WASHINGTON STATE LASER

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

STC/MS

Earth in Space

December 20, 2010

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 01

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).	Reading: Astronomy SG pp 9-11	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 02

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSA	Any system may be thought of as containing subsystems and as being a subsystem of a larger system.	• Given a system, identify subsystems and a larger encompassing system	Reading: Scaling the Sun-Earth-Moon System SG pp 18-21	**Aligned as designed**	Teachers need to emphasize the SEM system is subsystem of a larger system, the solar system and galaxy.
ES1C	Most objects in the Solar System are in regular and predictable motion. These motions explain such phenomena as the day, the year, phases of the moon, and eclipses.	• Use a simple physical model or labeled drawing of the Earth-Sun-Moon system to explain day and night, phases of the Moon, and eclipses of the Moon and Sun.	Inquiry 2.1 p 14	**Aligned as designed**	The unit/lesson is an integral part of a learning progression. Lesson 2 through 6 all focus on using physical models to explain days, years, phases of the moon and eclipses.
ES1C	Most objects in the Solar System are in regular and predictable motion. These motions explain such phenomena as the day, the year, phases of the moon, and eclipses.	• Use a simple physical model or labeled drawing of the Earth-Sun-Moon system to explain day and night, phases of the Moon, and eclipses of the Moon and Sun.	Inquiry 2.1 p 14	**Aligned as designed**	The unit/lesson is an integral part of a learning progression. Lesson 2 through 6 all focus on using physical models to explain days, years, phases of the moon and eclipses.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 02

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES1E	Our Sun is one of hundreds of billions of stars in the Milky Way galaxy. Many of these stars have planets orbiting around them. The Milky Way galaxy is one of hundreds of billions of galaxies in the universe.	• Construct a physical model or diagram showing Earth's position in the Solar System, the Solar System's position in the Milky Way, and the Milky Way among other galaxies.	Reading: Scaling the Sun-Earth-Moon System SG pp 18-21	**Aligned with modifications (see comments)**	Talks about the sun's place in the Milky Way, but does not mention other solar systems, other galaxies, and other possible planets. Need to be supplemented.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 03

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
APPH	People in all cultures have made and continue to make contributions to society through science and technology.	• Describe scientific or technological contributions to society by people in various cultures.	Reading: The Anasazi SG pp 40-41	**Aligned with modifications (see comments)**	Teacher needs to make the connection between technology and the use of technology.
ES1C	Most objects in the Solar System are in regular and predictable motion. These motions explain such phenomena as the day, the year, phases of the moon, and eclipses.	• Use a simple physical model or labeled drawing of the Earth-Sun-Moon system to explain day and night, phases of the Moon, and eclipses of the Moon and Sun.	Inquiry 3.4 p 34-35	**Aligned as designed**	Inquiry 3.1, 3.2, 3.3 all lead up to Inquiry 3.4. The unit/lesson is an integral part of a learning progression. Lessons 2 - 6 all focus on using physical models to explain days, years, phases of the moon and eclipses.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 04

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES1C	Most objects in the Solar System are in regular and predictable motion. These motions explain such phenomena as the day, the year, phases of the moon, and eclipses.	• Use a simple physical model or labeled drawing of the Earth-Sun-Moon system to explain day and night, phases of the Moon, and eclipses of the Moon and Sun.	Reading: Reasons for the Seasons SG pp 54-57; Inquiry 4.1 SG pp 45-49; Inquiry 4.2 and 4.3 support the idea that earth rotates; SG pp 50-53; Reading: Steering by the Stars SG pp 58-61	**Aligned as designed**	After the inquiry, during the reflections, Teachers must be intentional about sharing the ideas that as the earth rotates from solar noon of one day to solar noon of the next day makes one day. Teachers must be intentional about sharing that as the earth orbits the sun from summer of one year, to summer the next year makes one year.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 05

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.	Reading: Apollo 11 Lands On the Moon pp 70-73	**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.	Reading: Apollo 11 SG pp 70-73	**Aligned as designed**	
ES1A	The Moon's monthly cycle of phases can be explained by its changing relative position as it orbits Earth. An eclipse of the Moon occurs when the Moon enters Earth's shadow. An eclipse of the Sun occurs when the Moon is between the Earth and Sun, and the Moon's shadow falls on the Earth.	• Use a physical model or diagram to explain how the Moon's changing position in its orbit results in the changing phases of the Moon as observed from Earth. • Explain how the cause of an eclipse of the Moon is different from the cause of the Moon's phases.	Inquiry 5.1, 5.2 SG pp 64-67; Student Sheets 5; TG p 71; 5.1, TG p 69; 5.2, TG p 70	**Aligned as designed**	The unit/lesson is an integral part of a learning progression. This lesson focuses on phases of the moon. Lesson 6 finishes this standard by including eclipses, and the geometry of the sun-earth-moon.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 05

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES1C	Most objects in the Solar System are in regular and predictable motion. These motions explain such phenomena as the day, the year, phases of the moon, and eclipses.	• Use a simple physical model or labeled drawing of the Earth-Sun-Moon system to explain day and night, phases of the Moon, and eclipses of the Moon and Sun.	Inquiry 5.2 SG pp 67 - 69; Inquiry 5.1 builds a static model; Inquiry 5.2 has a model that includes motion	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 06

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES1A	The Moon's monthly cycle of phases can be explained by its changing relative position as it orbits Earth. An eclipse of the Moon occurs when the Moon enters Earth's shadow. An eclipse of the Sun occurs when the Moon is between the Earth and Sun, and the Moon's shadow falls on the Earth.	• Use a physical model or diagram to explain how the Moon's changing position in its orbit results in the changing phases of the Moon as observed from Earth. • Explain how the cause of an eclipse of the Moon is different from the cause of the Moon's phases.	Video: Sun, Earth, Moon; Inquiry 6.1 SG pp 76-77; Inquiry 6.2 SG pp 78-80; Reading: Eclipses SG pp 81-84	**Aligned as designed**	The unit/lesson is an integral part of a learning progression. This lesson, combined with Lesson 5, presents a complete investigation of standard ES1A.
ES1C	Most objects in the Solar System are in regular and predictable motion. These motions explain such phenomena as the day, the year, phases of the moon, and eclipses.	• Use a simple physical model or labeled drawing of the Earth-Sun-Moon system to explain day and night, phases of the Moon, and eclipses of the Moon and Sun.	Video: Sun - Earth - Moon; Inquiry 6.1 SG pp 76-77; Reading: Eclipses SG 81-84; Table 6.3 SG pp 80	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 07

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQB	Different kinds of questions suggest different kinds of scientific investigations.	• Plan and conduct a scientific investigation (e.g., field study, systematic observation, controlled experiment, model, or simulation) that is appropriate for the question being asked. • Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis. • Work collaboratively with other students to carry out the investigations.	Inquiry 7.2 SG pp 93,94; Student Sheet TG p 343	**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.	Inquiry 7.1 and 7.2 SG pp 90-94; TG page 89; Reflection 2.C	**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.	Reading: Using Eclipses To Study Solar Wind SG pp 95-97	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 07

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.	Reading: Using Eclipses to Study Solar Wind SG pp 95-97	**Aligned as designed**	
PS3A	Energy exists in many forms: heat, light, chemical, electrical, motion of objects, and sound. Energy can be transformed from one form to another and transferred from one place to another.	• List different forms of energy (e.g., thermal, light, chemical, electrical, kinetic, and sound energy). • Describe ways in which energy is transformed from one form to another and transferred from one place to another (e.g., chemical to electrical energy in a battery, electrical to light energy in a bulb).	Inquiry 7.1 SG pp 90-92; Reading: Our Sun's Energy; SG pp 98-100	**Aligned as designed**	Teachers need to emphasize the energy transformations: electric energy to light, light to heat, heat to motion.
PS3A	Energy exists in many forms: heat, light, chemical, electrical, motion of objects, and sound. Energy can be transformed from one form to another and transferred from one place to another.	• List different forms of energy (e.g., thermal, light, chemical, electrical, kinetic, and sound energy). • Describe ways in which energy is transformed from one form to another and transferred from one place to another (e.g., chemical to electrical energy in a battery, electrical to light energy in a bulb).	Extension 4 TG p 92	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 07

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES2B	The Sun is the major source of energy for phenomena on Earth's surface, such as winds, ocean currents, and the water cycle.	• Connect the uneven heating of Earth's surface by the Sun to global wind and ocean currents. • Describe the role of the Sun in the water cycle.	Reading: Our Sun's Energy	**Aligned as designed**	
LS2C	The major source of energy for ecosystems on Earth's surface is sunlight. Producers transform the energy of sunlight into the chemical energy of food through photosynthesis. This food energy is used by plants, and all other organisms to carry on life processes. Nearly all organisms on the surface of Earth depend on this energy source.	• Explain how energy from the Sun is transformed through photosynthesis to produce chemical energy in food. • Explain that producers are the only organisms that make their own food. Animals cannot survive without producers because animals get food by eating producers or other animals that eat producers.	Extension 4 TG p 92	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
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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.	Inquiry 8.2 SG pp 108-109 Communicate sunspot positions by using tables and drawings; Inquiry 8.3 SG pp 109-112 Analyzing Sunspot data by graphing historical data and observe patterns in sunspot activity	**Aligned as designed**	
ES2E	The solid Earth is composed of a relatively thin crust, a dense metallic core, and a layer called the mantle between the crust and core that is very hot and partially melted.	• Sketch and label the major layers of Earth, showing the approximate relative thickness and consistency of the crust, core, and mantle.	Extension 2 TG p 108	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 09

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.	Reading: Fastplants SG pp 126-127	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 10

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.	Reading: Mission Introduction SG pp 137-143	**Aligned as designed**	
ES1B	Earth is the third planet from the sun in a system that includes the Moon, the Sun, seven other major planets and their moons, and smaller objects such as asteroids, plutoids, dwarf planets, and comets. These bodies differ in many characteristics (e.g., size, composition, relative position).	• Compare the relative sizes and distances of the Sun, Moon, Earth, other major planets, moons, asteroids, plutoids, and comets.	Student Sheet 10.1c	**Aligned with modifications (see comments)**	The unit/lesson is an integral part of a learning progression. Scale of the Sun-Earth-Moon is introduced early (Lesson 2). Comparing planets is the focus of the anchor project (Lesson 10). Asteroids are focused on in Lessons 12 and 17. Lesson 11 focuses on scale of the solar system. Teachers need to emphasize planet size, composition, and relative position.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 11

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES1B	Earth is the third planet from the sun in a system that includes the Moon, the Sun, seven other major planets and their moons, and smaller objects such as asteroids, plutoids, dwarf planets, and comets. These bodies differ in many characteristics (e.g., size, composition, relative position).	• Compare the relative sizes and distances of the Sun, Moon, Earth, other major planets, moons, asteroids, plutoids, and comets.	Reading: Scaling the Sun-Earth-Moon System; SG pp 18-21; Inquiry 11.1 SG pp 147-148; Inquiry 11.3 SG pp 150-151	**Aligned as designed**	The unit/lesson is an integral part of a learning progression. Scale of the Sun-Earth-Moon is introduced early (Lesson 2). Comparing planets is the focus of the anchor project (Lesson 10). Asteroids are focused on in Lessons 12 and 17.
ES2E	The solid Earth is composed of a relatively thin crust, a dense metallic core, and a layer called the mantle between the crust and core that is very hot and partially melted.	• Sketch and label the major layers of Earth, showing the approximate relative thickness and consistency of the crust, core, and mantle.	Reading: Earth SG 288	**Aligned with modifications (see comments)**	On SG p 288, there is one page of information about the layers of the Earth, poorly associated with a few lessons.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 12

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).	Earth has formations that are formed by asteroid impact; Figure 12.2, SG p 161; Figure 12.7 SG p 163	**Aligned with modifications (see comments)**	This unit/lesson is a part of a conceptual sequence that continues with surface features (Lesson 13).

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 13

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES2F	The crust is composed of huge crustal plates on the scale of continents and oceans which move centimeters per year, pushed by convection in the upper mantle, causing earthquakes, volcanoes, and mountains.	• Draw a labeled diagram showing how convection in the upper mantle drives movement of crustal plates. • Describe what may happen when plate boundaries meet (e.g., earthquakes, tsunami, faults, mountain building), with examples from the Pacific Northwest.	Inquiry 13.1 SG pp 180 - 190	**Aligned with modifications (see comments)**	Teacher must be intentional about use of the terms convection, crustal plates, plate boundaries.
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).	Inquiry 13.1 SG pp 180-190	**Aligned as designed**	
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).	Entire lesson; Wind erosion SG p 182; Water erosion SG p 185; Tectonics SG p 187; Vulcanism SG p 189	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 14

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES1D	Gravity is the force that keeps planets in orbit around the Sun and governs the rest of the motion in the Solar System. Gravity alone holds us to the Earth's surface.	• Predict what would happen to an orbiting object if gravity were increased, decreased, or taken away.	Inquiry 14.1 SG pp 202-203; Reading: Mass and Weight SG pp 206-209	**Aligned with modifications (see comments)**	Module does not emphasize that gravity holds things on the Earth. Teachers need to emphasize the difference in weight is because more massive planets have greater gravitational pull. Review Student Misconceptions in the teachers guide. TG pp 212

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 15

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES1C	Most objects in the Solar System are in regular and predictable motion. These motions explain such phenomena as the day, the year, phases of the moon, and eclipses.	• Use a simple physical model or labeled drawing of the Earth-Sun-Moon system to explain day and night, phases of the Moon, and eclipses of the Moon and Sun.	CD-ROM: Explore the Planets, Starry Night Backyard; Inquiry 15.1, 15.2, 15.3 SG pp 221-223	**Aligned as designed**	
ES1D	Gravity is the force that keeps planets in orbit around the Sun and governs the rest of the motion in the Solar System. Gravity alone holds us to the Earth's surface.	• Predict what would happen to an orbiting object if gravity were increased, decreased, or taken away.	Inquiry 15.1 SG pp 218-219; Inquiry 15.2, 15.3 SG pp 219 - 223; Inquiry 15.4 SG pp 223-225; Reading: Heavy Thoughts SG pp 226-228	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 17

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.	Reading: The Space Name Game SG p 289	**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.	Extension 2 TG p 275	**Aligned as designed**	
ES1B	Earth is the third planet from the sun in a system that includes the Moon, the Sun, seven other major planets and their moons, and smaller objects such as asteroids, plutoids, dwarf planets, and comets. These bodies differ in many characteristics (e.g., size, composition, relative position).	• Compare the relative sizes and distances of the Sun, Moon, Earth, other major planets, moons, asteroids, plutoids, and comets.	CD-ROM Explore the Planets, Asteroid segment in Tour the Planets section; Reading: Asteroids, Comets, and Meteoroids, SG pp 272-275	**Aligned as designed**	The unit/lesson is an integral part of a learning progression. Scale of the Sun-Earth-Moon is introduced early (Lesson 2). Comparing planets is the focus of the anchor project (Lesson 10). Asteroids are focused on in Lessons 12 and 17. Lesson 11 focuses on scale of the solar system.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 17

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
ES2A	The atmosphere is a mixture of nitrogen, oxygen, and trace gases that include water vapor. The atmosphere has different properties at different elevations.	• Describe the composition and properties of the troposphere and stratosphere.	Reading: Earth SG p 288	**Aligned with modifications (see comments)**	On SG p 288, there is one page of information about the atmosphere of the Earth, poorly associated with a few lessons.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 18

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.	Figure 18.2 and Figure 18.3 SG pp 296-297; Inquiry 18.1, 18.2, SG pp 290-298	**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.	• 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.	Inquiry 18.1 SG pp 209 - 297; Reading: Fossils SG pp 301-304; Reading: Dating Rocks SG pp 309-311	**Aligned as designed**	
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.	Reading: The Great Asteroid and the End of the Dinosaurs SG pp 305-307	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 19

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.	Reading: Science Fiction-Science Fact SG pp 321-323	**Aligned as designed**	
ES1B	Earth is the third planet from the sun in a system that includes the Moon, the Sun, seven other major planets and their moons, and smaller objects such as asteroids, plutoids, dwarf planets, and comets. These bodies differ in many characteristics (e.g., size, composition, relative position).	• Compare the relative sizes and distances of the Sun, Moon, Earth, other major planets, moons, asteroids, plutoids, and comets.	Inquiry 19.1 SG p 314; Student Sheet 10.1c; Reading: Little Things Mean a Lot, SG pp 319-320	**Aligned as designed**	The unit/lesson is an integral part of a learning progression. Scale of the Sun-Earth-Moon is introduced early (Lesson 2). Comparing planets is the focus of the anchor project (Lesson 10). Asteroids are focused on in Lessons 12 and 17. Lesson 11 focuses on scale of the solar system.

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 20

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 328-333; Inquiry 20.1 SG pp 326-327	**Aligned as designed**	
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.	Inquiry 20.1 SG pp 326-327; Reading: Spinoffs From Space SG pp 328-333	**Aligned as designed**	
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).	Entire Lesson 20	**Aligned as designed**	

Alignment of Washington 6-8 Science Standards with
STC/MS Earth in Space ~ Lesson 20

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).	Extension 1 TG p 297	**Aligned as designed**	