 and 35.
APPC	Science and technology are interdependent. Science drives technology by demanding better instruments and suggesting ideas for new designs. Technology drives science by providing instruments and research methods.	• Give examples to illustrate how scientists have helped solve technological problems (e.g., how the science of biology has helped sustain fisheries) and how engineers have aided science (e.g., designing telescopes to discover distant planets).	SG pp C-44-48; TG p C-91	**Aligned as designed**	The activity is an integral part of the learning progression and students are asked to demonstrate conceptual understanding of standards in this activity and activities 34 and 35.
APPD	The process of technological design begins by defining a problem and identifying criteria for a successful solution, followed by research to better understand the problem and brainstorming to arrive at potential solutions.	• Define a problem that can be solved by technological design and identify criteria for success. • Research how others solved similar problems. • Brainstorm different solutions.	SG pp C-44-48; TG p C-91	**Aligned as designed**	Teachers need to emphasize analysis question 4 SG p 48 to assess students ability to meet this standard. The activity is an integral part of the learning progression students are asked to demonstrate conceptual understanding of standards in this activity and activities 34 and 35.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 33

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES2G	Land forms are created by processes that build up structures and processes that break down and carry away material through erosion and weathering.	• Explain how a given land form (e.g., mountain) has been shaped by processes that build up structures (e.g., uplift) and by processes that break down and carry away material (e.g., weathering and erosion).	SG pp C-44-48; TG pp C-91-93	**Aligned as designed**	Teacher must be intentional about sharing the background information in TG pp C-92-93. Teachers need to emphasize the domain content in SG pp. C-45-46 to support students ability to complete the analysis on SG p C-48.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 34

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES3A	Our understanding of Earth history is based on the assumption that processes we see today are similar to those that occurred in the past.	• Describe Earth processes that we can observe and measure today (e.g., rate of sedimentation, movement of crustal plates, and changes in composition of the atmosphere) that provide clues to Earth's past.	SG pp C-49-51; TR 34.1; TG pp 101-103	**Aligned as designed**	Teachers need to emphasize analysis question 1, SG p C-50 which allows students to demonstrate understanding of the standard. The activity is an integral part of the learning progression students are asked to demonstrate conceptual understanding of standards in Activity 33 and 35.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 35

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSF	The natural and designed world is complex; it is too large and complicated to investigate and comprehend all at once. Scientists and students learn to define small portions for the convenience of investigation. The units of investigation can be referred to as “systems.”	• Given a complex societal issue with strong science and technology components (e.g., overfishing, global warming), describe the issue from a systems point of view, highlighting how changes in one part of the system are likely to influence other parts of the system.	SG pp C-52-58; Student Sheet 35.1, 35.2	**Aligned as designed**	
INQH	Science advances through openness to new ideas, honesty, and legitimate skepticism. Asking thoughtful questions, querying other scientists' explanations, and evaluating one’s own thinking in response to the ideas of others are abilities of scientific inquiry.	• Recognize flaws in scientific claims, such as uncontrolled variables, over generalizations from limited data, and experimenter bias. • Listen actively and respectfully to research reports by other students. Critique their presentations respectfully, using logical argument and evidence. • Engage in reflection and self-evaluation.	SG pp C-52-C-58; Student sheet 35.1, 35.2	**Aligned as designed**	This activity is a part of a conceptual sequence, activity 33, 34, and 35.
INQI	Scientists and engineers have ethical codes governing animal experiments, research in natural ecosystems, and studies that involve human subjects.	• Demonstrate ethical concerns and precautions in response to scenarios of scientific investigations involving animal experiments, research in natural ecosystems, and studies that involve human subjects.	SG pp C-52-58; Student Sheet 35.1, 35.2	**Aligned as designed**	This activity is a part of a conceptual sequence, activity 33, 34, and 35.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 35

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
APPB	Scientists and technological designers (including engineers) have different goals. Scientists answer questions about the natural world; technological designers solve problems that help people reach their goals.	• Investigate several professions in which an understanding of science and technology is required. Explain why that understanding is necessary for success in each profession.	SG pp C-52-58; Student Sheet 35.1, 35.2	**Aligned as designed**	This activity is a part of a conceptual sequence, activity 33, 34, and 35.
APPC	Science and technology are interdependent. Science drives technology by demanding better instruments and suggesting ideas for new designs. Technology drives science by providing instruments and research methods.	• Give examples to illustrate how scientists have helped solve technological problems (e.g., how the science of biology has helped sustain fisheries) and how engineers have aided science (e.g., designing telescopes to discover distant planets).	SG pp C-52-58; Student Sheet 35.1, 35.2	**Aligned as designed**	This activity is a part of a conceptual sequence, activity 33, 34, and 35.
APPD	The process of technological design begins by defining a problem and identifying criteria for a successful solution, followed by research to better understand the problem and brainstorming to arrive at potential solutions.	• Define a problem that can be solved by technological design and identify criteria for success. • Research how others solved similar problems. • Brainstorm different solutions.	SG pp C-52-58; Student Sheet 35.1, 35.2	**Aligned as designed**	This activity is a part of a conceptual sequence, activity 33, 34, and 35.

Alignment of Washington 6-8 Science Standards with
SEPUP Erosion & Deposition ~ Activity 35

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 C-52-58; TG pp 109-111; Student Sheet 35.1, 35.2	**Aligned as designed**	This activity is a part of a conceptual sequence, activity 33, 34, and 35.
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 C-52-58; TG pp C-109-110; Student sheet 35.1, 35.2	**Aligned as designed**	This activity is a part of a conceptual sequence, activity 33, 34, and 35.