

# WASHINGTON STATE LASER

Alignment of Washington 6-8  
Science Standards by EALR/Domain for

FOSS/MS

Planetary Science

November 1, 2010

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Systems ~ SYSA**

**Content Standard**

Any system may be thought of as containing subsystems and as being a subsystem of a larger system.

**Performance Expectation**

- Given a system, identify subsystems and a larger encompassing system

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 03	Aligned with modifications (see comments)	Investigation 3 part 2 pp 94-96	Teacher must be intentional about the use of the term system and subsystem. Teacher must be intentional about using the terms input and output of matter and energy when looking at the system.
Investigation 08	Aligned with modifications (see comments)	Investigation 8 parts 1-4 pp 250-271	Teacher must be intentional about the use of the term system and subsystem. Teacher must be intentional about using the terms input and output of matter and energy when looking at the system.
Investigation 10	Aligned with modifications (see comments)	Resource book pp 84-89	Teacher must be intentional about the use of the term system and subsystem. Teacher must be intentional about using the terms input and output of matter and energy when looking at the system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Systems ~ SYSB**

**Content Standard** The boundaries of a system can be drawn differently depending on the features of the system being investigated, the size of the system, and the purpose of the investigation.

**Performance Expectation** • Explain how the boundaries of a system can be drawn to fit the purpose of the study (e.g., to study how insect populations change, a system might be a forest, a meadow in the forest, or a single tree).

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 01	Aligned as designed	Investigation 1 part 1 pp 38-42	Teacher must be intentional about the use of the terms system, subsystem and boundary.
Investigation 07	Aligned with modifications (see comments)	Investigation 7 part 2 pp 222-227	Teacher must be intentional about the use of the terms system, subsystem and boundary. Teacher must be intentional about using the terms input and output of matter and energy when looking at the system.
Investigation 09	Aligned with modifications (see comments)	Investigation 9 parts 2-3 pp 288-302	Teacher must be intentional about the use of the terms system, subsystem and boundary. Teacher must be intentional about using the terms input and output of matter and energy when looking at the system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Systems ~ SYSD**

**Content Standard** In an open system, matter flows into and out of the system. In a closed system, energy may flow into or out of the system, but matter stays within the system.

**Performance Expectation** • Given a description of a system, analyze and defend whether it is open or closed.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 03	Aligned with modifications (see comments)	Investigation 3 part 2 p 94-98	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers must also be intentional about using the terms matter, energy, closed system and open system.
Investigation 05	Aligned with modifications (see comments)	Investigation parts 1-4 pp 154-183	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers must also be intentional about using the terms matter, energy, closed system and open system.
Investigation 07	Aligned with modifications (see comments)	Investigation 7 part 2 pp 222-227	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers must also be intentional about using the terms matter, energy, closed system and open system.
Investigation 09	Aligned with modifications (see comments)	Investigation 9 parts 2-3 pp 288-297	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers must also be intentional about using the terms matter, energy, closed system and open system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Systems ~ SYSE**

**Content Standard**

If the input of matter or energy is the same as the output, then the amount of matter or energy in the system won't change; but if the input is more or less than the output, then the amount of matter or energy in the system will change.

**Performance Expectation**

• Measure the flow of matter into and out of an open system and predict how the system is likely to change (e.g., a bottle of water with a hole in the bottom, an ecosystem, an electric circuit).

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 05	Aligned as designed	Investigation 5 parts 2-4 pp 158-173; CD-ROM: Crater Formation Animation	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers must also be intentional about using the terms matter, energy, closed system and open system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Systems ~ SYSF**

**Content Standard**

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.”

**Performance Expectation**

- 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 01	Aligned with modifications (see comments)	pp 29-54	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.
Investigation 02	Aligned with modifications (see comments)	pp 55-78	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.
Investigation 03	Aligned with modifications (see comments)	pp 79-110	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.
Investigation 04	Aligned with modifications (see comments)	pp 111-142	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Systems ~ SYSF**

**Content Standard**

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.”

**Performance Expectation**

- 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 05	Aligned with modifications (see comments)	pp 143-184	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.
Investigation 06	Aligned with modifications (see comments)	pp 185-206	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.
Investigation 07	Aligned with modifications (see comments)	pp 207-238	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.
Investigation 08	Aligned with modifications (see comments)	pp 239-272	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Systems ~ SYSF**

**Content Standard**

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.”

**Performance Expectation**

- 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 09	Aligned with modifications (see comments)	pp 273-302	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.
Investigation 10	Aligned with modifications (see comments)	pp 303-326	The teacher needs to intentionally take advantage of multiple opportunities to make the connection to a systems point of view and how the investigations are related to portions and the whole of a particular system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQA**

**Content Standard** Scientific inquiry involves asking and answering questions and comparing the answer with what scientists already know about the world.

**Performance Expectation** • Generate a question that can be answered through scientific investigation. This may involve refining or refocusing a broad and ill-defined question.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 02	Aligned as designed	Investigation 2 parts 1-2 pp 55-78	Teacher must be intentional about using questioning techniques and comparing results to known scientific data.
Investigation 03	Aligned as designed	Investigation 3 pp 79-110	Teacher must be intentional about using questioning techniques and comparing results to known scientific data.
Investigation 04	Aligned as designed	Investigation 4 parts 2-3, pp 126-134	Teacher must be intentional about using questioning techniques and comparing results to known scientific data.
Investigation 05	Aligned as designed	pp 143-184	Teacher must be intentional about using questioning techniques and comparing results to known scientific data.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQA**

**Content Standard** Scientific inquiry involves asking and answering questions and comparing the answer with what scientists already know about the world.

**Performance Expectation** • Generate a question that can be answered through scientific investigation. This may involve refining or refocusing a broad and ill-defined question.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 07	<b>Aligned as designed</b>	pp 207-238	Teacher must be intentional about using questioning techniques and comparing results to known scientific data.
Investigation 08	<b>Aligned as designed</b>	pp 239-272	Teacher must be intentional about using questioning techniques and comparing results to known scientific data.
Investigation 09	<b>Aligned as designed</b>	pp 273-302	Teacher must be intentional about using questioning techniques and comparing results to known scientific data.
Investigation 10	<b>Aligned as designed</b>	pp 302-326	Teacher must be intentional about using questioning techniques and comparing results to known scientific data.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQB**

**Content Standard**

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.

**Performance Expectation**

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 01	Aligned as designed	Investigation 1 parts 1-2	The teacher needs to be intentional about discussing how a question can lead to a specific scientific investigation.
Investigation 02	Aligned as designed	Investigation 2 parts 1-2 pp 64-77	The teacher needs to be intentional about discussing how a question can lead to a specific scientific investigation.
Investigation 04	Aligned as designed	Investigation 4 parts 2 and 3 pp 128-135; Lab Notebook p 27	
Investigation 05	Aligned as designed	Investigation 5 parts 2-3 pp 158-167 and part 6 pp 176-179	The teacher needs to be intentional about discussing how a question can lead to a specific scientific investigation.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQB**

**Content Standard**

Different kinds of questions suggest different kinds of scientific investigations.

**Performance Expectation**

- 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
<b>Investigation 08</b>	<b>Aligned as designed</b>	Investigation 8 parts 3-4 pp 262-270	The teacher needs to be intentional about discussing how a question can lead to a specific scientific investigation.
<b>Investigation 09</b>	<b>Aligned as designed</b>	Investigation 9 part 2 pp 288-292	The teacher needs to be intentional about discussing how a question can lead to a specific scientific investigation.
<b>Investigation 10</b>	<b>Aligned as designed</b>	Investigation 10 part 1 pp 312-317	The teacher needs to be intentional about discussing how a question can lead to a specific scientific investigation.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQC**

**Content Standard**

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.

**Performance Expectation**

- 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 01	Aligned as designed	Investigation 1 parts 2 and 3 pp 43-52	
Investigation 02	Aligned as designed	Investigation 2 parts 1-2 pp 64-78	
Investigation 03	Aligned as designed	Investigation 3 part 2, pp 94-98 and part 4 pp 104-109	
Investigation 04	Aligned as designed	Investigation 4 part 1 pp 121-125; Lab Notebook p 23	

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQC**

**Content Standard**

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.

**Performance Expectation**

- 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
<b>Investigation 05</b>	<b>Aligned as designed</b>	Investigation 5 parts 2-3, pp 158-167, and parts 6-7 pp 176-182; Lab Notebook pp 33-39	
<b>Investigation 07</b>	<b>Aligned as designed</b>	Investigation 7 part 3 pp 228-232	
<b>Investigation 08</b>	<b>Aligned as designed</b>	Investigation 8 parts 2-4 pp 255-270; Lab Notebook pp 57, 63, 65	

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQD**

**Content Standard**

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.

**Performance Expectation**

• 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 05	Aligned with modifications (see comments)	Investigation 5 parts 2 and 3 pp 158-167; Lab Notebook pp 35, 37	Be sure to clarify the vocabulary: variable, independent (manipulated), dependent (responding), and controlled. Inquiries need to intentionally follow an experimental process.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQE**

**Content Standard** 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.

**Performance Expectation** • 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 01	<b>Aligned as designed</b>	Investigation 1 part 1 pp 38-42	Teacher must be intentional about use of the terms (vocabulary) model, systems, hypotheses, and phenomena.
Investigation 02	<b>Aligned as designed</b>	Investigation 2 parts 1-2 pp 64-78	Teacher must be intentional about use of the terms (vocabulary) model, systems, hypotheses, and phenomena.
Investigation 03	<b>Aligned as designed</b>	Investigation 3 part 1 pp 89-93	Teacher must be intentional about use of the terms (vocabulary) model, systems, hypotheses, and phenomena.
Investigation 06	<b>Aligned as designed</b>	Investigation 6 part 3 pp 201-205	Teacher must be intentional about use of the terms (vocabulary) model, systems, hypotheses, and phenomena.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQE**

**Content Standard** 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.

**Performance Expectation** • 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 09	<b>Aligned as designed</b>	Investigation 9 part 2 pp 288-292 and part 4 pp 298-302	Teacher must be intentional about use of the terms (vocabulary) model, systems, hypotheses, and phenomena.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQF**

**Content Standard** 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.

**Performance Expectation**

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 01	<b>Aligned as designed</b>	Investigation 1 part 1 pp 38-42 and part 3 pp 48-53	Teacher must be intentional about distinguishing between results and a conclusion.
Investigation 02	<b>Aligned as designed</b>	Investigation 2 parts 1-2 pp 56-77	Teacher must be intentional about distinguishing between results and a conclusion.
Investigation 03	<b>Aligned as designed</b>	Investigation 3 parts 2 pp 94-97 and part 4 pp 104-109	Teacher must be intentional about distinguishing between results and a conclusion.
Investigation 05	<b>Aligned as designed</b>	Investigation 5 parts 4, 6, and 7; pp 168-173 and 176-184	Teacher must be intentional about distinguishing between results and a conclusion.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQF**

**Content Standard** 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.

**Performance Expectation**

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 06	<b>Aligned as designed</b>	Investigation 6 part 2 pp 197-200	Teacher must be intentional about distinguishing between results and a conclusion.
Investigation 07	<b>Aligned as designed</b>	Investigation 7 part 2 pp 222-227 and part 4 pp 232-235	Teacher must be intentional about distinguishing between results and a conclusion.
Investigation 08	<b>Aligned as designed</b>	Investigation 8 part 4 pp 265-267	Teacher must be intentional about distinguishing between results and a conclusion.
Investigation 09	<b>Aligned as designed</b>	Investigation 9 parts 1-4 pp 283-301	Teacher must be intentional about distinguishing between results and a conclusion.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Inquiry ~ INQG**

**Content Standard**

Scientific reports should enable another investigator to repeat the study to check the results.

**Performance Expectation**

• 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 10	Aligned with modifications (see comments)	Investigation 10 part 3	Teach and model the appropriate format for scientific reports.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Application ~ APPA**

**Content Standard** People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.

**Performance Expectation** • Describe how a technology has changed over time in response to societal challenges.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 07	Aligned with modifications (see comments)	Investigation 7 part 1 pp 220-221	This investigation discusses space exploration and how civilization promotes scientific advances. This is the only place that this is directly addressed, however there are many other places in this module to discuss the connection between technologic advances and the effects on society.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Application ~ APPC**

**Content Standard** 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.

**Performance Expectation** • 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).

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 07	Aligned as designed	Investigation 7 part 1 pp 218-221; Video: "For All Mankind"	The teacher needs to be intentional about discussing the standard.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Application ~ APPE**

**Content Standard** Scientists and engineers often work together to generate creative solutions to problems and decide which ones are most promising.

**Performance Expectation** • Collaborate with other students to generate creative solutions to a problem, and apply methods for making tradeoffs to choose the best solution.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 10	Aligned with modifications (see comments)	Investigation 10 part 2 pp 318-322	Teacher questioning should elicit student understanding of scientists and engineers working as a team to solve problems. Students work throughout the unit in collaborative groups.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Application ~ APPH**

**Content Standard** People in all cultures have made and continue to make contributions to society through science and technology.

**Performance Expectation** • Describe scientific or technological contributions to society by people in various cultures.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 04	Aligned as designed	Investigation 4 parts 1-4 pp 111-141; Resource book pp 54-58	Teacher must do the reading and discussions as assigned as well as talk to students about how the lunar myths contribute to our understanding of the moon.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Physical Science ~ PS1A**

**Content Standard**

Average speed is defined as the distance traveled in a given period of time.

**Performance Expectation**

- Measure the distance an object travels in a given interval of time and calculate the object's average speed, using  $S = d/t$ . (e.g., a battery-powered toy car travels 20 meters in 5 seconds, so its average speed is 4 meters per second).
- Illustrate the motion of an object using a graph, or infer the motion of an object from a graph of the object's position vs. time or speed vs. time.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 05	Aligned with modifications (see comments)	Investigation 5 part 2 pp 158-163; Lab Notebook p 35; CD-ROM: Crater Formation Animation	The unit contains opportunities to address the standards but the teacher must be intentional in using the term "speed" and its method of calculation. The investigation is not explicit in teaching how to calculate speed (Speed = Distance / Time). The teacher must include the CD-ROM as well as p 35 of the Resource book.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Physical Science ~ PS3A**

**Content Standard** 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.

**Performance Expectation**

- 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).

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 05	Module/Unit requires changes (see comments)	Investigation 5 parts 1 and 2 pp 154-167	Teacher must be intentional about use of the terms: energy forms, thermal, electrical, light, chemical, kinetic & sound, energy transfer and energy transform.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Earth Science ~ ES1A**

**Content Standard**

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.

**Performance Expectation**

- 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 09	Aligned as designed	Investigation 9 parts 1-4 pp 283-301; Resource book pp 80-83; CD-ROM: Phases of the Moon; Lab Notebook p 67	Teacher must make use of information found on the CD-ROM and in the Resource book on pp 80 - 83.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Earth Science ~ ES1B**

**Content Standard**

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).

**Performance Expectation**

- Compare the relative sizes and distances of the Sun, Moon, Earth, other major planets, moons, asteroids, plutoids, and comets.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 10	Aligned with modifications (see comments)	Investigation 10 parts 2-3, pp 318-324; Resource book pp 84-89 and 97-100; CD-ROM: Planet Images, Solar System Planet Locator	Teacher must make use of information found in The CD and Student Text readings on pp 84-89 and 97-100.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Earth Science ~ ES1C**

**Content Standard** 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.

**Performance Expectation** • 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 03	Aligned as designed	Investigation 3 parts 1 and 2, pp 89-97; CD-ROM: Day/ Night Simulation; Lab Notebook p 13	Teacher must make use of information found in the CD.
Investigation 09	Aligned as designed	Investigation 9 parts 1-3 pp 284-297; Resource book pp 80-83; CD-ROM: Phases of the Moon; Lab Notebook page 67	Teacher must make use of information found on the CD-ROM and Resource book on pp 80 - 83.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Earth Science ~ ES1D**

**Content Standard** 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.

**Performance Expectation** • Predict what would happen to an orbiting object if gravity were increased, decreased, or taken away.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 05	Aligned with modifications (see comments)	Investigation 5 part 1-3, pp 154-167; Resource book pp 69-70	The unit contains many opportunities to address the standards but the teacher must be intentional in using the term gravity when discussing the crater impacts. Teacher must use the reading in the resource book to address this standard and discuss how this relates to objects in the solar system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Earth Science ~ ES1E**

**Content Standard** 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.

**Performance Expectation** • 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.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 10	Module/Unit requires changes (see comments)	Investigation 10 part 3 pp 322-325; Resource book pp 97-100	Teacher must make use of information found in the Resource book on pp 97-100. The unit/ lesson contain many opportunities to discuss objects in space beyond the Moon and our Solar System, however teacher needs to be intentional about discussing other galaxies.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Planetary Science  
Earth Science ~ ES3D**

**Content Standard** Earth has been shaped by many natural catastrophes, including earthquakes, volcanic eruptions, glaciers, floods, storms, tsunamis, and the impacts of asteroids.

**Performance Expectation** • 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).

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 05	Aligned as designed	Investigation 5 parts 1-4 pp 150-173; Resource book pp 59-70; CD-ROM: Crater Formation Animation, Mare Formation.	Teacher must make use of information found on the CD-ROM and Resource book on pp 59-70 as well as Extending the Experience 1-3.