

# WASHINGTON STATE LASER

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

STC/MS

Organisms, Micro to Macro

November 1, 2010

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 01**

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"> <li>• 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.</li> <li>• 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).</li> </ul>	Reading: That's Life SG pp 6-7	<b>Aligned as designed</b>	
LS1E	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>• Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Inquiry 1.1, SG pp 4-5; Reading: What's in an Organism's Name pp 8-11; Student Sheet 1.1 TG pp 13-14	<b>Aligned as designed</b>	
LS2A	An ecosystem consists of all the populations living within a specific area and the nonliving factors they interact with. One geographical area may contain many ecosystems.	<ul style="list-style-type: none"> <li>• Explain that an ecosystem is a defined area that contains populations of organisms and nonliving factors.</li> <li>• Give examples of ecosystems (e.g., Olympic National Forest, Puget Sound, one square foot of lawn) and describe their boundaries and contents.</li> </ul>	Inquiry 1.1 SG pp 4-5; Extension 3 TG p 12	<b>Aligned with modifications (see comments)</b>	Teacher must be intentional about use of the terms (vocabulary) "habitat" as part of an ecosystem.

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 02**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 2.3 SG pp 18-21; Student Sheet 2.3B TG pp 29-31; Extension 3 TG p 25; Extension 1 TG pp 24-25	<b>Aligned as designed</b>	
<b>APPA</b>	People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.	<ul style="list-style-type: none"> <li>• Describe how a technology has changed over time in response to societal challenges.</li> </ul>	Reading: Microscope Pioneers SG pp 26-27	<b>Aligned as designed</b>	
<b>APPH</b>	People in all cultures have made and continue to make contributions to society through science and technology.	<ul style="list-style-type: none"> <li>• Describe scientific or technological contributions to society by people in various cultures.</li> </ul>	Reading: Microscope Pioneers SG pp 26-27	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 02**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS1E</b>	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>• Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Reading: Intriguing Insects SG pp 22-25; Reading: Dr. Matthews and the WOWBug SG pp 24-25	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 03**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 3.1, 3.2, 3.3 SG pp 30-33; Extension 4 TG p 41; Student Sheet 3.1, 3.2, 3.3 TG pp 43-47	<b>Aligned as designed</b>	
<b>LS1A</b>	All organisms are composed of cells, which carry on the many functions needed to sustain life.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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).</li> </ul>	Inquiry 3.2 and 3.3 SG pp 32-33	<b>Aligned with modifications (see comments)</b>	Teacher must be intentional about sharing that blood pulsation and regeneration are functions needed to sustain life.
<b>LS1E</b>	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>• Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Lesson 3 Introduction SG p 28; Extension 3 TG p 41	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 03**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<p><b>LS3C</b></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"> <li>• Identify sexually and asexually reproducing plants and animals.</li> <li>• Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	<p>Inquiry 3.3 SG p 33</p>	<p><b>Aligned with modifications (see comments)</b></p>	<p>Teacher must be intentional about sharing "regeneration" as a form of asexual reproduction.</p>

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 04**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 4.2 SG pp 41-42; Student Sheet 4.2 TG pp 55-56	<b>Aligned as designed</b>	
<b>INQE</b>	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"> <li>• 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.</li> </ul>	Inquiry 4.1 SG p 40; Extension 1 TG p 53	<b>Aligned as designed</b>	
<b>LS1B</b>	One-celled organisms must contain parts to carry out all life functions.	<ul style="list-style-type: none"> <li>• Draw and describe observations made with a microscope showing that a single-celled organism (e.g., paramecium) contains parts used for all life functions.</li> </ul>	Inquiry 4.2 SG pp 41-42; Student Sheet 4.2 TG pp 45-46	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 04**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS2A</b>	An ecosystem consists of all the populations living within a specific area and the nonliving factors they interact with. One geographical area may contain many ecosystems.	<ul style="list-style-type: none"> <li>• Explain that an ecosystem is a defined area that contains populations of organisms and nonliving factors.</li> <li>• Give examples of ecosystems (e.g., Olympic National Forest, Puget Sound, one square foot of lawn) and describe their boundaries and contents.</li> </ul>	Inquiry 4.1 SG p 40; Reading: Excuse Me SG pp 43-45; Extension 2 TG p 53	<b>Aligned as designed</b>	
<b>LS2D</b>	Ecosystems are continuously changing. Causes of these changes include nonliving factors such as the amount of light, range of temperatures, and availability of water, as well as living factors such as the disappearance of different species through disease, predation, habitat destruction and overuse of resources or the introduction of new species.	<ul style="list-style-type: none"> <li>• Predict what may happen to an ecosystem if nonliving factors change (e.g., the amount of light, range of temperatures, or availability of water or habitat), or if one or more populations are removed from or added to the ecosystem.</li> </ul>	Extension 3 TG p 53; Reading: Excuse Me SG pp 43-45	<b>Aligned with modifications (see comments)</b>	Teachers need to emphasize "Everything Changes" from the reading before doing Extension 3.

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 05**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Student Sheet 5.1 TG p 71; Table 5.1 SG p 63, Inquiry 5.4 SG p 55	<b>Aligned as designed</b>	
<b>INQE</b>	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"> <li>• 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.</li> </ul>	Inquiry 5.1 SG pp 51-52; Extension 6 TG p 70	<b>Aligned as designed</b>	
<b>APPA</b>	People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.	<ul style="list-style-type: none"> <li>• Describe how a technology has changed over time in response to societal challenges.</li> </ul>	Reading: Wisconsin Fast Plants SG pp 56-58	<b>Aligned with modifications (see comments)</b>	Teacher must be intentional about sharing "Sprouting in Space" section of reading.

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 05**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS3C</b>	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"> <li>• Identify sexually and asexually reproducing plants and animals.</li> <li>• Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	Inquiry 5.4 SG p 55; Reading: Wisconsin Fast Plants SG pp 56-58; From Seed to Adult Plant SG pp 59-62	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 06**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQB</b>	Different kinds of questions suggest different kinds of scientific investigations.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.</li> <li>• Work collaboratively with other students to carry out the investigations.</li> </ul>	Extension 2, 6, and 7 TG pp 89-90	<b>Aligned as designed</b>	
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 6.1 SG pp 65-68; Inquiry Master 6.1A, 6.1B TG pp 93-98; Inquiry 6.2 SG pp 69-74; Student Sheet 6.2 TG pp 100-101; Inquiry 6.3 SG pp 75-77; Student Sheet 6.3 TG pp 102-104; Extension 1 and 4 TG p 89; Extension 8 TG p 90	<b>Aligned as designed</b>	
<b>LS1E</b>	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>• Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Lesson 6 Introduction SG p 64	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 06**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<p><b>LS3F</b></p>	<p>Extinction occurs when the environment changes and the adaptive characteristics of a species, including its behaviors, are insufficient to allow its survival.</p>	<ul style="list-style-type: none"> <li>Given an ecosystem, predict which organisms are most likely to disappear from that environment when the environment changes in specific ways.</li> </ul>	<p>Reading: The Delicate Balance of Life SG pp 78-79; Reading: Gypsy Moths SG pp 80-81</p>	<p><b>Aligned as designed</b></p>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 07**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>SYSA</b>	Any system may be thought of as containing subsystems and as being a subsystem of a larger system.	<ul style="list-style-type: none"> <li>Given a system, identify subsystems and a larger encompassing system</li> </ul>	Reading: Plant and Animal Cells SG pp 83-85; Inquiry 7.1-7.4 SG pp 87-93	<b>Aligned with modifications (see comments)</b>	The teacher needs to be intentional about discussing the standard. Each cell can be discussed as both a system and a subsystem.
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 7.1-7.4 SG pp 87-93; Student Sheets 7.1-7.4 TG pp 122-126; Extension 1-5, 7-10 TG pp 118-119	<b>Aligned as designed</b>	
<b>INQE</b>	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"> <li>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.</li> </ul>	Extension 1 TG p 118	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 07**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS1A</b>	All organisms are composed of cells, which carry on the many functions needed to sustain life.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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).</li> </ul>	Lesson 7 Introduction SG p 82; Reading: Plant and Animal Cells SG pp 83-85; Inquiry 7.1 SG pp 87-88; Inquiry 7.2 SG pp 89-90; Inquiry 7.3 SG p 90; Inquiry 7.4 SG p 93; Student Sheet 7.1-7.4 TG pp 122-126	<b>Aligned as designed</b>	
<b>LS1D</b>	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"> <li>• 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).</li> </ul>	Reading: Plant and Animal Cells SG pp 83-85; Inquiry 7.1-7.4 SG pp 87-93; Extension 1, 2, 5, 7, 9 and 10 TG pp 118-119	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 08**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQE</b>	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"> <li>• 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.</li> </ul>	Inquiry 8.1-8.2 SG pp 97-101; Extension 4 TG p 142	<b>Aligned as designed</b>	
<b>LS3C</b>	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"> <li>• Identify sexually and asexually reproducing plants and animals.</li> <li>• Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	Inquiry 8.1-8.2 SG pp 97-101; Reading: Multiply, Divide, and Survive SG pp 102-105; Student Sheets 8.2 TG pp 144-149	<b>Aligned as designed</b>	Teacher must be intentional about sharing cell division as an introduction to mitosis/meiosis. Mitosis/Meiosis is a high school concept according to the National Science Standards.

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 09**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 9.1 SG pp 109-110	<b>Aligned as designed</b>	
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 9.1 SG pp 108-110; Student Sheet 9.1 TG pp 163-165; Extensions 2-4 TG p 160	<b>Aligned as designed</b>	
<b>APPB</b>	Scientists and technological designers (including engineers) have different goals. Scientists answer questions about the natural world; technological designers solve problems that help people reach their goals.	<ul style="list-style-type: none"> <li>• Investigate several professions in which an understanding of science and technology is required. Explain why that understanding is necessary for success in each profession.</li> </ul>	Extensions 3-4 TG p 160	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 09**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<p><b>LS3C</b></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"> <li>• Identify sexually and asexually reproducing plants and animals.</li> <li>• Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	<p>Inquiry 9.2 SG pp 111-112; Reading: Methods of Reproduction SG pp 113-115; Reading: The Wonder of Flowering Plants SG pp 116-119; Extension 2 TG p 160</p>	<p><b>Aligned with modifications (see comments)</b></p>	<p>Mitosis/Meiosis information in Reading: Methods of Reproduction is an introduction and is seen in the high school National Science Standards.</p>

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 10**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>SYSD</b>	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"> <li>Given a description of a system, analyze and defend whether it is open or closed.</li> </ul>	Inquiry 10.3 SG pp 126-128; Reading: Looking at Leaves SG pp 129-131; Extension 2-3 TG pp 175-176	<b>Aligned as designed</b>	
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 10.1 SG p 122-123; Student Sheet 10.1 TG p 179; Inquiry 10.3 SG pp 126-127; Student Sheet 10.3 TG pp 182-184; Extensions 4-8 TG p 176	<b>Aligned as designed</b>	
<b>INQE</b>	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"> <li>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.</li> </ul>	Inquiry 10.2 SG pp 124-125; Student Sheet 10 TG pp 180-181	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 10**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS1C</b>	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"> <li>• Relate the structure of a specialized cell (e.g., nerve and muscle cells) to the function that the cell performs.</li> <li>• 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).</li> <li>• Describe the components and functions of the digestive, circulatory, and respiratory systems in</li> </ul>	Inquiry 10.1-10.3 SG pp 122-128; Reading: Looking at Leaves SG pp 129-131; Extension 5 TG p 176	<b>Aligned as designed</b>	
<b>LS1E</b>	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>• Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Extension 8 TG p 176	<b>Aligned as designed</b>	
<b>LS2C</b>	The major source of energy for ecosystems on Earth's surface is sunlight. Producers transform the energy of sunlight into the chemical energy of food through photosynthesis. This food energy is used by plants, and all other organisms to carry on life processes. Nearly all organisms on the surface of Earth depend on this energy source.	<ul style="list-style-type: none"> <li>• Explain how energy from the Sun is transformed through photosynthesis to produce chemical energy in food.</li> <li>• Explain that producers are the only organisms that make their own food. Animals cannot survive without producers because animals get food by eating producers or other animals that eat producers.</li> </ul>	Reading: Looking at Leaves SG pp 129-131; Extensions 2-3 & 7 TG pp 175-176	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 10**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS2D</b>	Ecosystems are continuously changing. Causes of these changes include nonliving factors such as the amount of light, range of temperatures, and availability of water, as well as living factors such as the disappearance of different species through disease, predation, habitat destruction and overuse of resources or the introduction of new species.	<ul style="list-style-type: none"> <li>• Predict what may happen to an ecosystem if nonliving factors change (e.g., the amount of light, range of temperatures, or availability of water or habitat), or if one or more populations are removed from or added to the ecosystem.</li> </ul>	Extension 8 TG p 176	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 11**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 11.1-11.3 SG pp 136-140; Student Sheet 11.2 TG p 200	<b>Aligned as designed</b>	
<b>APPA</b>	People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.	<ul style="list-style-type: none"> <li>• Describe how a technology has changed over time in response to societal challenges.</li> </ul>	Extensions 3, 5 TG p 193	<b>Aligned as designed</b>	
<b>APPB</b>	Scientists and technological designers (including engineers) have different goals. Scientists answer questions about the natural world; technological designers solve problems that help people reach their goals.	<ul style="list-style-type: none"> <li>• Investigate several professions in which an understanding of science and technology is required. Explain why that understanding is necessary for success in each profession.</li> </ul>	Reading: Mighty Microbes SG pp 143-145; Extensions 1-2 TG p 192	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 11**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>APPB</b>	Scientists and technological designers (including engineers) have different goals. Scientists answer questions about the natural world; technological designers solve problems that help people reach their goals.	<ul style="list-style-type: none"> <li>Investigate several professions in which an understanding of science and technology is required. Explain why that understanding is necessary for success in each profession.</li> </ul>	Reading: Mighty Microbes SG pp 143-145	<b>Aligned as designed</b>	
<b>LS1E</b>	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Reading: The Fine Art of Naming Organisms SG pp 133-134; Reading: Welcome to the Monera Kingdom! SG pp 141-142	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 12**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>SYSA</b>	Any system may be thought of as containing subsystems and as being a subsystem of a larger system.	<ul style="list-style-type: none"> <li>Given a system, identify subsystems and a larger encompassing system</li> </ul>	Extension 1 TG p 207	<b>Aligned as designed</b>	
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 12.1-12.2 SG pp 148-151; Student Sheet 12.1A, 12.1B TG pp 209-214	<b>Aligned as designed</b>	
<b>INQE</b>	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"> <li>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.</li> </ul>	Inquiry 12.1 SG pp 148-149	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 12**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
LS1E	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>• Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Inquiry 12.1 SG pp 148-149; Student Sheet 12.1A and 12.1B TG pp 209-210, 212-213	<b>Aligned as designed</b>	
LS2A	An ecosystem consists of all the populations living within a specific area and the nonliving factors they interact with. One geographical area may contain many ecosystems.	<ul style="list-style-type: none"> <li>• Explain that an ecosystem is a defined area that contains populations of organisms and nonliving factors.</li> <li>• Give examples of ecosystems (e.g., Olympic National Forest, Puget Sound, one square foot of lawn) and describe their boundaries and contents.</li> </ul>	Reading: The Changing Pond SG pp 152-155; Extension 6 TG p 207	<b>Aligned as designed</b>	
LS2B	Energy flows through an ecosystem from producers (plants) to consumers to decomposers. These relationships can be shown for specific populations in a food web.	<ul style="list-style-type: none"> <li>• Analyze the flow of energy in a local ecosystem, and draw a labeled food web showing the relationships among all of the ecosystem's plant and animal populations.</li> </ul>	Reading: The Changing Pond SG pp 152-155; Extension 6 TG p 207	<b>Aligned with modifications (see comments)</b>	Teacher must be intentional about use of the terms (vocabulary) used in the standard. (producers, consumers, decomposers, populations, food web/food chain.

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 12**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS2D</b>	Ecosystems are continuously changing. Causes of these changes include nonliving factors such as the amount of light, range of temperatures, and availability of water, as well as living factors such as the disappearance of different species through disease, predation, habitat destruction and overuse of resources or the introduction of new species.	<ul style="list-style-type: none"> <li>• Predict what may happen to an ecosystem if nonliving factors change (e.g., the amount of light, range of temperatures, or availability of water or habitat), or if one or more populations are removed from or added to the ecosystem.</li> </ul>	Reading: The Changing Pond SG pp 152-155	<b>Aligned as designed</b>	
<b>LS3C</b>	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"> <li>• Identify sexually and asexually reproducing plants and animals.</li> <li>• Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	Inquiry 12.2 SG pp 150-151; Student Sheet 12.2 TG p 214; Extension 2 TG p 207	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 13**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>SYSA</b>	Any system may be thought of as containing subsystems and as being a subsystem of a larger system.	<ul style="list-style-type: none"> <li>Given a system, identify subsystems and a larger encompassing system</li> </ul>	Video: Body by Design	<b>Aligned as designed</b>	
<b>INQG</b>	Scientific reports should enable another investigator to repeat the study to check the results.	<ul style="list-style-type: none"> <li>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.</li> </ul>	Inquiry 13.1 SG pp 159-165	<b>Aligned with modifications (see comments)</b>	The unit/lesson is an integral part of a learning progression.
<b>LS1E</b>	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Inquiry 13.1 SG pp 159-165	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 13**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS2A</b>	An ecosystem consists of all the populations living within a specific area and the nonliving factors they interact with. One geographical area may contain many ecosystems.	<ul style="list-style-type: none"> <li>• Explain that an ecosystem is a defined area that contains populations of organisms and nonliving factors.</li> <li>• Give examples of ecosystems (e.g., Olympic National Forest, Puget Sound, one square foot of lawn) and describe their boundaries and contents.</li> </ul>	Inquiry 13.1 SG pp 159-165; Reading: Habitats SG pp 169-171	<b>Aligned as designed</b>	
<b>LS2E</b>	Investigations of environmental issues should uncover factors causing the problem and relevant scientific concepts and findings that may inform an analysis of different ways to address the issue.	<ul style="list-style-type: none"> <li>• Investigate a local environmental issue by defining the problem, researching possible causative factors, understanding the underlying science, and evaluating the benefits and risks of alternative solutions.</li> <li>• Identify resource uses that reduce the capacity of ecosystems to support various populations (e.g., use of pesticides, construction).</li> </ul>	Reading: Daphnia's Change of Appetite SG pp 166-168	<b>Aligned as designed</b>	
<b>LS3A</b>	The scientific theory of evolution underlies the study of biology and explains both the diversity of life on Earth and similarities of all organisms at the chemical, cellular, and molecular level. Evolution is supported by multiple forms of scientific evidence.	<ul style="list-style-type: none"> <li>• Explain and provide evidence of how biological evolution accounts for the diversity of species on Earth today.</li> </ul>	Reading: Charles Darwin and His Theory of Evolution SG p 165	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 13**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS3E</b>	Adaptations are physical or behavioral changes that are inherited and enhance the ability of an organism to survive and reproduce in a particular environment.	<ul style="list-style-type: none"> <li>• Give an example of a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change.</li> </ul>	Lesson Introduction and Getting Started SG pp 158-159; Video: Body by Design; Reading: Daphnia's Change of Appetite SG pp 166-168	<b>Aligned as designed</b>	
<b>LS3F</b>	Extinction occurs when the environment changes and the adaptive characteristics of a species, including its behaviors, are insufficient to allow its survival.	<ul style="list-style-type: none"> <li>• Given an ecosystem, predict which organisms are most likely to disappear from that environment when the environment changes in specific ways.</li> </ul>	Reading: Daphnia's Change of Appetite SG pp 166-168; Reading: Habitats SG pp 169-171	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 14**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQB</b>	Different kinds of questions suggest different kinds of scientific investigations.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.</li> <li>• Work collaboratively with other students to carry out the investigations.</li> </ul>	Inquiry 14.1 SG p 174; Student Sheet 14.1 TG pp 251-252; Extensions 1-2 TG p 247	<b>Aligned with modifications (see comments)</b>	Extensions should use a designing an investigation template.
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 14.1-14.2 SG pp 174-176; Student Sheets 14.1 TG pp 251-252; Inquiry Master 14.2 TG p 250; Extensions 1-2 TG p 247	<b>Aligned as designed</b>	
<b>APPA</b>	People have always used technology to solve problems. Advances in human civilization are linked to advances in technology.	<ul style="list-style-type: none"> <li>• Describe how a technology has changed over time in response to societal challenges.</li> </ul>	Reading: There's a Fungus Among Us SG pp 177-179; Extension 4 TG p 247	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 14**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>APPB</b>	Scientists and technological designers (including engineers) have different goals. Scientists answer questions about the natural world; technological designers solve problems that help people reach their goals.	<ul style="list-style-type: none"> <li>Investigate several professions in which an understanding of science and technology is required. Explain why that understanding is necessary for success in each profession.</li> </ul>	Extension 4 TG p 247	<b>Aligned as designed</b>	
<b>LS1E</b>	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Lesson 14 Introduction SG p 172	<b>Aligned with modifications (see comments)</b>	Kingdom only.
<b>LS2A</b>	An ecosystem consists of all the populations living within a specific area and the nonliving factors they interact with. One geographical area may contain many ecosystems.	<ul style="list-style-type: none"> <li>Explain that an ecosystem is a defined area that contains populations of organisms and nonliving factors.</li> <li>Give examples of ecosystems (e.g., Olympic National Forest, Puget Sound, one square foot of lawn) and describe their boundaries and contents.</li> </ul>	Reading: There's a Fungus Among Us SG pp 177-179	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 14**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<p><b>LS2B</b></p>	<p>Energy flows through an ecosystem from producers (plants) to consumers to decomposers. These relationships can be shown for specific populations in a food web.</p>	<ul style="list-style-type: none"> <li>Analyze the flow of energy in a local ecosystem, and draw a labeled food web showing the relationships among all of the ecosystem's plant and animal populations.</li> </ul>	<p>Reading: There's a Fungus Among Us SG pp 177-179</p>	<p><b>Aligned with modifications (see comments)</b></p>	<p>Teacher must be intentional about use of the terms (vocabulary) symbiosis/symbiotic</p>

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 15**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQB</b>	Different kinds of questions suggest different kinds of scientific investigations.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.</li> <li>• Work collaboratively with other students to carry out the investigations.</li> </ul>	Inquiry 15.1 SG pp 184-185; Student Sheet 15.1 TG pp 261-265	<b>Aligned as designed</b>	
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 15.1 SG pp 184-185; Student Sheet 15.1 TG pp 261-265; Extensions 1-2 TG p 260	<b>Aligned as designed</b>	
<b>APPH</b>	People in all cultures have made and continue to make contributions to society through science and technology.	<ul style="list-style-type: none"> <li>• Describe scientific or technological contributions to society by people in various cultures.</li> </ul>	Reading: Introducing Yeast SG pp 181-182; Reading: Yeast SG pp 186-187	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 15**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS3C</b>	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"> <li>• Identify sexually and asexually reproducing plants and animals.</li> <li>• Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	Reading: Introducing Yeast SG pp 181-182	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 16**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>SYSA</b>	Any system may be thought of as containing subsystems and as being a subsystem of a larger system.	<ul style="list-style-type: none"> <li>Given a system, identify subsystems and a larger encompassing system</li> </ul>	Reading: The Transparent Water Flea SG p 193	<b>Aligned as designed</b>	
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 16.1-16.2 SG pp 190-192; Student Sheets 16.1, 16.2A, 16.2B TG pp 275-279; Extension 1, 3 TG p 273	<b>Aligned with modifications (see comments)</b>	Extension 1, eliminate nicotine if school prohibits.
<b>LS1E</b>	In classifying organisms, scientists consider both internal and external structures and behaviors.	<ul style="list-style-type: none"> <li>Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	Lesson 16 Introduction SG p 188; Inquiry 16.1 SG p 190; Student Sheet 16.1 TG p 275	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 16**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS3C</b>	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"> <li>• Identify sexually and asexually reproducing plants and animals.</li> <li>• Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	Reading: The Transparent Water Flea SG p 193	<b>Aligned as designed</b>	
<b>LS3F</b>	Extinction occurs when the environment changes and the adaptive characteristics of a species, including its behaviors, are insufficient to allow its survival.	<ul style="list-style-type: none"> <li>• Given an ecosystem, predict which organisms are most likely to disappear from that environment when the environment changes in specific ways.</li> </ul>	Inquiry 16.2 SG pp 191-192; Reading: The Transparent Water Flea SG p 193	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 17**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQC</b>	Collecting, analyzing, and displaying data are essential aspects of all investigations.	<ul style="list-style-type: none"> <li>• Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.</li> <li>• Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.</li> <li>• Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.</li> </ul>	Inquiry 17.1-17.3 SG pp 197-198; Student Sheets 17.1-17.3 TG pp 289-291; Extension 1 TG pp 287-288	<b>Aligned as designed</b>	
<b>INQE</b>	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"> <li>• 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.</li> </ul>	Extension 5 TG p 288	<b>Aligned as designed</b>	
<b>LS2D</b>	Ecosystems are continuously changing. Causes of these changes include nonliving factors such as the amount of light, range of temperatures, and availability of water, as well as living factors such as the disappearance of different species through disease, predation, habitat destruction and overuse of resources or the introduction of new species.	<ul style="list-style-type: none"> <li>• Predict what may happen to an ecosystem if nonliving factors change (e.g., the amount of light, range of temperatures, or availability of water or habitat), or if one or more populations are removed from or added to the ecosystem.</li> </ul>	Reading: Jellyfish Get a Bad Rap SG pp 202-203	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 17**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS3C</b>	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"> <li>• Identify sexually and asexually reproducing plants and animals.</li> <li>• Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	Inquiry 17.3 SG p 198; Student Sheet 17.3 TG pp 290-292; Reading: The Hydra SG pp 199-201	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 18**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQB</b>	Different kinds of questions suggest different kinds of scientific investigations.	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.</li> <li>• Work collaboratively with other students to carry out the investigations.</li> </ul>	Extensions 2, 4, and 6 TG pp 299-300	<b>Aligned as designed</b>	
<b>INQE</b>	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"> <li>• 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.</li> </ul>	Inquiry 18.2 SG pp 207-208; Extension 1 TG p 299	<b>Aligned as designed</b>	
<b>APPH</b>	People in all cultures have made and continue to make contributions to society through science and technology.	<ul style="list-style-type: none"> <li>• Describe scientific or technological contributions to society by people in various cultures.</li> </ul>	Reading: Botany's Father SG p 211; Reading: Growing Seedless Fruits SG pp 209-210	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 18**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS2E</b>	Investigations of environmental issues should uncover factors causing the problem and relevant scientific concepts and findings that may inform an analysis of different ways to address the issue.	<ul style="list-style-type: none"> <li>Investigate a local environmental issue by defining the problem, researching possible causative factors, understanding the underlying science, and evaluating the benefits and risks of alternative solutions.</li> <li>Identify resource uses that reduce the capacity of ecosystems to support various populations (e.g., use of pesticides, construction).</li> </ul>	Extension 4 TG p 300	<b>Aligned as designed</b>	
<b>LS3C</b>	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"> <li>Identify sexually and asexually reproducing plants and animals.</li> <li>Explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction.</li> </ul>	Inquiry 18.1-18.2 SG pp 206-208; Reading: Growing Seedless Fruits SG pp 209-210; Reading: The Cabbage White Butterfly SG pp 212-215	<b>Aligned as designed</b>	
<b>LS3E</b>	Adaptations are physical or behavioral changes that are inherited and enhance the ability of an organism to survive and reproduce in a particular environment.	<ul style="list-style-type: none"> <li>Give an example of a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change.</li> </ul>	Lesson 18 Introduction and Getting Started SG pp 204-205; Extension 6 TG p 300	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 19**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>INQI</b>	Scientists and engineers have ethical codes governing animal experiments, research in natural ecosystems, and studies that involve human subjects.	<ul style="list-style-type: none"> <li>• Demonstrate ethical concerns and precautions in response to scenarios of scientific investigations involving animal experiments, research in natural ecosystems, and studies that involve human subjects.</li> </ul>	Reading: Hello, Dolly SG pp 233-235	<b>Aligned as designed</b>	
<b>APPB</b>	Scientists and technological designers (including engineers) have different goals. Scientists answer questions about the natural world; technological designers solve problems that help people reach their goals.	<ul style="list-style-type: none"> <li>• Investigate several professions in which an understanding of science and technology is required. Explain why that understanding is necessary for success in each profession.</li> </ul>	Extension 4 TG p 317; Reading: Hello, Dolly SG pp 233-235	<b>Aligned as designed</b>	
<b>APPH</b>	People in all cultures have made and continue to make contributions to society through science and technology.	<ul style="list-style-type: none"> <li>• Describe scientific or technological contributions to society by people in various cultures.</li> </ul>	Reading: Mendel's Discoveries SG pp 226-229; Reading: What Are the Chances? SG p 232	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 19**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<b>LS3D</b>	In sexual reproduction the new organism receives half of its genetic information from each parent, resulting in offspring that are similar but not identical to either parent. In asexual reproduction just one parent is involved, and genetic information is passed on nearly unchanged.	<ul style="list-style-type: none"> <li>Describe that in sexual reproduction the offspring receive genetic information from both parents, and therefore differ from the parents.</li> <li>Predict the outcome of specific genetic crosses involving one characteristic (using principles of Mendelian genetics).</li> <li>Explain the survival value of genetic variation.</li> </ul>	Inquiry 19.1-19.3 SG pp 219-225; Student Sheets 19.1-19.3 TG 319-329; Reading: Mendel's Discoveries SG pp 226-229; Reading: Heredity-Passing It On SG pp 230-231; Reading: What Are the Chances? SG p 232; Reading: Hello, Dolly SG pp 233-235	<b>Aligned with modifications (see comments)</b>	Teacher must be intentional about use of the terms (vocabulary): homozygous, heterozygous, dominant, recessive, genotype, phenotype.
<b>LS3E</b>	Adaptations are physical or behavioral changes that are inherited and enhance the ability of an organism to survive and reproduce in a particular environment.	<ul style="list-style-type: none"> <li>Give an example of a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change.</li> </ul>	Extension 2 TG p 317	<b>Aligned as designed</b>	

**Alignment of Washington 6-8 Science Standards with  
STC/MS Organisms, Micro to Macro ~ Lesson 20**

Standard	Content Standard	Performance Expectation	Evidence of Alignment	Alignment	Alignment Comments
<p><b>LS1E</b></p>	<p>In classifying organisms, scientists consider both internal and external structures and behaviors.</p>	<ul style="list-style-type: none"> <li>• Use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors.</li> </ul>	<p>Inquiry 20.1-20.2 SG pp 238-240</p>	<p><b>Aligned as designed</b></p>	<p>The unit/lesson is an integral part of the learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-19.</p>