

WASHINGTON STATE LASER

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

SEPUP

Rocks & Minerals

November 1, 2010

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 12**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • 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 B-5; TG p B-5	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 13**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • 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. 	TG p B-10; Student Sheet 13.1	Aligned as designed	The unit/lesson is an integral part of a learning progression, and Student Sheet 13.1 is used in future lessons.

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 14**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • 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. 	TG pp B-16-17; Transparency 14.1; Student Sheet 14.1	Aligned as designed	Teacher must make use of information found in previous lesson 13.

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 15**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
PS2A	Substances have characteristic intrinsic properties such as density, solubility, boiling point, and melting point, all of which are independent of the amount of the sample.	<ul style="list-style-type: none"> • Use characteristic intrinsic properties such as density, boiling point, and melting point to identify an unknown substance. 	SG p B-19; TG p B-31	Aligned with modifications (see comments)	The unit/lesson intentionally refers to the standard. Teachers need to emphasize the standard to fully meet it with this lesson.
ES2D	Water is a solvent. As it passes through the water cycle, it dissolves minerals and gases and carries them to the oceans.	<ul style="list-style-type: none"> • Distinguish between bodies of saltwater and fresh water and explain how saltwater became salty. 	SG p B-20; TG p B-30	Aligned with modifications (see comments)	The unit/lesson intentionally refers to the standard. The teacher needs to be intentional about discussing the standard using Extension 2.

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 16**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • 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 B-23; TG p B-39; Student Sheet 16.1	Aligned as designed	
PS2A	Substances have characteristic intrinsic properties such as density, solubility, boiling point, and melting point, all of which are independent of the amount of the sample.	<ul style="list-style-type: none"> • Use characteristic intrinsic properties such as density, boiling point, and melting point to identify an unknown substance. 	SG pp B-21-23; TG pp B-35-40	Aligned as designed	The teacher needs to be intentional about discussing the standard and the amount of sample.

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 17**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
PS2A	Substances have characteristic intrinsic properties such as density, solubility, boiling point, and melting point, all of which are independent of the amount of the sample.	<ul style="list-style-type: none"> • Use characteristic intrinsic properties such as density, boiling point, and melting point to identify an unknown substance. 	SG p B-28; TG pp B-46-47; Student Sheet 17.1	Aligned as designed	The teacher needs to be intentional about discussing the standard, with particular attention to the portion regarding sample size.

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 19**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES2H	The rock cycle describes the formation of igneous rock from magma or lava, sedimentary rock from compaction of eroded particles, and metamorphic rock by heating and pressure.	<ul style="list-style-type: none"> • Identify samples of igneous, sedimentary, and metamorphic rock from their properties and describe how their properties provide evidence of how they were formed. • Explain how one kind of rock could eventually become a different kind of rock. 	SG pp B-34-37; TG pp B-61-66; Student Sheet 19.1, 19.2	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 20**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • 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 B-39; TG p B-75; Student Sheet 20.1	Aligned as designed	
ES2H	The rock cycle describes the formation of igneous rock from magma or lava, sedimentary rock from compaction of eroded particles, and metamorphic rock by heating and pressure.	<ul style="list-style-type: none"> • Identify samples of igneous, sedimentary, and metamorphic rock from their properties and describe how their properties provide evidence of how they were formed. • Explain how one kind of rock could eventually become a different kind of rock. 	SG pp B-39-41; TG pp B-71-76; Student Sheet 20.1	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 21**

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.	<ul style="list-style-type: none"> • 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 B-42-44; TG pp B-79-83	Aligned as designed	
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.	<ul style="list-style-type: none"> • 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 p B-44; TG pp B-82-83	Aligned as designed	The teacher needs to be intentional about discussing the standard using Analysis question 3.
ES3C	In most locations sedimentary rocks are in horizontal formations with the oldest layers on the bottom. However, in some locations, rock layers are folded, tipped, or even inverted, providing evidence of geologic events in the distant past.	<ul style="list-style-type: none"> • Explain why younger layers of sedimentary rocks are usually on top of older layers, and hypothesize what geologic events could have caused huge blocks of horizontal sedimentary layers to be tipped or older rock layers to be on top of younger rock layers. 	SG pp B-42-44; TG pp B-81-83; Transparency 21.1	Aligned with modifications (see comments)	The teacher needs to be intentional about discussing what might have happened to rock layers that are folded, tipped, or inverted.

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 22**

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.	<ul style="list-style-type: none"> • 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 B-46-47; TG pp B-87-92; TR 22.1, 22.2; Student Sheet 22.1	Aligned as designed	
ES2H	The rock cycle describes the formation of igneous rock from magma or lava, sedimentary rock from compaction of eroded particles, and metamorphic rock by heating and pressure.	<ul style="list-style-type: none"> • Identify samples of igneous, sedimentary, and metamorphic rock from their properties and describe how their properties provide evidence of how they were formed. • Explain how one kind of rock could eventually become a different kind of rock. 	SG p B-47; TG pp B-87-92; Transparency 22.1, 22.2; Student Sheet 22.1	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
SEPUP Rocks & Minerals ~ Activity 23**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
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.	<ul style="list-style-type: none"> • 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 B-48-53; TG pp B-99-105	Aligned as designed	
APPA	People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.	<ul style="list-style-type: none"> • Describe how a technology has changed over time in response to societal challenges. 	SG pp B-48-53; TG pp B-99-105	Aligned with modifications (see comments)	Teacher has multiple opportunities to reinforce the concept of how human civilization is impacted by technology.
PS2A	Substances have characteristic intrinsic properties such as density, solubility, boiling point, and melting point, all of which are independent of the amount of the sample.	<ul style="list-style-type: none"> • Use characteristic intrinsic properties such as density, boiling point, and melting point to identify an unknown substance. 	SG pp B-48-53; TG pp B-99-105	Aligned with modifications (see comments)	The teacher needs to be intentional about discussing the standard when comparing natural versus manufactured diamonds.