

WASHINGTON STATE LASER

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

FOSS/MS

Diversity of Life

November 1, 2010

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 01**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQA	Scientific inquiry involves asking and answering questions and comparing the answer with what scientists already know about the world.	<ul style="list-style-type: none"> • Generate a question that can be answered through scientific investigation. This may involve refining or refocusing a broad and ill-defined question. 	Extension 1 p 64	Aligned as designed	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.
INQB	Different kinds of questions suggest different kinds of scientific investigations.	<ul style="list-style-type: none"> • 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. 	Investigation 1 part 2, pp 52-63; Extension p 64	Aligned as designed	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.
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. • Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. • Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships. 	Investigation 1 pp 47-50; 57-62; Lab notebook pp 3, 5 and 6; Extension p 64	Aligned as designed	Be intentional with the students about what components of the scientific method are being addressed. Students make comparisons between living and nonliving things.

**Alignment of Washington 6-8 Science Standards with
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Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQD	For an experiment to be valid, all (controlled) variables must be kept the same whenever possible, except for the manipulated (independent) variable being tested and the responding (dependent) variable being measured and recorded. If a variable cannot be controlled, it must be reported and accounted for.	<ul style="list-style-type: none"> 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. 	Extension p 64	Aligned with modifications (see comments)	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.
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	<ul style="list-style-type: none"> 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. 	Extension p 64	Aligned with modifications (see comments)	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.
INQG	Scientific reports should enable another investigator to repeat the study to check the results.	<ul style="list-style-type: none"> 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. 	Extension p 64	Aligned with modifications (see comments)	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.

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 01**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
APPD	The process of technological design begins by defining a problem and identifying criteria for a successful solution, followed by research to better understand the problem and brainstorming to arrive at potential solutions.	<ul style="list-style-type: none"> • Define a problem that can be solved by technological design and identify criteria for success. • Research how others solved similar problems. • Brainstorm different solutions. 	Extension 1 p 64	Aligned with modifications (see comments)	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.
APPE	Scientists and engineers often work together to generate creative solutions to problems and decide which ones are most promising.	<ul style="list-style-type: none"> • Collaborate with other students to generate creative solutions to a problem, and apply methods for making tradeoffs to choose the best solution. 	Extension 1 p 64	Aligned with modifications (see comments)	When students are designing their investigation, they should take on the role of scientists and engineers and discuss how they work together.
APPF	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.	<ul style="list-style-type: none"> • 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. 	Extension 1 p 64	Aligned with modifications (see comments)	This extension contains opportunities to discuss design and solutions.

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 02**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<p>INQF</p>	<p>It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.</p>	<ul style="list-style-type: none"> • 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. 	<p>pp 65-92</p>	<p>Aligned with modifications (see comments)</p>	<p>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.</p>

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 03**

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.	<ul style="list-style-type: none"> Given a system, identify subsystems and a larger encompassing system 	pp 93-107; Resource book pp 8-13	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system and subsystem. An alternate lesson can be found at: Eco columns http://www.pcc.edu/about/faculty/sustainability-training/documents/ecosystem-in-a-bottle.pdf
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships. 	pp 93-124; Lab Notebook pp 15-25	Aligned as designed	This investigation is strong on diagramming microscopic life and comparing different organisms.
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	<ul style="list-style-type: none"> 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. 	pp 93-124	Aligned with modifications (see comments)	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 ~ Investigation 03**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS1A	All organisms are composed of cells, which carry on the many functions needed to sustain life.	<ul style="list-style-type: none"> • 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). 	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	Aligned as designed	Investigations 1 and 2 are integral parts of a learning progression.
LS1B	One-celled organisms must contain parts to carry out all life functions.	<ul style="list-style-type: none"> • Draw and describe observations made with a microscope showing that a single-celled organism (e.g., paramecium) contains parts used for all life functions. 	Investigation 3 parts 1-3; pp 106-124; Lab Notebook pp 15-25; Resource book pp 24-26; CD ROM	Aligned as designed	
LS1D	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.	<ul style="list-style-type: none"> • 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). 	Investigation 3 p 107 (cytoplasm)	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 04**

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.	<ul style="list-style-type: none"> Given a system, identify subsystems and a larger encompassing system 	pp 125-139	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system and subsystem.
SYSB	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.	<ul style="list-style-type: none"> 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). 	pp 125-139	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system, subsystem and boundaries.
INQE	Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.	<ul style="list-style-type: none"> Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon. 	Investigation 4 part 2 pp 137-142; CD-ROM; Ribbon of Life; Resource book pp 27-30	Aligned with modifications (see comments)	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.

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 04**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	<ul style="list-style-type: none"> • 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. 	pp 125-142	Aligned with modifications (see comments)	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.
LS1A	All organisms are composed of cells, which carry on the many functions needed to sustain life.	<ul style="list-style-type: none"> • 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). 	Investigation 4 parts 1-3 pp 126-129; CD-ROM: Ribbon of Life; Lab Notebook p 28, 4; Resource book pp 27-30	Aligned as designed	Investigations 1 and 2 are integral parts of a learning progression.
LS1B	One-celled organisms must contain parts to carry out all life functions.	<ul style="list-style-type: none"> • Draw and describe observations made with a microscope showing that a single-celled organism (e.g., paramecium) contains parts used for all life functions. 	Investigation 4 part 2; CD-ROM: Ribbon of Life; Lab Notebook pp 28-29	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 04**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS1C	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.	<ul style="list-style-type: none"> • 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 	Investigation 4 part 2; CD ROM: Ribbons of Life; Lab Notebook pp 28-29	Aligned as designed	Investigation 3 part 3 is an integral part of a learning progression forming the bridge between single and multi-cellular organisms.
LS1D	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.	<ul style="list-style-type: none"> • 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). 	Investigation 4 part 2; CD-ROM: Ribbon of Life; Lab Notebook pp 28-29; Resource book pp 27-30	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 05**

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.	<ul style="list-style-type: none"> Given a system, identify subsystems and a larger encompassing system 	pp 143-171	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system and subsystem.
SYSC	The output of one system can become the input of another system.	<ul style="list-style-type: none"> Give an example of how output of matter or energy from a system can become input for another system 	pp 143-172	Aligned with modifications (see comments)	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.
SYSD	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.	<ul style="list-style-type: none"> Given a description of a system, analyze and defend whether it is open or closed. 	pp 143-172	Aligned with modifications (see comments)	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 ~ Investigation 05**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. • Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. • Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships. 	Investigation 5 pp 143-171; Lab Notebook pp 30, 31, 35	Aligned as designed	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.
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	<ul style="list-style-type: none"> • 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. 	Investigation 5 part 2 pp 158-164; Lab Notebook p 31	Aligned with modifications (see comments)	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.
LS1C	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.	<ul style="list-style-type: none"> • 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 	Investigation 5 pp 143-172	Aligned as designed	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.

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 05**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS1D	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.	<ul style="list-style-type: none"> • 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). 	pp 167-170	Aligned as designed	In Investigation 5, teacher needs to emphasize the similarities and differences between plants and animals.

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 06**

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.	<ul style="list-style-type: none"> Given a system, identify subsystems and a larger encompassing system 	pp 173-203	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system and subsystem.
SYSC	The output of one system can become the input of another system.	<ul style="list-style-type: none"> Give an example of how output of matter or energy from a system can become input for another system 	pp 173-204	Aligned with modifications (see comments)	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.
SYSD	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.	<ul style="list-style-type: none"> Given a description of a system, analyze and defend whether it is open or closed. 	Investigation 6 Extension 2 p 203 contains opportunities to discuss system, sub system, open and closed systems.	Aligned with modifications (see comments)	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 ~ Investigation 06**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSE	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.	<ul style="list-style-type: none"> • 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). 	Investigation 6 parts 1 and 2 pp 186-197; Extension 3 p 203	Aligned with modifications (see comments)	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.
INQA	Scientific inquiry involves asking and answering questions and comparing the answer with what scientists already know about the world.	<ul style="list-style-type: none"> • Generate a question that can be answered through scientific investigation. This may involve refining or refocusing a broad and ill-defined question. 	Investigation 6 part 1 pp 187-19; Lab Notebook pp 36-37; Extension p 203	Aligned as designed	When students are designing their investigation, they have opportunity to use the scientific method and scientific inquiry.
INQB	Different kinds of questions suggest different kinds of scientific investigations.	<ul style="list-style-type: none"> • 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. 	Investigation 6 part pp 187-192; Lab Notebook pp 36-37; Extension p 203	Aligned as designed	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.

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 06**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. • Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. • Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships. 	Investigation 6 part 1 pp 187-192; Lab Notebook pp 36-37	Aligned as designed	This unit/lesson is a part of a conceptual sequence.
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.	<ul style="list-style-type: none"> • 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. 	Investigation 6 part 1 pp 186-192; Extension p 203	Aligned with modifications (see comments)	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.
INQE	Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.	<ul style="list-style-type: none"> • Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon. 	Extension 3 p 203 Stomate model	Aligned with modifications (see comments)	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 ~ Investigation 06**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	<ul style="list-style-type: none"> • 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. 	Investigation 6 part 1 pp 187-192; Lab Notebook pp 36-37	Aligned with modifications (see comments)	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.
INQG	Scientific reports should enable another investigator to repeat the study to check the results.	<ul style="list-style-type: none"> • 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. 	Investigation 6 part 1 pp 187-192; Lab Notebook pp 36-37	Aligned with modifications (see comments)	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.
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.	<ul style="list-style-type: none"> • 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). 	Resource Book p 36	Module/Unit requires changes (see comments)	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 ~ Investigation 06**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS1A	All organisms are composed of cells, which carry on the many functions needed to sustain life.	<ul style="list-style-type: none"> • 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). 	Investigation 6 part 2 pp 193-197; Lab Notebook p 39; Resource book pp 35-39	Aligned as designed	
LS1C	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.	<ul style="list-style-type: none"> • 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 	Investigation 6 parts 2 and 3 pp 195-197, pp 200-202; Resource book "Stems and Leaves" pp 35-39; Lab Notebook p 39	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 07**

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.	<ul style="list-style-type: none"> Given a system, identify subsystems and a larger encompassing system 	pp 205-226	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system and subsystem.
SYSC	The output of one system can become the input of another system.	<ul style="list-style-type: none"> Give an example of how output of matter or energy from a system can become input for another system 	pp 205-230	Aligned with modifications (see comments)	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.
LS1C	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.	<ul style="list-style-type: none"> 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 	Investigation 7 part 2 pp 226-228; Lab Notebook p 47; Resource book p 46-50; CD ROM: Seed Dispersal	Aligned as designed	

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 07**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<p>LS3C</p>	<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<p>Investigation 7 part 1 pp 218-223; Resource book pp 40-45</p>	<p>Aligned with modifications (see comments)</p>	<p>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</p>
<p>LS3E</p>	<p>Adaptations are physical or behavioral changes that are inherited and enhance the ability of an organism to survive and reproduce in a particular environment.</p>	<ul style="list-style-type: none"> • Give an example of a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change. 	<p>Resource book pp 46-50</p>	<p>Aligned with modifications (see comments)</p>	<p>Teacher must be intentional about using the term adaptation.</p>

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 08**

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.	<ul style="list-style-type: none"> Given a system, identify subsystems and a larger encompassing system 	pp 231-260	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system and subsystem.
SYSB	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.	<ul style="list-style-type: none"> 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). 	pp 231-260	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system, subsystem and boundaries.
SYSC	The output of one system can become the input of another system.	<ul style="list-style-type: none"> Give an example of how output of matter or energy from a system can become input for another system 	pp 231-260	Aligned with modifications (see comments)	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 ~ Investigation 08**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSD	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.	<ul style="list-style-type: none"> Given a description of a system, analyze and defend whether it is open or closed. 	pp 231-260	Aligned with modifications (see comments)	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.
INQA	Scientific inquiry involves asking and answering questions and comparing the answer with what scientists already know about the world.	<ul style="list-style-type: none"> Generate a question that can be answered through scientific investigation. This may involve refining or refocusing a broad and ill-defined question. 	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	Aligned as designed	When students are designing their investigation, they have opportunity to use the scientific method and pursue scientific inquiry.
INQB	Different kinds of questions suggest different kinds of scientific investigations.	<ul style="list-style-type: none"> 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. 	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	Aligned as designed	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 ~ Investigation 08**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> • Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. • Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. • Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships. 	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	Aligned as designed	This unit/lesson is a part of a conceptual sequence.
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.	<ul style="list-style-type: none"> • 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. 	Investigation 8 part 2 pp 244-252	Aligned with modifications (see comments)	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.
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	<ul style="list-style-type: none"> • 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. 	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	Aligned with modifications (see comments)	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 ~ Investigation 08**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQG	Scientific reports should enable another investigator to repeat the study to check the results.	<ul style="list-style-type: none"> • 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. 	Investigation 8 part 2 pp 246-252; Lab Notebook pp 50-51	Aligned with modifications (see comments)	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.
LS1C	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.	<ul style="list-style-type: none"> • 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 	Investigation 8 part 1 pp 241-243; Lab Notebook p 49; Resource book pp 51-54	Aligned as designed	
LS1E	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> • Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors. 	Investigation 8 parts 1 and 3 pp 239-243 and 253-259; Resource book pp 16-17	Aligned with modifications (see comments)	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.

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 08**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS3C	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.	<ul style="list-style-type: none"> • 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. 	Resource book pp 51-54	Module/Unit requires changes (see comments)	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

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 09**

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.	<ul style="list-style-type: none"> Given a system, identify subsystems and a larger encompassing system 	pp 261-290	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system and subsystem.
SYSB	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.	<ul style="list-style-type: none"> 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). 	pp 261-290	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system, subsystem and boundaries.
SYSC	The output of one system can become the input of another system.	<ul style="list-style-type: none"> Give an example of how output of matter or energy from a system can become input for another system 	pp 261-290	Aligned with modifications (see comments)	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 ~ Investigation 09**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSD	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.	<ul style="list-style-type: none"> Given a description of a system, analyze and defend whether it is open or closed. 	pp 261-290	Aligned with modifications (see comments)	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.
INQA	Scientific inquiry involves asking and answering questions and comparing the answer with what scientists already know about the world.	<ul style="list-style-type: none"> Generate a question that can be answered through scientific investigation. This may involve refining or refocusing a broad and ill-defined question. 	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62-63	Aligned as designed	When students are designing their investigation, they have opportunity to use the scientific method and pursue scientific inquiry
INQB	Different kinds of questions suggest different kinds of scientific investigations.	<ul style="list-style-type: none"> 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. 	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62 and 63	Aligned as designed	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 ~ Investigation 09**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships. 	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62-63	Aligned as designed	This unit/lesson is a part of a conceptual sequence.
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.	<ul style="list-style-type: none"> 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. 	Investigation 9 part 2 pp 278-285	Aligned with modifications (see comments)	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.
INQF	It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.	<ul style="list-style-type: none"> 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. 	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62-63	Aligned with modifications (see comments)	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 ~ Investigation 09**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQG	Scientific reports should enable another investigator to repeat the study to check the results.	<ul style="list-style-type: none"> • 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. 	Investigation 9 part 2 pp 280-285; Lab Notebook pp 62-63	Aligned with modifications (see comments)	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.
LS1C	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.	<ul style="list-style-type: none"> • 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 	Investigation 9 part 2 pp 278-285; Resource book pp 60-64	Aligned as designed	
LS3C	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.	<ul style="list-style-type: none"> • 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. 	Resource book pp 60-64	Module/Unit requires changes (see comments)	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

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 09**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<p>LS3E</p>	<p>Adaptations are physical or behavioral changes that are inherited and enhance the ability of an organism to survive and reproduce in a particular environment.</p>	<ul style="list-style-type: none"> • Give an example of a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change. 	<p>Investigation 9 parts 1 and 3 pp 273-277 and 286-289; Lab Notebook pp 56-57, and 64-65</p>	<p>Aligned with modifications (see comments)</p>	<p>Teacher must be intentional about discussing the standard and include the idea of environmental changes.</p>

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 10**

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.	<ul style="list-style-type: none"> Given a system, identify subsystems and a larger encompassing system 	pp 291-320	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system and subsystem.
SYSB	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.	<ul style="list-style-type: none"> 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). 	pp 291-320	Aligned with modifications (see comments)	Teacher must be intentional about the use of the term system, subsystem and boundaries.
SYSC	The output of one system can become the input of another system.	<ul style="list-style-type: none"> Give an example of how output of matter or energy from a system can become input for another system 	pp 291-320	Aligned with modifications (see comments)	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 ~ Investigation 10**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
SYSD	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.	<ul style="list-style-type: none"> Given a description of a system, analyze and defend whether it is open or closed. 	pp 291-320	Aligned with modifications (see comments)	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.
SYSE	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.	<ul style="list-style-type: none"> 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). 	pp 291-320	Aligned with modifications (see comments)	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.
INQC	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words. Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships. 	Investigation 10 part 2 pp 312-316; Lab Notebook pp 70-71	Aligned as designed	This unit/lesson is a part of a conceptual sequence.

**Alignment of Washington 6-8 Science Standards with
FOSS/MS Diversity of Life ~ Investigation 10**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
INQD	For an experiment to be valid, all (controlled) variables must be kept the same whenever possible, except for the manipulated (independent) variable being tested and the responding (dependent) variable being measured and recorded. If a variable cannot be controlled, it must be reported and accounted for.	<ul style="list-style-type: none"> 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. 	Investigation 10 part 2 pp 310-316; Lab Notebook p 71	Aligned with modifications (see comments)	Teacher needs to be intentional about discussing variables, and the difference between an independent and dependent variable.
LS1D	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.	<ul style="list-style-type: none"> 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). 	pp 291-320	Aligned as designed	
LS1E	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors. 	pp 291-320; Resource book pp 65-70	Aligned with modifications (see comments)	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.