

# WASHINGTON STATE LASER

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

FOSS/MS

Diversity of Life

November 1, 2010

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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)	pp 93-107; Resource book pp 8-13	Teacher must be intentional about the use of the term system and subsystem. An alternate lesson can be found at: Eco columns <a href="http://www.pcc.edu/about/faculty/sustainability-training/documents/ecosystem-in-a-bottle.pdf">http://www.pcc.edu/about/faculty/sustainability-training/documents/ecosystem-in-a-bottle.pdf</a>
Investigation 04	Aligned with modifications (see comments)	pp 125-139	Teacher must be intentional about the use of the term system and subsystem.
Investigation 05	Aligned with modifications (see comments)	pp 143-171	Teacher must be intentional about the use of the term system and subsystem.
Investigation 06	Aligned with modifications (see comments)	pp 173-203	Teacher must be intentional about the use of the term system and subsystem.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 07	Aligned with modifications (see comments)	pp 205-226	Teacher must be intentional about the use of the term system and subsystem.
Investigation 08	Aligned with modifications (see comments)	pp 231-260	Teacher must be intentional about the use of the term system and subsystem.
Investigation 09	Aligned with modifications (see comments)	pp 261-290	Teacher must be intentional about the use of the term system and subsystem.
Investigation 10	Aligned with modifications (see comments)	pp 291-320	Teacher must be intentional about the use of the term system and subsystem.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 04	Aligned with modifications (see comments)	pp 125-139	Teacher must be intentional about the use of the term system, subsystem and boundaries.
Investigation 08	Aligned with modifications (see comments)	pp 231-260	Teacher must be intentional about the use of the term system, subsystem and boundaries.
Investigation 09	Aligned with modifications (see comments)	pp 261-290	Teacher must be intentional about the use of the term system, subsystem and boundaries.
Investigation 10	Aligned with modifications (see comments)	pp 291-320	Teacher must be intentional about the use of the term system, subsystem and boundaries.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Systems ~ SYSC**

**Content Standard**

The output of one system can become the input of another system.

**Performance Expectation**

- Give an example of how output of matter or energy from a system can become input for another system

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 05	Aligned with modifications (see comments)	pp 143-172	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers also must be intentional about the use of the terms matter and energy.
Investigation 06	Aligned with modifications (see comments)	pp 173-204	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers also must be intentional about the use of the terms matter and energy.
Investigation 07	Aligned with modifications (see comments)	pp 205-230	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers also must be intentional about the use of the terms matter and energy.
Investigation 08	Aligned with modifications (see comments)	pp 231-260	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers also must be intentional about the use of the terms matter and energy.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Systems ~ SYSC**

**Content Standard**

The output of one system can become the input of another system.

**Performance Expectation**

- Give an example of how output of matter or energy from a system can become input for another system

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 09	Aligned with modifications (see comments)	pp 261-290	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers also must be intentional about the use of the terms matter and energy.
Investigation 10	Aligned with modifications (see comments)	pp 291-320	Teacher must be intentional about the use of the term systems, subsystems, boundaries, input and output. Teachers also must be intentional about the use of the terms matter and energy.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 05	Aligned with modifications (see comments)	pp 143-172	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 06	Aligned with modifications (see comments)	Investigation 6 Extension 2 p 203 contains opportunities to discuss system, sub system, open and closed systems.	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 08	Aligned with modifications (see comments)	pp 231-260	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)	pp 261-290	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 Diversity of Life  
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 10	Aligned with modifications (see comments)	pp 291-320	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 Diversity of Life  
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 06	Aligned with modifications (see comments)	Investigation 6 parts 1 and 2 pp 186-197; Extension 3 p 203	Teacher needs to be intentional about discussing the plant as a system and the water is the input into and out of the system through the stomates.
Investigation 10	Aligned with modifications (see comments)	pp 291-320	Teacher must be intentional about the use of the term system and subsystem. Teacher must be intentional about using the terms input and out put of matter and energy when looking at the system.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 01	<b>Aligned as designed</b>	Extension 1 p 64	To meet this standard in Investigation 1, you must use the extension on P 64, but students have other opportunities for scientific inquiry in this module.
Investigation 06	<b>Aligned as designed</b>	Investigation 6 part 1 pp 187-19; Lab Notebook pp 36-37; Extension p 203	When students are designing their investigation, they have opportunity to use the scientific method and scientific inquiry.
Investigation 08	<b>Aligned as designed</b>	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	When students are designing their investigation, they have opportunity to use the scientific method and pursue scientific inquiry.
Investigation 09	<b>Aligned as designed</b>	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62-63	When students are designing their investigation, they have opportunity to use the scientific method and pursue scientific inquiry

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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
Investigation 01	<b>Aligned as designed</b>	Investigation 1 part 2, pp 52-63; Extension p 64	To meet this standard in Investigation 1, you must use the extension on P 64, but students have other opportunities for scientific inquiry in this module.
Investigation 06	<b>Aligned as designed</b>	Investigation 6 part pp 187-192; Lab Notebook pp 36-37; Extension p 203	When students are designing their investigation, they have opportunity to ask a question, develop a hypothesis and make a plan that will test their hypothesis. The teacher need to be intentional about supporting students to explain the linkage between the question and the plan during this process.
Investigation 08	<b>Aligned as designed</b>	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	When students are designing their investigation, they have opportunity to use the scientific method and pursue scientific inquiry.
Investigation 09	<b>Aligned as designed</b>	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62 and 63	When students are designing their investigation, they have opportunity to use the scientific method and pursue scientific inquiry.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 pp 47-50; 57-62; Lab notebook pp 3, 5 and 6; Extension p 64	Be intentional with the students about what components of the scientific method are being addressed. Students make comparisons between living and nonliving things.
Investigation 03	Aligned as designed	pp 93-124; Lab Notebook pp 15-25	This investigation is strong on diagramming microscopic life and comparing different organisms.
Investigation 05	Aligned as designed	Investigation 5 pp 143-171; Lab Notebook pp 30, 31, 35	The investigation is strong in collecting data with opportunity to analyze data. Teacher must be intentional about using the term analyze. These investigations are a part of a conceptual sequence. Teacher can use the light versus dark part of part 2 to make comparisons between their results.
Investigation 06	Aligned as designed	Investigation 6 part 1 pp 187-192; Lab Notebook pp 36-37	This unit/lesson is a part of a conceptual sequence.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 08</b>	<b>Aligned as designed</b>	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	This unit/lesson is a part of a conceptual sequence.
<b>Investigation 09</b>	<b>Aligned as designed</b>	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62-63	This unit/lesson is a part of a conceptual sequence.
<b>Investigation 10</b>	<b>Aligned as designed</b>	Investigation 10 part 2 pp 312-316; Lab Notebook pp 70-71	This unit/lesson is a part of a conceptual sequence.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 01	Aligned with modifications (see comments)	Extension p 64	When students are designing their investigation, they have opportunity to use scientific investigation. Teacher needs to intentionally take advantage of the multiple opportunities to identify variables (manipulated, responding, and controlled) and how the controlled variables might affect results of experiments.
Investigation 06	Aligned with modifications (see comments)	Investigation 6 part 1 pp 186-192; Extension p 203	When students are designing their investigation, they have opportunity to use scientific investigation. Teacher needs to intentionally take advantage of the multiple opportunities to identify variables (manipulated, responding, and controlled) and how the controlled variables might affect results of experiments.
Investigation 08	Aligned with modifications (see comments)	Investigation 8 part 2 pp 244-252	When students are designing their investigation, they have opportunity to use scientific investigation. Teacher needs to intentionally take advantage of the multiple opportunities to identify variables (manipulated, responding, and controlled) and how the controlled variables might affect results of experiments.
Investigation 09	Aligned with modifications (see comments)	Investigation 9 part 2 pp 278-285	When students are designing their investigation, they have opportunity to use scientific investigation. Teacher needs to intentionally take advantage of the multiple opportunities to identify variables (manipulated, responding, and controlled) and how the controlled variables might affect results of experiments.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 10	Aligned with modifications (see comments)	Investigation 10 part 2 pp 310-316; Lab Notebook p 71	Teacher needs to be intentional about discussing variables, and the difference between an independent and dependent variable.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 04	Aligned with modifications (see comments)	Investigation 4 part 2 pp 137-142; CD-ROM; Ribbon of Life; Resource book pp 27-30	Teacher must be intentional about discussing how the models of the cell in the resource book represent the microscopic objects they observed in Investigation 3.
Investigation 06	Aligned with modifications (see comments)	Extension 3 p 203 Stomate model	When students are designing their investigation, they have opportunity to use models and explore relationships between variables.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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	Aligned with modifications (see comments)	Extension p 64	The unit/lesson is strong in collecting evidence. Teachers need to emphasize the role evidence plays in developing conclusions. These investigations are a part of a conceptual sequence.
Investigation 02	Aligned with modifications (see comments)	pp 65-92	The unit/lesson is strong in collecting evidence. Teachers need to emphasize the role evidence plays in developing conclusions. These investigations are a part of a conceptual sequence.
Investigation 03	Aligned with modifications (see comments)	pp 93-124	The unit/lesson is strong in collecting evidence. Teachers need to emphasize the role evidence plays in developing conclusions. These investigations are a part of a conceptual sequence.
Investigation 04	Aligned with modifications (see comments)	pp 125-142	The unit/lesson is strong in collecting evidence. Teachers need to emphasize the role evidence plays in developing conclusions. These investigations are a part of a conceptual sequence.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 05	Aligned with modifications (see comments)	Investigation 5 part 2 pp 158-164; Lab Notebook p 31	Teacher must be intentional about differentiating from results and a conclusion. When they make their observations between light and dark, they can analyze their observations to make a conclusion.
Investigation 06	Aligned with modifications (see comments)	Investigation 6 part 1 pp 187-192; Lab Notebook pp 36-37	The unit/lesson is strong in collecting evidence. Teachers need to emphasize the role evidence plays in developing conclusions. These investigations are a part of a conceptual sequence.
Investigation 08	Aligned with modifications (see comments)	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	The unit/lesson is strong in collecting evidence. Teachers need to emphasize the role evidence plays in developing conclusions. These investigations are a part of a conceptual sequence.
Investigation 09	Aligned with modifications (see comments)	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62-63	The unit/lesson is strong in collecting evidence. Teachers need to emphasize the role evidence plays in developing conclusions. These investigations are a part of a conceptual sequence.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 01	Aligned with modifications (see comments)	Extension p 64	These investigations are strong in the use of the scientific method but lack the identification of variables and limitations of the investigation. Teachers need to emphasize identification of variables and explain limitations of the investigation.
Investigation 06	Aligned with modifications (see comments)	Investigation 6 part 1 pp 187-192; Lab Notebook pp 36-37	These investigations are strong in the use of the scientific method without the inclusion of variables and identifying limitations of the investigation. Teachers need to emphasize identification of variables and explain limitations of the investigation.
Investigation 08	Aligned with modifications (see comments)	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	These investigations are strong in the use of the scientific method without the inclusion of variables and identifying limitations of the investigation. Teachers need to emphasize identification of variables and explain limitations of the investigation.
Investigation 09	Aligned with modifications (see comments)	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62-63	These investigations are strong in the use of the scientific method without the inclusion of variables and identifying limitations of the investigation. Teachers need to emphasize identification of variables and explain limitations of the investigation.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Application ~ APPD**

**Content Standard**

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.

**Performance Expectation**

- Define a problem that can be solved by technological design and identify criteria for success.
- Research how others solved similar problems.
- Brainstorm different solutions.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 01	Aligned with modifications (see comments)	Extension 1 p 64	This lesson contains many opportunities to discuss defining a problem, identifying criteria for a solution, understanding the role research plays, and how to brainstorm solutions.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 01	Aligned with modifications (see comments)	Extension 1 p 64	When students are designing their investigation, they should take on the role of scientists and engineers and discuss how they work together.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Application ~ APPF**

**Content Standard** Solutions must be tested to determine whether or not they will solve the problem. Results are used to modify the design, and the best solution must be communicated persuasively.

**Performance Expectation**

- Test the best solution by building a model or other representation and using it with the intended audience. Redesign as necessary.
- Present the recommended design using models or drawings and an engaging presentation.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 01	Aligned with modifications (see comments)	Extension 1 p 64	This extension contains opportunities to discuss design and solutions.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
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 06	Module/Unit requires changes (see comments)	Resource Book p 36	Investigation 6-Resource book-pages 36 discusses photosynthesis, but does not discuss energy transformation. Teacher must make the connection to energy transfer and transformation.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Life Science ~ LS1A**

**Content Standard**

All organisms are composed of cells, which carry on the many functions needed to sustain life.

**Performance Expectation**

- Draw and describe observations made with a microscope showing that plants and animals are made of cells, and explain that cells are the fundamental unit of life.
- Describe the functions performed by cells to sustain a living organism (e.g., division to produce more cells, taking in nutrients, releasing waste, using energy to do work, and producing materials the organism needs).

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 03	Aligned as designed	Investigation 3 Parts 1-3 pp 106-107 (cytoplasm), 111-114, 119-122; CD-ROM: Elodea Leaf Tissue, Protista, Amoeba, Euglena Databases; Resource book pp 24-26; Lab Notebook pp 15-17, 19, 20-21, 23, and 25	Investigations 1 and 2 are integral parts of a learning progression.
Investigation 04	Aligned as designed	Investigation 4 parts 1-3 pp 126-129; CD-ROM: Ribbon of Life; Lab Notebook p 28, 4; Resource book pp 27-30	Investigations 1 and 2 are integral parts of a learning progression.
Investigation 06	Aligned as designed	Investigation 6 part 2 pp 193-197; Lab Notebook p 39; Resource book pp 35-39	

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Life Science ~ LS1B**

**Content Standard**

One-celled organisms must contain parts to carry out all life functions.

**Performance Expectation**

• Draw and describe observations made with a microscope showing that a single-celled organism (e.g., paramecium) contains parts used for all life functions.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 03	Aligned as designed	Investigation 3 parts 1-3; pp 106-124; Lab Notebook pp 15-25; Resource book pp 24-26; CD ROM	
Investigation 04	Aligned as designed	Investigation 4 part 2; CD-ROM: Ribbon of Life; Lab Notebook pp 28-29	

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Life Science ~ LS1C**

**Content Standard**

Multicellular organisms have specialized cells that perform different functions. These cells join together to form tissues that give organs their structure and enable the organs to perform specialized functions within organ systems.

- Relate the structure of a specialized cell (e.g., nerve and muscle cells) to the function that the cell performs.
- Explain the relationship between tissues that make up individual organs and the functions the organ performs (e.g., valves in the heart control blood flow, air sacs in the lungs maximize surface area for transfer of gases).
- Describe the components and functions of the digestive, circulatory, and respiratory systems in humans and how these systems interact.

**Performance Expectation**

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 04	Aligned as designed	Investigation 4 part 2; CD ROM: Ribbons of Life; Lab Notebook pp 28-29	Investigation 3 part 3 is an integral part of a learning progression forming the bridge between single and multi-cellular organisms.
Investigation 05	Aligned as designed	Investigation 5 pp 143-172	Investigation 3 part 3 is an integral part of a learning progression forming the bridge between single and multi-cellular organisms. In investigation 5 the instructor needs to be intentional about the use of the terms tissues, organs, and cells in reference to plants.
Investigation 06	Aligned as designed	Investigation 6 parts 2 and 3 pp 195-197, pp 200-202; Resource book "Stems and Leaves" pp 35-39; Lab Notebook p 39	
Investigation 07	Aligned as designed	Investigation 7 part 2 pp 226-228; Lab Notebook p 47; Resource book p 46-50; CD ROM: Seed Dispersal	

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Life Science ~ LS1C**

**Content Standard**

Multicellular organisms have specialized cells that perform different functions. These cells join together to form tissues that give organs their structure and enable the organs to perform specialized functions within organ systems.

**Performance Expectation**

- Relate the structure of a specialized cell (e.g., nerve and muscle cells) to the function that the cell performs.
- Explain the relationship between tissues that make up individual organs and the functions the organ performs (e.g., valves in the heart control blood flow, air sacs in the lungs maximize surface area for transfer of gases).
- Describe the components and functions of the digestive, circulatory, and respiratory systems in humans and how these systems interact.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
<b>Investigation 08</b>	<b>Aligned as designed</b>	Investigation 8 part 1 pp 241-243; Lab Notebook p 49; Resource book pp 51-54	
<b>Investigation 09</b>	<b>Aligned as designed</b>	Investigation 9 part 2 pp 278-285; Resource book pp 60-64	

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Life Science ~ LS1D**

**Content Standard**

Both plant and animal cells must carry on life functions, so they have parts in common, such as nuclei, cytoplasm, cell membranes, and mitochondria. But plants have specialized cell parts, such as chloroplasts and cell walls, which provide plants their overall structure.

**Performance Expectation**

- Use labeled diagrams or models to illustrate similarities and differences between plant and animal cell structures and describe their functions (e.g., both have nuclei, cytoplasm, cell membranes, and mitochondria, while only plants have chloroplasts and cell walls).

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 03	Aligned as designed	Investigation 3 p 107 (cytoplasm)	
Investigation 04	Aligned as designed	Investigation 4 part 2; CD-ROM: Ribbon of Life; Lab Notebook pp 28-29; Resource book pp 27-30	
Investigation 05	Aligned as designed	pp 167-170	In Investigation 5, teacher needs to emphasize the similarities and differences between plants and animals.
Investigation 10	Aligned as designed	pp 291-320	

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Life Science ~ LS1E**

**Content Standard**

In classifying organisms, scientists consider both internal and external structures and behaviors.

**Performance Expectation**

• Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 08	Aligned with modifications (see comments)	Investigation 8 parts 1 and 3 pp 239-243 and 253-259; Resource book pp 16-17	Investigation 8 part 3 contains many opportunities to discuss classification. The reading in the Resource book on p 16-17 is part of a conceptual sequence.
Investigation 10	Aligned with modifications (see comments)	pp 291-320; Resource book pp 65-70	The unit/lesson contain many opportunities to discuss classification, but the teacher must be intentional about making the connection between the different organisms and their classification. Teacher needs to be intentional about discussing the system of classification.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Life Science ~ LS3C**

**Content Standard**

Reproduction is essential for every species to continue to exist. Some plants and animals reproduce sexually while others reproduce asexually. Sexual reproduction leads to greater diversity of characteristics because offspring inherit genes from both parents.

**Performance Expectation**

- Identify sexually and asexually reproducing plants and animals.
- Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 07	<b>Aligned with modifications (see comments)</b>	Investigation 7 part 1 pp 218-223; Resource book pp 40-45	This module refers to reproduction of various species but does not include diversity of characteristics because children inherit genes from both parents. This unit contains many opportunities to address the standards but the teacher must be intentional in discussing the diversity of characteristics because offspring inherit genes from both parents.
Investigation 08	<b>Module/Unit requires changes (see comments)</b>	Resource book pp 51-54	This module refers to reproduction of various species but does not include diversity of characteristics because children inherit genes from both parents. This unit contains many opportunities to address the standards but the teacher must be intentional in discussing the diversity of characteristics because offspring inherit genes from both parents.
Investigation 09	<b>Module/Unit requires changes (see comments)</b>	Resource book pp 60-64	This module refers to reproduction of various species but does not include diversity of characteristics because children inherit genes from both parents. This unit contains many opportunities to address the standards but the teacher must be intentional in discussing the diversity of characteristics because offspring inherit genes from both parents.

**Alignment of Washington 6-8 Science Standards with  
FOSS/MS Diversity of Life  
Life Science ~ LS3E**

**Content Standard** Adaptations are physical or behavioral changes that are inherited and enhance the ability of an organism to survive and reproduce in a particular environment.

**Performance Expectation** • Give an example of a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Investigation 07	Aligned with modifications (see comments)	Resource book pp 46-50	Teacher must be intentional about using the term adaptation.
Investigation 09	Aligned with modifications (see comments)	Investigation 9 parts 1 and 3 pp 273-277 and 286-289; Lab Notebook pp 56-57, and 64-65	Teacher must be intentional about discussing the standard and include the idea of environmental changes.