

WASHINGTON STATE LASER

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

STC/MS

Human Body Systems

November 1, 2010

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Systems ~ SYSA**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 01	Aligned as designed	Unit 1 The Digestive System; Lesson 1 Human Body Systems-A Preassessment; Reading: SG p 3 Galen-The Gladiators' Doctor; Getting Started SG p 3; Inquiry 1.1 Human Body Mapping SG pp 4-5	The unit/lesson is an integral part of a learning progression found in lessons 1-8. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 1 The Digestive System TG p xxv provides important information for the teacher about the standard as it relates to the system of digestion.
Lesson 02	Aligned as designed	Unit 1 The Digestive System; Lesson 2 Moving Through The Digestive Tract; Introduction SG p 8; Getting Started SG p9; Inquiry 2.1 Moving Right Along SG pp 10-11	The unit/lesson is an integral part of a learning progression found in lessons 1-8. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 1 The Digestive System TG p xxv provides important information for the teacher about the standard as it relates to the system of digestion.
Lesson 03	Aligned as designed	Unit 1 The Digestive System; Lesson 3 Exploring Carbohydrates: Reading: Nutrients: You Just Can't Live Without 'Em SG pp 20-23	The unit/lesson is an integral part of a learning progression found in lessons 1-8. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 1 The Digestive System TG p xxv provides important information for the teacher about the standard as it relates to the system of digestion.
Lesson 04	Aligned as designed	Unit 1 The Digestive System; Lesson 4 Digestion in the Mouth, Introduction SG p 24; Getting Started SG p 25; Inquiry 4.1 Exploring Chemical Digestion in the Mouth SP pp 25-28; Reading: Making it Simple SG p 29; Reading: Spies-Into the System SG pp 30-31	The unit/lesson is an integral part of a learning progression found in lessons 1-8. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 1 The Digestive System TG p xxv provides important information for the teacher about the standard as it relates to the system of digestion.

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Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 05	Aligned as designed	Unit 1 The Digestive System; Lesson 5 Digestion in the Stomach, Introduction SG p 32; Getting Started SG p 33; Inquiry 5.1 Exploring Digestion in the Stomach SG pp 33-36; Reading: Chances of a Lifetime SG p 37; Reading Spies-Into the Blender SG pp 38-39	The unit/lesson is an integral part of a learning progression found in lessons 1-8. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 1 The Digestive System TG p xxv provides important information for the teacher about the standard as it relates to the system of digestion.
Lesson 06	Aligned as designed	Unit 1 The Digestive System; Lesson 6 Diffusion and Active Transport: Introduction SG p 40; Getting Started SG p41; Inquiry 6.1 Spreading Out and Through SG pp 42-45; Reading: Diffusion and Active Transport: Getting From Here to There SG pp 46-47; Reading: Spies-The Long and Winding Tube SG pp 48-49	The unit/lesson is an integral part of a learning progression found in lessons 1-8. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 1 The Digestive System TG p xxv provides important information for the teacher about the standard as it relates to the system of digestion.
Lesson 07	Aligned as designed	Lesson 7 Surface Area and Absorption: Introduction SG p 40; Inquiry 7.1 Increasing the Surface Area of a Clay Cube SG pp 51-52; Inquiry 7.2 Modeling the Inside Surface of the Small Intestine SG pp 52-52; Reading: Surface Area: Your Small Intestine Isn't Small at All SG pp 54-55; Reading: Spies-Left Overs SG pp 56-59	The unit/lesson is an integral part of a learning progression found in lessons 1-8. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 1 The Digestive System TG p xxv provides important information for the teacher about the standard as it relates to the system of digestion.
Lesson 08	Aligned as designed	Unit 1 The Digestive System; Lesson 8 The Digestive System-An Assessment SG pp 60-62; TG pp 81-98	The Unit/Lesson is an integral part of the learning progression students are asked to demonstrate conceptual understanding of standards in Lessons 1-8.

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Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 10	Aligned as designed	Unit 2 The Respiratory and Circulatory Systems; Lesson 10 Assessing Breathing Models: Introduction SG p 76; Reading: Excuse Me Please! SG pp 77-78; Getting Started pp 79-82; Inquiry 10.1 Assessing the Syringe Model of Breathing SG pp 83-84; Reading: Spies-The Second Journey Begins SG pp 85-89	The unit/lesson is an integral part of a learning progression found in lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 2 The Respiratory and Circulatory Systems TG p xxvi provides important information for the teacher about the standard as it relates to the systems of respiration and circulation.
Lesson 11	Aligned as designed	Unit 2 The Respiratory and Circulatory Systems; Lesson 11 How Much Air Can You Exhale? Introduction SG p 90; Getting Started SG pp 91-92; Inquiry 11.1 Measuring How Much Air You Can Exhale SG pp 92-95; Reading Up, Up, and Away! SG p 96	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 2 The Respiratory and Circulatory Systems TG p xxvi provides important information for the teacher about the standard as it relates to the systems of respiration and circulation.
Lesson 12	Aligned as designed	Unit 2 The Respiratory and Circulatory Systems. Lesson 12 Recipe for Energy- Cellular Respiration; Introduction SG pp 98-99; Reading: Oxidation-One Process, Two Forms SG p 99; Getting Started SG pp 100-101; Inquiry 12.1 Investigating Cellular Respiration SG p 102; Inquiry 12.2 Using a Model to Show Evidence of a Waste Product of Cellular Respiration SG pp 103-104; Inquiry 12.3 Exploring Movement of Carbon Dioxide Through a Membrane SG pp 104-105; Reading: Spies-Why So Many? SG pp 108-109	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 2 The Respiratory and Circulatory Systems TG p xxvi provides important information for the teacher about the standard as it relates to the systems of respiration and circulation.
Lesson 13	Aligned as designed	Unit 2 The Respiratory and Circulatory Systems; Lesson 13 Releasing Energy From Food: Getting Started SG pp 111-112; Inquiry 13.1 Comparing the Energy Released by Marshmallows and Sunflower Seeds SG pp 113-115	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 2 The Respiratory and Circulatory Systems TG p xxvi provides important information for the teacher about the standard as it relates to the systems of respiration and circulation. Teacher needs to intentionally focus on the calorimeter as a system.

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Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 14	Aligned as designed	Unit 2 The Respiratory and Circulatory Systems; Lesson 14 The Pumping Heart, Introduction SG p 120; Reading: Dr. William Harvey Closes the Loop SG p 121; Getting Started SG p 122; Inquiry 14.1 Analyzing the Siphon Pump Heart Model SG pp 123-124; Reading: Marcello Malpighi-Man With a Microscope SG p 125; Reading: Spies-Back in Circulation SG pp 126-129	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 2 The Respiratory and Circulatory Systems TG p xxvi provides important information for the teacher about the standard as it relates to the systems of respiration and circulation.
Lesson 15	Aligned as designed	Unit 2 The Respiratory and Circulatory Systems; Lesson 15 Factors Affecting Heart Rate Introduction SG p130; Getting Started SG p 132; Inquiry 15.1 Exploring Factors That Affect Heart Rate SG pp 132-133; Reading: Blood Life's Liquid SG pp 134-137; Reading: The Other Circulatory System SG p 137	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 2 The Respiratory and Circulatory Systems TG p xxvi provides important information for the teacher about the standard as it relates to the systems of respiration and circulation.
Lesson 16	Aligned as designed	Unit 2 The Respiratory and Circulatory Systems; Lesson 16 The Heart Meets Resistance; Introduction SG p 138; Inquiry 16.1 Feeling the Pressure SG pp 139-141; Reading: Blood Pressure: What Goes Up Should Come Down SG pp 142-143; Reading: Cholesterol: Friend or Foe? SG p 143	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 2 The Respiratory and Circulatory Systems TG p xxvi provides important information for the teacher about the standard as it relates to the systems of respiration and circulation.
Lesson 17	Aligned as designed	Unit 2 The Respiratory and Circulatory Systems; Lesson 17 The Respiratory and Circulatory Systems-An Assessment; SG pp 144-146; TG pp 191-205; Reading: Organ and Tissue Transplantation: A Round-the-Clock Need SG p147	The Unit/Lesson is an integral part of the learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.

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Performance Expectation

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Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 18	Aligned as designed	Unit 3 The Musculoskeletal System; Lesson 18 The Musculoskeletal System-An Overview, Introduction SG p 150; Getting Started SG pp 151-152; Inquiry 18.1 Winging It SG pp 152-154; Reading: Life in the Bone Zone SG 155-157; Reading: Spies-Two Working as One SG pp 158-159	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 3 The Musculoskeletal Systems TG pp xxvi-xxvii provides important information for the teacher about the standard as it relates to the musculoskeletal system.
Lesson 19	Aligned as designed	Unit 3 The Musculoskeletal System; Lesson 19 Joints and Movement; Introduction SG p 160; Getting Started p 161; Inquiry 19.1 Exploring Joints with Models SG pp 161-164; Reading: Spies-What Kind of Joint is This? SG pp 165-167	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 3 The Musculoskeletal Systems TG pp xxvi-xxvii provides important information for the teacher about the standard as it relates to the musculoskeletal system.
Lesson 20	Aligned as designed	Unit 3 The Musculoskeletal System; Lesson 20 Muscle Size and Strength: Inquiry 20.1 Investigating Muscle Size and Strength SG pp 170-172	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 3 The Musculoskeletal Systems TG pp xxvi-xxvii provides important information for the teacher about the standard as it relates to the musculoskeletal system.
Lesson 21	Aligned as designed	Unit 3 The Musculoskeletal System; Lesson 21 Exploring Muscle Fatigue; Reading: Repetitive Stress Injury: Too Much of the Same Old Thing SG pp 177-178; Reading: Speis-Command Central SG pp 179-181	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 3 The Musculoskeletal Systems TG pp xxvi-xxvii provides important information for the teacher about the standard as it relates to the musculoskeletal system.

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Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 22	Aligned as designed	Unit 3 The Musculoskeletal System; Lesson 22 The Body in Balance; Reading: Spies-Back Home SG pp 188-189	The unit/lesson is an integral part of a learning progression found in Lessons 10-17. The teacher needs to be intentional about discussing the Systems standard. Module Overview Part 3 The Musculoskeletal Systems TG pp xxvi-xxvii provides important information for the teacher about the standard as it relates to the musculoskeletal system.
Lesson 23	Aligned as designed	Units 1-3 Lesson 23 Final Assessment-The Human Body Systems; SG pp 190-192; Reading: Reflex Actions: Ready or Not, Here They Come! SG pp 193-195: TG pp 261-276	The Unit/Lesson is an integral part of the learning progression students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Systems ~ SYSC**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 10	Aligned with modifications (see comments)	Lesson 10 Assessing Breathing Models: Getting Started SG pp 79-82; Reading: Spies-The Second Journey Begins SG p85-89; TG	Teachers need to emphasize the inputs and outputs of matter and energy. Teacher must be intentional about using diagrams 10.1, 10.2, and 10.3 in SG pp 79-81. The Unit/Lesson is an integral part of the learning progression students are asked to demonstrate conceptual understanding of standards in Lessons 10-14.
Lesson 12	Aligned with modifications (see comments)	Lesson 12 Recipe for Energy-Cellular Respiration: Introduction SG pp 98-99; Reading: Oxidation-One Process, Two Forms SG p 99; Getting Started SG pp 100-101; Inquiry 12.1 Investigating Cellular Respiration SG p102; Inquiry 12.2 Using a Model To Show Evidence of a Waste Product of Cellular Respiration SG pp 103-104; Inquiry 12.3 Exploring the Movement of Carbon Dioxide Through a Membrane SG pp 104-105; Reading: Spies-Why So Many? SG pp 108-109	Teachers need to emphasize the inputs and outputs of matter and energy. Teacher must be intentional about using the Reflection questions for Inquiry 12.3 on TG pp 146-147. Teacher must be intentional about use of the terms input, output, matter, and energy.
Lesson 13	Aligned with modifications (see comments)	Lesson 13 Releasing Energy From Food; Getting Started SG pp 111-112; Inquiry 13.1 Comparing the Energy Released By Marshmallows and Sunflower Seeds SG pp 113-115; TG pp 153-154	Teachers need to emphasize the inputs and outputs of matter and energy. Teacher must be intentional about using the Reflection questions for Inquiry 13.1 on TG p 157. Teacher must be intentional about use of the terms input, output, matter, and energy.
Lesson 14	Aligned as designed	Lesson 14 The Pumping Heart; Introduction SG p 120; Inquiry 14.1 Analyzing the Siphon-Pump Heart Model SG pp 123-124; Student Sheet 14.1a Human Circulation; Reading: Spies-Back in Circulation SG pp 126-129	Teachers need to emphasize the inputs and outputs of matter and energy. Teacher must be intentional about explaining the input of oxygen and the output of carbon dioxide in Procedure 7B of Inquiry 14.1 SG p 123. Teacher needs to emphasize how the electrical input from a small area in the upper right chamber of the heart creates the output of a heart contraction in the Spies article.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Systems ~ SYSD**

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

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 14	Module/Unit requires changes (see comments)	Lesson 14 The Pumping Heart; Reading: Dr. William Harvey Closes the Loop SG p 121; Getting Started SG p 122; Inquiry 14.1 Analyzing the Siphon-Pump Heart Model SG pp 123-124; Reading Spies-Back in Circulation SG pp 126-129	The teacher needs to be intentional about discussing open and closed systems. Teacher needs to intentionally have students review the digestive and respiratory systems and determine whether these are open or closed systems comparing them to the circulatory system.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQA**

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

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 08	Aligned as designed	Lesson 8 The Digestive System-An Assessment; Inquiry 8.1 Which Solution Has The Enzyme? SG pp 61-63	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-7.
Lesson 17	Aligned as designed	Lesson 17 The Respiratory and Circulatory System-An Assessment; Inquiry 17.1 Respiratory and Circulatory System: An Assessment Part A-Designing and Conducting and Inquiry	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.
Lesson 23	Aligned as designed	Lesson 23 Final Assessment-Human Body Systems; Inquiry 23.1 Reaction Time Inquiry SG pp 190-192	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQB**

Content Standard

Different kinds of questions suggest different kinds of scientific investigations.

Performance Expectation

- Plan and conduct a scientific investigation (e.g., field study, systematic observation, controlled experiment, model, or simulation) that is appropriate for the question being asked.
- Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.
- Work collaboratively with other students to carry out the investigations.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 01	Aligned as designed	Lesson 1 Human Body Systems-A Preassessment; Inquiry 1.1 Human Body Mapping SG pp 4-5	
Lesson 04	Aligned as designed	Lesson 4 Digestion in the Mouth; Inquiry 4.1 Exploring Chemical Digestion in the Mouth SG pp 25-27	
Lesson 05	Aligned as designed	Lesson 5 Digestion in the Stomach; Inquiry 5.1 Exploring Chemical Digestion in the Stomach SG pp 33-36	
Lesson 06	Aligned as designed	Lesson 6 Diffusion and Active Transport; Inquiry 6.1 Spreading Out and Through SG pp 42-45	

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQB**

Content Standard

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- Plan and conduct a scientific investigation (e.g., field study, systematic observation, controlled experiment, model, or simulation) that is appropriate for the question being asked.
- Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.
- Work collaboratively with other students to carry out the investigations.

Performance Expectation

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 07	Aligned as designed	Unit 1 The Digestive System; Lesson 7 Surface Area and Absorption; Inquiry 7.1 Increasing the Surface Area of a Clay Cube SG pp 51-52	
Lesson 07	Aligned as designed	Lesson 7 Surface Area and Absorption; Inquiry 7.2 Modeling the Inside Surface of the Small Intestine SG pp 52-53	
Lesson 08	Aligned as designed	Lesson 8 The Digestive System-An Assessment; Inquiry 8.1 Which Solution Has The Enzyme? SG pp 61-63.	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-7. Teacher needs to be intentional about having students design and conduct their own scientific investigation to answer the proposed question using what they learned in Lessons 3-7.
Lesson 10	Aligned as designed	Lesson 10 Assessing Breathing Models; Getting Started SG pp 79-81; Inquiry 10.1 Assessing the Syringe Model of Breathing, SG pp 83-84	

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Inquiry ~ INQB**

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Performance Expectation

- Plan and conduct a scientific investigation (e.g., field study, systematic observation, controlled experiment, model, or simulation) that is appropriate for the question being asked.
- Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.
- Work collaboratively with other students to carry out the investigations.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 11	Aligned as designed	How Much Air Can You Exhale? Getting Started SG pp 91-92; Inquiry 11.1 Measuring How Much Air You Can Exhale SG pp 92-94	
Lesson 12	Aligned as designed	Lesson 12 Recipe for Energy-Cellular Respiration; Getting Started SG pp 100-101; Inquiry 12.1 Investigating Cellular Respiration SG p 102; Inquiry 12.2 Using a Model to Show Evidence of a Waste Product of Cellular Respiration SG pp 103-104; Inquiry 12.3 Exploring the Movement of Carbon Dioxide Through a Membrane SG pp 104-105	
Lesson 13	Aligned as designed	Lesson 13 Releasing Energy From Food; Inquiry 13.1 Comparing the Energy Released By Marshmallows and Sunflower Seeds SG pp 113-115	
Lesson 14	Aligned as designed	Lesson 14 The Pumping Heart; Getting Started SG p 122; Inquiry 14.1 Analyzing the Siphon-Pump Heart Model SG pp 123-125	

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQB**

Content Standard

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- Plan and conduct a scientific investigation (e.g., field study, systematic observation, controlled experiment, model, or simulation) that is appropriate for the question being asked.
- Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.
- Work collaboratively with other students to carry out the investigations.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 15	Aligned as designed	Lesson 15 Factors Affecting Heart Rate; Inquiry 15.1 Exploring Factors That Affect Heart Rate.	
Lesson 16	Aligned as designed	Lesson 16 The Heart Meets Resistance; Inquiry 16.1 Feeling the Pressure SG pp 139-141	
Lesson 17	Aligned as designed	Lesson 17 The Respiratory and Circulatory System-An Assessment; Inquiry 17.1 Respiratory and Circulatory System: An Assessment Part A-Designing and Conducting and Inquiry.	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.
Lesson 18	Aligned as designed	Lesson 18 The Musculoskeletal System-An Overview; Inquiry 18.1 Winging It SG pp 152-154	

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Inquiry ~ INQB**

Content Standard

Different kinds of questions suggest different kinds of scientific investigations.

Performance Expectation

- Plan and conduct a scientific investigation (e.g., field study, systematic observation, controlled experiment, model, or simulation) that is appropriate for the question being asked.
- Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.
- Work collaboratively with other students to carry out the investigations.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 19	Aligned as designed	Lesson 19 Joints and Movement ;Inquiry 19.1 Exploring Joints with Models SG pp 161-164	
Lesson 20	Aligned as designed	Lesson 20 Muscle Size and Strength; Inquiry 20.1 Investigating Muscle Size and Strength, SG pp 170-172	
Lesson 21	Aligned as designed	Lesson 21 Exploring Muscle Fatigue; Getting Started SG p 175; Inquiry 21.1 Working Against Fatigue SG pp 175-176	
Lesson 22	Aligned as designed	Lesson 22 The Body in Balance; Inquiry 22.1 Maintaining a Balance SG pp 184-185	

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STC/MS Human Body Systems
Inquiry ~ INQB**

Content Standard

Different kinds of questions suggest different kinds of scientific investigations.

Performance Expectation

- Plan and conduct a scientific investigation (e.g., field study, systematic observation, controlled experiment, model, or simulation) that is appropriate for the question being asked.
- Propose a hypothesis, give a reason for the hypothesis, and explain how the planned investigation will test the hypothesis.
- Work collaboratively with other students to carry out the investigations.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 23	Aligned as designed	Lesson 23 Final Assessment-Human Body Systems; Inquiry 23.1 Reaction Time Inquiry SG pp 190-192	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQC**

Content Standard

Collecting, analyzing, and displaying data are essential aspects of all investigations.

- Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.

Performance Expectation

- Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.
- Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 01	Aligned as designed	Lesson 1 Human Body Systems-A Preassessment; Inquiry 1.1 Human Body Mapping SG pp 4-5	
Lesson 04	Aligned as designed	Lesson 4 Digestion in the Mouth; Inquiry 4.1 Exploring Chemical Digestion in the Mouth SG pp 25-27	
Lesson 05	Aligned as designed	Lesson 5 Digestion in the Stomach; Inquiry 5.1 Exploring Chemical Digestion in the Stomach SG pp 33-36	
Lesson 15	Aligned as designed	Lesson 15 Factors Affecting Heart Rate; Inquiry 15.1 Exploring Factors That Affect Heart Rate.	

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Inquiry ~ INQC**

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Performance Expectation

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- Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 17	Aligned as designed	Lesson 17 The Respiratory and Circulatory System-An Assessment; Inquiry 17.1 Respiratory and Circulatory System: An Assessment Part A-Designing and Conducting and Inquiry	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.
Lesson 20	Aligned as designed	Lesson 20 Muscle Size and Strength; Inquiry 20.1 Investigating Muscle Size and Strength, SG pp 170-172	
Lesson 21	Aligned as designed	Lesson 21 Exploring Muscle Fatigue; Getting Started SG p 175; Inquiry 21.1 Working Against Fatigue SG pp 175-176	
Lesson 22	Aligned as designed	Lesson 22 The Body in Balance; Inquiry 22.1 Maintaining a Balance SG pp 184-185	

**Alignment of Washington 6-8 Science Standards with
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Inquiry ~ INQC**

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Collecting, analyzing, and displaying data are essential aspects of all investigations.

- Communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative.

Performance Expectation

- Recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words.
- Use statistical procedures (e.g., median, mean, or mode) to analyze data and make inferences about relationships.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 23	Aligned as designed	Lesson 23 Final Assessment-Human Body Systems; Inquiry 23.1 Reaction Time Inquiry SG pp 190-192	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQD**

Content Standard

For an experiment to be valid, all (controlled) variables must be kept the same whenever possible, except for the manipulated (independent) variable being tested and the responding (dependent) variable being measured and recorded. If a variable cannot be controlled, it must be reported and accounted for.

Performance Expectation

• Plan and conduct a controlled experiment to test a hypothesis about a relationship between two variables. Determine which variables should be kept the same (controlled), which (independent) variable should be systematically manipulated, and which responding (dependent) variable is to be measured and recorded. Report any variables not controlled and explain how they might affect results.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 03	Aligned with modifications (see comments)	Lesson 3 Exploring Carbohydrates; Inquiry 3.1 Testing Foods for Sugar and Starch SG pp 17-19	Teacher must be intentional about use of the terms hypothesis, controlled variables, manipulated variable, responding variable, and what it means to have a controlled experiment.
Lesson 04	Aligned with modifications (see comments)	Lesson 4 Digestion in the Mouth; Inquiry 4.1 Exploring Chemical Digestion in the Mouth SG pp 25-27	Teacher must be intentional about use of the terms hypothesis, controlled variables, manipulated variable, responding variable, and what it means to have a controlled experiment.
Lesson 05	Aligned with modifications (see comments)	Lesson 5 Digestion in the Stomach; Inquiry 5.1 Exploring Chemical Digestion in the Stomach, pp 33-36	Teacher must be intentional about use of the terms hypothesis, controlled variables, manipulated variable, responding variable, and what it means to have a controlled experiment.
Lesson 06	Aligned with modifications (see comments)	Lesson 6 Diffusion and Active Transport; Inquiry 6.1 Spreading Out and Through SG pp 42-45	Teacher must be intentional about use of the terms hypothesis, controlled variables, manipulated variable, responding variable, and what it means to have a controlled experiment.

**Alignment of Washington 6-8 Science Standards with
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Inquiry ~ INQD**

Content Standard

For an experiment to be valid, all (controlled) variables must be kept the same whenever possible, except for the manipulated (independent) variable being tested and the responding (dependent) variable being measured and recorded. If a variable cannot be controlled, it must be reported and accounted for.

Performance Expectation

• Plan and conduct a controlled experiment to test a hypothesis about a relationship between two variables. Determine which variables should be kept the same (controlled), which (independent) variable should be systematically manipulated, and which responding (dependent) variable is to be measured and recorded. Report any variables not controlled and explain how they might affect results.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 08	Aligned as designed	Lesson 8 The Digestive System-An Assessment; Inquiry 8.1 Which Solution Has The Enzyme? SG pp 61-63	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-7. Teacher needs to be intentional about having students design and conduct their own scientific investigation to answer the proposed question using what they learned in Lessons 3-7.
Lesson 12	Module/Unit requires changes (see comments)	Lesson 12 Recipe for Energy-Cellular Respiration; Inquiry 12.1 Investigating Cellular Respiration SG p 102.	Teacher needs to be intentional about having students design and conduct their own scientific investigation to answer the proposed question using what they learned in Inquiry 12.1.
Lesson 15	Aligned with modifications (see comments)	Lesson 15 Factors Affecting Heart Rate; Inquiry 15.1 Exploring Factors That Affect Heart Rate.	Teacher must be intentional about use of the terms hypothesis, controlled variables, manipulated variable, responding variable, and what it means to have a controlled experiment.
Lesson 17	Aligned as designed	Lesson 17 The Respiratory and Circulatory System-An Assessment; Inquiry 17.1 Respiratory and Circulatory System: An Assessment Part A-Designing and Conducting and Inquiry	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQD**

Content Standard

For an experiment to be valid, all (controlled) variables must be kept the same whenever possible, except for the manipulated (independent) variable being tested and the responding (dependent) variable being measured and recorded. If a variable cannot be controlled, it must be reported and accounted for.

Performance Expectation

• Plan and conduct a controlled experiment to test a hypothesis about a relationship between two variables. Determine which variables should be kept the same (controlled), which (independent) variable should be systematically manipulated, and which responding (dependent) variable is to be measured and recorded. Report any variables not controlled and explain how they might affect results.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 21	Aligned with modifications (see comments)	Lesson 21 Exploring Muscle Fatigue; Getting Started SG p 175; Inquiry 21.1 Working Against Fatigue SG pp 175-176	Teacher must be intentional about use of the terms hypothesis, controlled variables, manipulated variable, responding variable, and what it means to have a controlled experiment.
Lesson 23	Aligned as designed	Lesson 23 Final Assessment-Human Body Systems; Inquiry 23.1 Reaction Time Inquiry SG pp 190-192	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQE**

Content Standard Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.

Performance Expectation • Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 01	Aligned as designed	Lesson 1 Human Body Systems-A Preassessment; Inquiry 1.1 Human Body Mapping SG pp 4-5	
Lesson 02	Aligned as designed	Lesson 2 Moving Through The Digestive Tract; Inquiry 2.1 Moving Right Along SG pp 10-11	
Lesson 06	Aligned as designed	Lesson 6 Diffusion and Active Transport; Inquiry 6.1 Spreading Out and Through SG pp 42-45	
Lesson 07	Aligned as designed	Lesson 7 Surface Area and Absorption; Inquiry 7.2 Modeling the Inside Surface of the Small Intestine SG pp 52-53	

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQE**

Content Standard Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.

Performance Expectation • Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 10	Aligned as designed	Lesson 10 Assessing Breathing Models; Getting Started SG pp 79-81; Inquiry 10.1 Assessing the Syringe Model of Breathing SG pp 83-84	
Lesson 11	Aligned as designed	How Much Air Can You Exhale? Getting Started SG pp 91-92; Inquiry 11.1 Measuring How Much Air You Can Exhale SG pp 92-94	
Lesson 12	Aligned as designed	Lesson 12 Recipe for Energy-Cellular Respiration; Getting Started SG pp 100-101; Inquiry 12.2 Using a Model to Show Evidence of a Waste Product of Cellular Respiration SG pp 103-104; Inquiry 12.3 Exploring the Movement of Carbon Dioxide Through a Membrane SG pp 104-105	
Lesson 13	Aligned as designed	Lesson 13 Releasing Energy From Food; Inquiry 13.1 Comparing the Energy Released By Marshmallows and Sunflower Seeds SG pp 113-115	

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQE**

Content Standard Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.

Performance Expectation • Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 14	Aligned as designed	Lesson 14 The Pumping Heart; Getting Started SG p 122; Inquiry 14.1 Analyzing the Siphon-Pump Heart Model SG pp 123-125	
Lesson 16	Aligned as designed	Lesson 16 The Heart Meets Resistance; Inquiry 16.1 Feeling the Pressure SG pp 139-141	
Lesson 18	Aligned as designed	Lesson 18 The Musculoskeletal System-An Overview; Inquiry 18.1 Winging It SG pp 152-154	
Lesson 19	Aligned as designed	Lesson 19 Joints and Movement; Inquiry 19.1 Exploring Joints with Models SG pp 161-164	

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQE**

Content Standard Models are used to represent objects, events, systems, and processes. Models can be used to test hypotheses and better understand phenomena, but they have limitations.

Performance Expectation • Create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 22	Aligned as designed	Lesson 22 The Body in Balance; Inquiry 22.1 Maintaining a Balance SG pp 184-185	

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQF**

Content Standard It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.

- Generate a scientific conclusion from an investigation using inferential logic, and clearly distinguish between results (e.g., evidence) and conclusions (e.g., explanation).
- Describe the differences between an objective summary of the findings and an inference made from the findings.

Performance Expectation

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 04	Aligned with modifications (see comments)	Lesson 4 Digestion in the Mouth; Inquiry 4.1 Exploring Chemical Digestion in the Mouth SG pp 25-27	The teacher needs to be intentional about discussing the use of inferential logic to distinguish between results (e.g., evidence) and conclusions (e.g., explanation). The teacher needs to be intentional about having students create a scientific conclusion.
Lesson 08	Aligned as designed	Lesson 8 The Digestive System-An Assessment; Inquiry 8.1 Which Solution Has The Enzyme? SG pp 61-63	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-7. Teacher needs to be intentional about having students write a conclusion based on the investigation they designed and conducted.
Lesson 15	Aligned with modifications (see comments)	Lesson 15 Factors Affecting Heart Rate; Inquiry 15.1 Exploring Factors That Affect Heart Rate.	Teacher needs to be intentional about having students write a scientific conclusion based on the investigation they designed and conducted.
Lesson 17	Aligned as designed	Lesson 17 The Respiratory and Circulatory System-An Assessment; Inquiry 17.1 Respiratory and Circulatory System: An Assessment Part A-Designing and Conducting and Inquiry	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQF**

Content Standard It is important to distinguish between the results of a particular investigation and general conclusions drawn from these results.

- Generate a scientific conclusion from an investigation using inferential logic, and clearly distinguish between results (e.g., evidence) and conclusions (e.g., explanation).
- Describe the differences between an objective summary of the findings and an inference made from the findings.

Performance Expectation

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 23	Aligned with modifications (see comments)	Lesson 23 Final Assessment-Human Body Systems; Inquiry 23.1 Reaction Time Inquiry SG pp 190-192	Teacher needs to be intentional about having students write a scientific conclusion based on the investigation they designed and conducted. The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQG**

Content Standard

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

Performance Expectation

• Prepare a written report of an investigation by clearly describing the question being investigated, what was done, and an objective summary of results. The report should provide evidence to accept or reject the hypothesis, explain the relationship between two or more variables, and identify limitations of the investigation.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 23	Aligned with modifications (see comments)	Lesson 23 Final Assessment-Human Body Systems; Inquiry 23.1 Reaction Time Inquiry SG pp 190-192	Teacher needs to intentionally inform students about the content expectations for the written report. The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Inquiry ~ INQH**

Content Standard

Science advances through openness to new ideas, honesty, and legitimate skepticism. Asking thoughtful questions, querying other scientists' explanations, and evaluating one's own thinking in response to the ideas of others are abilities of scientific inquiry.

Performance Expectation

- Recognize flaws in scientific claims, such as uncontrolled variables, over generalizations from limited data, and experimenter bias.
- Listen actively and respectfully to research reports by other students. Critique their presentations respectfully, using logical argument and evidence.
- Engage in reflection and self-evaluation.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 18	Aligned as designed	Lesson 18 The Musculoskeletal System-An Overview; Inquiry 18.1 Winging It SG pp 152-154	
Lesson 21	Aligned as designed	Lesson 21 Exploring Muscle Fatigue; Getting Started SG p 175; Inquiry 21.1 Working Against Fatigue SG pp 175-176	Suggest teacher have students journal their reflection as well as discuss.
Lesson 22	Aligned as designed	Lesson 22 The Body in Balance; Inquiry 22.1 Maintaining a Balance SG pp 184-185	

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Application ~ APPB**

Content Standard 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.

Performance Expectation • Investigate several professions in which an understanding of science and technology is required. Explain why that understanding is necessary for success in each profession.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 09	Aligned as designed	Lesson 9 Anchor Activity: Disease and Health Concerns; Introduction SG pp 68-69; Anchor Activity following choice B throughout-Health Career. Reading:Disease: What's Gotten Into You? SG pp 72-75	Anchor Activity SG pp 70-71. Use choice 2B - Researching a Health Career to complete the Anchor Activity.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Application ~ APPH**

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

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 01	Aligned with modifications (see comments)	Lesson 1 Human Body Systems a Preassessment: Reading: Galen-The Gladiators' Doctor SG p 3; Reading: Humans-The Problem-Solving Animals SG pp 6-7	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.
Lesson 05	Aligned as designed	Lesson 5 Digestion in the Stomach; Reading:Chance of a Lifetime SG p 37	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.
Lesson 09	Aligned with modifications (see comments)	Lesson 9 Anchor Activity-Disease and Health Careers; Reading: Disease:What's Gotten Into You? SG pp 72-75	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.
Lesson 11	Aligned with modifications (see comments)	Lesson 11 How Much Air Can You Exhale? Reading: Up, Up, and Away! SG p 96; Reading: Dr. Heimlich's Lifesaving Maneuver SG p97	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Application ~ APPH**

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

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 12	Aligned with modifications (see comments)	Lesson 12 Recipe for Energy-Cellular Respiration; Reading: Machines and Medicine Control a Killer SG pp 106-107	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.
Lesson 14	Aligned with modifications (see comments)	Lesson 14 The Pumping Heart; Reading: Dr. William Harvey Closes the Loop SG p 121; Reading: Marco Malpighi-Man With a Microscope SG p 125	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.
Lesson 17	Aligned with modifications (see comments)	Lesson 17 The Respiratory and Circulatory Systems-an Assessment; Reading: Organ and Tissue Transplantation: A Round-The-Clock Need SG p 147	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.
Lesson 18	Aligned with modifications (see comments)	Lesson 18 The Musculoskeletal System-An Overview; Reading: Life in the Bone Zone SG pp155-157	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Application ~ APPH**

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

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 22	Aligned with modifications (see comments)	Lesson 22 The Body in Balance; Reading: Dr. Claude Bernard SG p 185. Reading: Lie Detectors: Tracking Reactions SG pp 186-187	Teacher must be intentional about describing the scientific or technological contributions to society by people in various cultures.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1A**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 04	Aligned as designed	Reading: Making It Simple SG p 29	Reading: Nutrients: You Just Can't Live Without 'Em SG pp 20-23 is a part of a conceptual sequence.
Lesson 06	Aligned with modifications (see comments)	Reading: Introduction SG page 40; Diffusion and Active Transport SG pp 46-47; Diffusion and Active Transport TG pp 57-60. Inquiry 6.1 SG pp 42-45. Student Sheet 6.1 Diffusion and Cell Membranes TG pp 66-67	Teacher must be intentional about sharing that the membrane used in Inquiry 6.1 represents a cell membrane; Extension 4 TG p 63 reinforces the concept of cellular diffusion. Teacher must intentionally discuss the egg as a cell; Reading: Nutrients: You Just Can't Live Without 'Em SG pp 20-23 is a part of a conceptual sequence.
Lesson 08	Aligned as designed	Lesson 8 The Digestive System-An Assessment; Inquiry 8.1 Which Solution has the Enzyme? SG pp 61-63; TG pp 83-98	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-7.
Lesson 10	Aligned as designed	Lesson 10 Assessing Breathing Models. Getting Started SG pp 79-81; TG pp 113-116; Inquiry Master 10.1c	

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1A**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 12	Aligned as designed	Lesson 12 Recipe for Energy-Cellular Respiration; Reading: Recipe for Energy-Cellular Respiration SG pp 98-99; TG pp 137-139; Reading: Spies-Why So Many? pp 108-109; Inquiry 12.1 SG p 102; Inquiry 12.2 SG pp 103-104; Inquiry 12.3 SG pp 104-105	
Lesson 17	Aligned as designed	The Respiratory and Circulatory System-An Assessment; SG pp 144-146; TG pp 191-205	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.
Lesson 21	Aligned as designed	Lesson 21 Exploring Muscle Fatigue; Reading: Spies-Central Command SG pp 179-181; Reading TG pp 245-247; Figure 21.1 Motor Unit TG p246	Teacher needs to make and use a transparency of Figure 21.1 Motor Unit TG p 246 showing the interconnection of nerve and muscle cells.
Lesson 23	Aligned as designed	Lesson 23 Final Assessment-Human Body Systems; TG pp 261-276; SG pp 190-192	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1B**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 09	Aligned with modifications (see comments)	Reading: Disease: What's Gotten Into You? SG pp 72-75	Teacher must be intentional about teaching one-celled organisms.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1C**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 01	Aligned with modifications (see comments)	Human Body Systems-A Preassessment SG pp 2-5; Reading: Galen-The Gladiator's Doctor SG p 3; Getting Started SG p4; Inquiry 1.1 Human Body Mapping SG pp 4-5; TG pp 3-4	Teachers need to emphasize the definitions of the terms organism, body system, organ, tissue and cell from TG p 4.
Lesson 06	Aligned as designed	Diffusion and Active Transport SG pp 40-49; Getting Started p 41; Inquire 6.1 Spreading Out and Through SG pp 42-45; Reading Diffusion and Active Transport: Getting From Here to There SG pp 46-47; Reading: Spies-The Long and Winding Tube SG pp 48-49	Recommend TG p 63 Extension #4.
Lesson 07	Aligned as designed	Surface Area and Absorption SG pp 50-58; Inquiry 7.1 and 7.2 SG pp 51-53; Reading: Surface Area: Your Intestine Isn't Small at All SG pp 54-55; Reading: Spies-Leftovers SG 56-58	
Lesson 08	Aligned as designed	Lesson 8 The Digestive System-An Assessment; SG pp 60-63; TG pp 81-98	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-7.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1C**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 08	Aligned as designed	Lesson 8 The Digestive System-An Assessment; SG pp 60-63; TG pp 81-98	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-7.
Lesson 10	Aligned as designed	Assessing Breathing Models SG pp 76-89; Reading: Excuse Me Please SG pp 77-78; Getting Started SG pp 79-82; TG pp 113-116; Inquiry 10.1 Assessing the Syringe Model of Breathing SG pp 83-84; Reading: Spies-The Second Journey Begins SG pp 85-89	Suggested Extension TG p 122 #2.
Lesson 11	Aligned with modifications (see comments)	How Much Air Can You Exhale? Getting Started SG pp 91-92; Inquiry 11.1 Measuring How Much Air You Can Exhale SG pp 92-94; Reading: Up, Up, and Away SG p 96.	Teacher must be intentional about using Extension #1 TG p135. Suggested extension #3 TG p 135.
Lesson 12	Aligned as designed	Recipe for Energy-Cellular Respiration; Reading: Introduction and Oxidation-One Process, Two forms SG pp 98-99; Inquiry 12.1 Investigating Cellular Respiration SG p 102; Inquiry 12.2 Using a Model to Show Evidence of a Waste Product of Cellular Respiration SG pp 103-104; Inquiry 12.3 Exploring the Movement of Carbon Dioxide Through a Membrane SG pp 104-105. Reading: Spies-Why So Many? SG pp 108-109. Reading TG 137-138	The unit/lesson is an integral part of a learning progression.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1C**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 14	Aligned as designed	Lesson 14 The Pumping Heart; Introduction SG p 120; Reading: Dr. William Harvey Closes the Loop SG 121; Getting Started SG p 122; Inquiry 14.1 Analyzing the Siphon-Pump Heart Model SG pp 123-125; Reading: Spies-Back in Circulation SG pp 126-129; TG pp 159-161	
Lesson 15	Aligned with modifications (see comments)	Lesson 15 Factors Affecting Heart Rate; Reading: Blood: Life's Liquid SG pp 134-137; Reading: The Other Circulatory System SG p 137	Teacher must be intentional about sharing how the components of blood (cells and fluids) create blood tissue.
Lesson 16	Aligned as designed	The Heart Meets Resistance Reading: Introduction SG p 138; Getting Started SG p 139; Inquiry 16.1 Feeling the Pressure SG pp 139-141; Reading: Blood Pressure: What Goes Up Should Come Down SG pp 142-143; TG 183-185	
Lesson 17	Aligned as designed	The Respiratory and Circulatory System-An Assessment' SG pp 144-146; TG pp 191-205	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1C**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 18	Aligned as designed	Lesson 18 The Musculoskeletal System-An Overview; Reading: Introduction SG p 150; Getting Started SG pp 151-152; Inquiry 18.1 Winging It SG pp 152-154; Reading: Life in the Bone Zone SG pp 155-157; Reading: Spies: Two Working as One SG pp 158-159; TG 209-211	Teachers need to emphasize that bones and muscles are tissues.
Lesson 19	Aligned as designed	Lesson 19 Joints and Movement; Inquiry 19.1 Exploring Joints with Models SG pp 161-164; Reading: Spies: What Kind of Joint is This? SG pp 165-167; TG pp 219-222	Student sheet 19.1 and teacher-made transparencies of Student Sheet 19.1 a,b,c,d need to be used to develop understanding of muscles and joints tissues. Teacher needs to read TG pp 219-222 and Reflections TG pp 224-225 prior to conducting Inquiry 19.1.
Lesson 20	Aligned as designed	Lesson 20 Muscle Size and Strength; Inquiry 20.1 Investigating Muscle Size and Strength; Reading: Anabolic Steroids-Not Worth the Risk SG p 173	Use Student Sheet 20.1 Muscle Size Versus Strength TG pp 242-243. Teacher must be intentional about use of the terms smooth, cardiac, and striated muscle as well as voluntary and involuntary muscle TG pp 235-236. Teacher needs to give students copies of Inquiry Master 20.1 Muscle Types TG p 241 as preparation for lesson 21.
Lesson 21	Aligned as designed	Lesson 21 Exploring Muscle Fatigue; Getting Started SG p 175; Inquiry 21.1 Working Against Fatigue SG pp 175-176; Reading: Repetitive Stress Injury: Too Much of the Same Old Thing SG pp 177-178; Reading: Spies-Command Central SG pp 179-181. Reading: TG pp 245-247	Teacher must be intentional about using Inquiry Master 20.1 Muscle Types to reinforce the information in lesson 21. Teacher should make a transparency of Figure 21.1 Motor Unit TG p 246 for use during instruction focusing on the connection between the nerve and muscle cell. Teacher needs to focus attention on the connection between ATP, muscle fatigue and cellular respiration TG p 245.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1C**

Content Standard

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

Performance Expectation

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

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 22	Aligned as designed	Lesson 22 The Body in Balance; Getting Started SG p 184; Inquiry 22.1 Maintaining a Balance SG pp 184-185; Reading: Spies-Back Home SG pp 188-189; Reading TG pp 253-255	Recommend teacher make a transparency of Figure 22.1 How the Skin and Blood Vessels Help Maintain a Constant Body Temperature TG p 254.
Lesson 23	Aligned as designed	Lesson 23 Final Assessment-Human Body Systems; SG pp 190-192; TG pp 261-276	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1F**

Content Standard Lifestyle choices and living environments can damage structures at any level of organization of the human body and can significantly harm the whole organism.

Performance Expectation • Evaluate how lifestyle choices and environments (e.g., tobacco, drug, and alcohol use, amount of exercise, quality of air, and kinds of food) affect parts of the human body and the organism as a whole.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 03	Aligned with modifications (see comments)	Reading: Nutrients: You Just Can't Live Without 'Em SG pp 20-23	Teacher must be intentional about pointing out the effect of nutritional life style choices.
Lesson 08	Aligned as designed	Lesson 8 Reading: Looking Good, Feeling Better SG pp 64-65	Teacher must be intentional about pointing out the effect of nutritional life style choices.
Lesson 08	Aligned as designed	Lesson 8 The Digestive System-An Assessment; SG pp 60-63; TG pp 81-98	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-7.
Lesson 09	Aligned as designed	Anchor Activity: Disease and Health Concerns; Introduction SG pp 68-69; Anchor Activity following choice A throughout-Disease; Reading: Disease: What's Gotten Into You? SG pp 72-75	Anchor Activity SG pp 70-71. Use choice 2A - Researching a Disease to complete the Anchor Activity.

**Alignment of Washington 6-8 Science Standards with
STC/MS Human Body Systems
Life Science ~ LS1F**

Content Standard Lifestyle choices and living environments can damage structures at any level of organization of the human body and can significantly harm the whole organism.

Performance Expectation • Evaluate how lifestyle choices and environments (e.g., tobacco, drug, and alcohol use, amount of exercise, quality of air, and kinds of food) affect parts of the human body and the organism as a whole.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 13	Aligned with modifications (see comments)	Releasing Energy From Food; Reading: Go For The Burn SG pp 116-119	Teacher must be intentional about pointing out the effect of nutritional life style choices.
Lesson 16	Aligned as designed	Lesson 16 The Heart Meets Resistance; Introduction SG p 138; Getting Started SG p 139; Inquiry 16.1 Feeling the Pressure SG pp 139-141; Reading: Blood Pressure:What Goes Up Should Come Down SG pp 142-143; Reading: Cholesterol: Friend or Foe? SG p. 143. Reading: TG pp 183-185	Teacher must be intentional about pointing out the effect of nutritional and other life style choices.
Lesson 17	Aligned as designed	The Respiratory and Circulatory System-An Assessment' SG pp 144-146; TG pp 191-205	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 10-17.
Lesson 18	Aligned with modifications (see comments)	The Musculoskeletal System-An Overview; Reading: Life in the Bone Zone SG pp 155-157	Teacher must be intentional about pointing out the effect of nutritional and other life style choices.

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Life Science ~ LS1F**

Content Standard Lifestyle choices and living environments can damage structures at any level of organization of the human body and can significantly harm the whole organism.

Performance Expectation • Evaluate how lifestyle choices and environments (e.g., tobacco, drug, and alcohol use, amount of exercise, quality of air, and kinds of food) affect parts of the human body and the organism as a whole.

Lesson Number	Alignment	Evidence of Alignment	AlignmentComments
Lesson 20	Aligned as designed	Lesson 20 Muscle Size and Strength; Reading: Anabolic Steroids-Not Worth the Risk SG p 173	Teacher must be intentional about pointing out the effect of life style choices.
Lesson 21	Aligned as designed	Lesson 21 Exploring Muscle Fatigue; Reading: Repetitive Stress Injury: Too Much of the Same Old Thing SG pp 177-178	Teacher must be intentional about pointing out the effect of activities and other life style choices.
Lesson 22	Aligned as designed	Lesson 22 The Body in Balance; Reading: Spies-Back Home SG pp 188-189	Teacher must be intentional about pointing out the effect of nutritional and other life style choices.
Lesson 23	Aligned as designed	Lesson 23 Final Assessment-Human Body System; SG pp 190-192; TG pp 261-276	The unit/lesson is an integral part of a learning progression. Students are asked to demonstrate conceptual understanding of standards in Lessons 1-22.