CORRELATION of **Health Science Anatomy & Physiology** to Introduction to Anatomy & Physiology

Standards/Objectives/Indicators	Textbook Pages
01.0 Analyze and interpret an overview of the human body, including organization and chemical process. The student will be able to:	
01.01 Evaluate interrelationships of the basic structural and functional organization of the human body including chemical, cellular, tissue and organ systems.	**Narrative:** 12-18 (Lesson 1.2: Basic Physiological Processes) 48-87 (Chapter 2: Cells and Tissues) **Application:** 15 (Check Your Understanding #1) 42 (Lesson 1.2 Learning Key Terms and Concepts #1-9) 64 (Taking It Further) 75 (Analyze and Apply #5; In the Lab #1-3) 84 (Check Your Understanding #1, 3) 85 (Life Span Review #1) 87 (Analyze and Apply #1, 3) 91 (Thinking Critically #3) 95 (Lab Investigations #2)
01.02 Describe the basic molecular structures and primary functions of the four major categories of biological macromolecules.	**Narrative:** 48-58 (Lesson 2.1: Molecules of Life) **Application:** 49 (Check Your Understanding #2, 4) 52 (Check Your Understanding #1, 3) 55 (Check Your Understanding #2) 58 (Check Your Understanding #1, 4) 91 (Lesson 2.1 Learning Key Terms and Concepts #1-9)
01.03 Examine medical implications of body planes, directional terms, cavities, abdominal regions, and quadrants.	**Narrative:** 5-9 (Describing the Human Body) **Application:** 9 (Check Your Understanding #1-3) 11 (Know and Understand #4, In the Lab #1-2)
01.04 Discuss the chemical processes that maintain life, including homeostasis, cellular respiration, the role of enzymes as catalysts and the basic concepts of metabolism.	**Narrative:** 15-18 (Homeostasis) 18 (Metabolism) 57-58 (ATP) **Application:** 18 (Check Your Understanding 1: #1-4; Check Your Understanding 2: #1-3)

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Standards/Objectives/Indicators	Textbook Pages
	60 (Know and Understand #10, In the Lab #2)
02.0 Apply correct medical terminology relating to body structure and function within a real-world application. The student will be able to:	
02.01 Evaluate and apply anatomical terminology to describe location of parts or areas of the body and to describe the relation of one part to another.	**Narrative:** 5-9 (Describing the Human Body) **Application:** 9 (Check Your Understanding #1-3) 11 (Know and Understand #2-4, In the Lab #1-2)
02.02 Interpret correct medical terminology including roots, prefixes and suffixes to indicate anatomical structures and function.	**Narrative:** 5 (Memory Tip) 102 (Memory Tip) 488 (Memory Tip) 662-665 (Appendix C: Anatomy and Physiology Word Elements) **Application:** 95 (Communicating about Anatomy & Physiology #1)
02.03 Extend medical terminology to real-world applications.	**Narrative:** 3 (chapter introduction) 4-5 (Introducing Anatomy and Physiology) **Application:** 17 (Taking It Further #1) 24 (Check Your Understanding #2) 25 (Analyze and Apply #1-3) 44 (Communicating about Anatomy & Physiology #1)
03.0 Evaluate cells and tissues microscopically and macroscopically and relate their specialized functions. – The student will be able to:	
03.01 Discuss and describe cell structure and function in healthy tissue.	**Narrative:** 61-74 (Lesson 2.2: Cells) **Application:** 71 (Check Your Understanding #1-6) 74 (Check Your Understanding #1-3) 75 (Know and Understand #1-7; Analyze and Apply #1-5; In the Lab #1-5)
03.02 Discuss and describe cell structure and function in diseased tissue including how damage to one tissue may impact the function of another tissue.	**Narrative:** 71 (What Research Tells Us about Checkpoint Inhibitors)

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Standards/Objectives/Indicators	Textbook Pages
	73-74 (Cancer) **Application:** 74 (Check Your Understanding #3) 75 (Analyze and Apply #5) 92 (Lesson 2.1 Thinking Critically #4) 94 (Lesson 2.3 Thinking Critically #2)
03.03 Compare and contrast the four main types of tissue including the interrelationships of tissues.	**Narrative:** 76-86 (Lesson 2.3: Tissues) **Application:** 79 (Check Your Understanding #1-4) 84 (Check Your Understanding #1-3) 85 (Check Your Understanding #1-4) 87 (Analyze and Apply #2, 3, 5) 93-94 (Lesson 2.3 Learning Key Terms and Concepts #2-13, Thinking Critically #1-3)
03.04 Discuss the location and function of tissues as it relates to homeostasis.	**Narrative:** 64 (What Research Tells Us about Integrating Physical and Chemical Processes) **Application:** 64 (Taking It Further) 93 (Thinking Critically #2) 94 (Thinking Critically #1)
04.0 Analyze the integumentary system in relation to health and disease. The student will be able to:	
04.01 Apply medical terminology as related to the integumentary system.	**Narrative:** 101-109 (Lesson 3.2: The Integumentary System) **Application:** 127-128 (Learning Key Terms and Concepts and Thinking Critically questions for Lesson 3.2)
04.02 Discuss and describe the structure and function of the integumentary system across the lifespan.	**Narrative:** 105-106 (Life Span Development: The Integumentary System) **Application:** 106 (Life Span Review #1, 2)
04.03 Demonstrate knowledge of cells and tissues in the integumentary system.	**Narrative:** 102-108 (Anatomy of the Skin, Appendages of the Skin) **Application:**

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Standards/Objectives/Indicators	Textbook Pages
	102 (Check Your Understanding #1-2) 105 (Check Your Understanding #1-3) 108 (Check Your Understanding #1-3) 109 (Know and Understand #1-7; Analyze and Apply #2, 4, 5) 127-128 (Lesson 3.2 Learning Key Terms and Concepts #1-8; Thinking Critically #1-4)
04.04 Identify and analyze common diseases and disorders of the integumentary system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 113 (Figure 3.12 Injuries of the Skin) 116 (Figure 3.16 Viral Infections of the Skin) 117 (Figure 3.18 Fungal and Bacterial Infections of the Skin) 118 (Figure 3.19 Inflammatory Conditions of the Skin and Membranes) 121 (Figure 3.27 Cancers of the Skin) **Application:** 112 (Check Your Understanding #1-3) 117 (Check Your Understanding #1-4) 120 (Check Your Understanding #1-3) 121 (Check Your Understanding (1-2) 123 (Know and Understand #1-7; Analyze and Apply #1-4; In the Lab #1-2)
04.05 Discuss or research health careers related to the integumentary system.	**Narrative:** 124-125 (Career Corner) **Application:** 125 (Planning for a Health-Related Career)
04.06 Demonstrate knowledge of skills related to the integumentary system which may include infection control and hand washing skills.	**Narrative:** 495 (Chain of Infection) 496-497 (Physical Barriers) 561 (Healthcare Associated Infections) **Application:** 496 (Check Your Understanding #4) 527 (Lab Investigations #1) 502 (Analyze and Apply #2) 565 (In the Lab #2)
05.0 Analyze the skeletal system in relation to health and disease. The student will be able to:	
05.01 Apply medical terminology as related to the	**Narrative:**

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Standards/Objectives/Indicators	Textbook Pages
skeletal system.	130-174 (Chapter 4: The Skeletal System) **Application:** 179-182 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 4.1, 4.2, 4.3, 4.4, 4.5) 183 (Communicating about Anatomy & Physiology #1-2)
05.02 Discuss and describe the structure and function of the skeletal system across the lifespan.	**Narrative:** 137-138 (Life Span Development: Bones) **Application:** 138 (Life Span Review #1-5)
05.03 Identify and explain major bone markings and their implications.	**Narrative:** 133-140 (Structure and Classification of Bones) 146-148 (Structures of the Vertebrae, The Spinal Curves) 152-156 (The Upper Extremity) 156-150 (The Lower Extremity) **Application:** 141 (Know and Understand #3) 151 (Know and Understand #6) 160 (Know and Understand #3, #6; Analyze and Apply #2)
05.04 Identify and explain joints and their implications.	**Narrative:** 161-163 (Lesson 4.4: Joints) **Application:** 162 (Check Your Understanding #1-3) 164 (Know and Understand #1-4; Analyze and Apply #2, 3) 181 (Lesson 4.4 Thinking Critically #1)
05.05 Discuss the interrelationship between calcium, hormones, and the skeletal system.	**Narrative:** 84 (Bone) 133 (Storage) 168 (Homeostatic Calcium Imbalances) 170 (What Research Tells Us about Preventing Osteoporosis) **Application:** 133 (Check Your Understanding #1)

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Standards/Objectives/Indicators	Textbook Pages
	168 (Check Your Understanding #4)
05.06 Apply knowledge of cells and tissues in the skeletal system.	**Narrative:** 133-134 (Organization of Bones) 135-140 (Anatomical Structure of Long Bones, Life Span Development: Bones) **Application:** 135 (Check Your Understanding #3, 4) 138 (Life Span Review #1-5) 140 (Check Your Understanding #1-5) 141 (Know and Understand #2, 3; Analyze and Apply #1-3) 180 (Lesson 4.1 Thinking Critically #1, 3)
05.07 Identify and analyze common diseases and disorders of the skeletal system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 166 (Figure 4.32 Common Bone Injuries and Disorders) 171 (Figure 4.38 Common Joint Injuries and Disorders) **Application:** 168 (Check Your Understanding #1-4) 170 (Check Your Understanding #1-3) 173 (Check Your Understanding 1 #1-3; Check Your Understanding 2 #1-2) 175 (Know and Understand #1-5; Analyze and Apply #1-5; In the Lab #1-2)
05.08 Discuss or research health careers related to the skeletal system.	**Narrative:** 176-177 (Career Corner) **Application:** 177 (Planning for a Health-Related Career)
05.09 Demonstrate knowledge of skills related to the skeletal system which may include range of motion.	**Narrative:** 222 (Physical Therapist) **Application:** 183 (Lab Investigations #4) 229 (Lab Investigations #6)
06.0 Analyze the muscular system in relation to health and disease. The student will be able to:	
06.01 Apply medical terminology as related to the muscular system.	**Narrative:** 184-220 (Chapter 5: The Muscular System) **Application:** 225-227 (Learning Key Terms and Concepts and

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Standards/Objectives/Indicators	Textbook Pages
	Thinking Critically questions for Lessons 5.1, 5.2, 5..3, 5.4)
06.02 Discuss and describe the structure and function of the muscular system across the lifespan.	**Narrative:** 208 (Life Span Development: Muscle) **Application:** 208 (Life Span Review #1-2)
06.03 Identify and explain the 3 main types of muscles and their implications.	**Narrative:** 186-188 (Muscle Categories) **Application:** 188 (Check Your Understanding #1-3) 191 (Know and Understand #2; Analyze and Apply #1) 226 (Lesson 5.1 Thinking Critically #1-2)
06.04 Interpret muscle function by examining attachment to bone.	**Narrative:** 189 (Behavioral Properties, last paragraph) 196 (Muscular Strength) **Application:** 190 (Check Your Understanding #1) 191 (In the Lab #5)
06.05 Discuss the interrelationship between calcium, ions, and the muscular system.	**Narrative:** 168 (Homeostatic Calcium Imbalances) 194 (Contractions of the Sarcomeres, Maximum Tension and Return to Relaxation) **Application:** 214 (Check Your Understanding #4) 200 (Analyze and Apply #1) 227 (Lesson 5.4 Learning Key Terms and Concepts #3) 228 (Communicating about Anatomy & Physiology #3)
06.06 Apply knowledge of cells and tissues in the muscular system.	**Narrative:** 186-188 (Muscle Categories) 188-190 (Muscle Functions) 192-196 (The Motor Unit, Skeletal Fiber Types) **Application:** 188 (Check Your Understanding #3)

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Standards/Objectives/Indicators	Textbook Pages
	191 (Know and Understand #1, 2; In the Lab #1) 200 (Know and Understand #1-6; Analyze and Apply #2, 4)
06.07 List the steps involved in the sliding filament of muscle contraction.	**Narrative:** 192-194 (The Motor Unit) **Application:** 194 (Check Your Understanding #3-5)
06.08 Describe signal transmission across a myoneural/neuromuscular junction.	**Narrative:** 192-194 (The Motor Unit) **Application:** 194 (Check Your Understanding #2) 200 (Know and Understand #3-4)
06.09 Identify and analyze common diseases and disorders of the muscular system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 213 (Figure 5.25 Common Muscle Injuries) 215 (Figure 5.28 Common Muscle Overuse Injuries) 218 (Figure 5.32 Common Muscle Disorders) **Application:** 214 (Check Your Understanding #2-5) 217 (Check Your Understanding #1-4) 220 (Check Your Understanding #1-4) 221 (Know and Understand #1-9; Analyze and Apply #2, 3; In the Lab #1, 2)
06.10 Discuss or research health careers related to the muscular system.	**Narrative:** 222-223 (Career Corner) **Application:** 223 (Planning for a Health-Related Career)
06.11 Demonstrate knowledge of skills related to the muscular system which may include isometric and isotonic contractions.	**Narrative:** 189-190 (Tension and Types of Skeletal Muscle Contraction) **Application:** 190 (Check Your Understanding #1) 191 (Analyze and Apply #2, 4; In the Lab #3) 226 (Lesson 5.1 Thinking Critically #3)

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Standards/Objectives/Indicators	Textbook Pages
	229 (Lab Investigations #1)
07.0 Analyze the nervous system in relation to health and disease. The student will be able to:	
07.01 Apply medical terminology as related to the nervous system.	**Narrative:** 230-270 (Chapter 6: The Nervous System) **Application:** 275-277 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 6.1, 6.2, 6.3, 6.4) 279 (Communicating about Anatomy & Physiology #2-3; Lab Investigations #2)
07.02 Discuss and describe the structure and function of the nervous system across the lifespan.	**Narrative:** 259 (Life Span Development: The Nervous System) **Application:** 259 (Life Span Review #1-3)
07.03 Identify and explain the interrelatedness of the Central Nervous System (CNS) and Peripheral Nervous System (PNS).	**Narrative:** 232-234 (Organization of the Nervous System) **Application:** 234 (Check Your Understanding #1-5) 237 (Analyze and Apply #1)
07.04 Compare and contrast the divisions of the Autonomic Nervous System (ANS).	**Narrative:** 258-260 (Autonomic Nervous System) **Application:** 260 (Check Your Understanding #1-2) 261 (Analyze and Apply #5)
07.05 Apply knowledge of cells and tissues in the nervous system.	**Narrative:** 234-236 (Nervous Tissues) **Application:** 236 (Check Your Understanding #1-3) 237 (Know and Understand #4-7; Analyze and Apply #2, 4, 5)
07.06 Explain how neurotransmitters help propagate electrical impulses.	**Narrative:** 234-235 (Neurons) 240-241 (Transmission at Synapses)

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Standards/Objectives/Indicators	Textbook Pages
	Application: 243 (Check Your Understanding #5, 6) 244 (Know and Understand #8)
07.07 Describe reflex pathways and their importance.	**Narrative:** 233 (Types of Efferent Nerves) 259 (Life Span Development: The Nervous System) **Application:** 243 (Reflexes) 243 (Check Your Understanding #4)
07.08 Identify and analyze common diseases and disorders of the nervous system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 263 (Figure 6.27 Injuries to the Brain and Spinal Cord) 267 (Figure 6.32 Diseases and Disorders of the CNS) **Application:** 271 (Know and Understand #1-5; Analyze and Apply #1-5; In the Lab #1-4)
07.09 Discuss or research health careers related to the nervous system.	**Narrative:** 272-273 (Career Corner) **Application:** 273 (Planning for a Health-Related Career)
07.10 Demonstrate knowledge of skills related to the nervous system which may include recognizing signs and symptoms of a stroke.	**Narrative:** 247 (2nd paragraph) 250 (What Research Tells Us about Studying the Brain: fMRI Scans) 472 (Cerebrovascular Accident) **Application:** 252 (Know and Understand #3) 481 (Communicating about Anatomy & Physiology #4)
08.0 Analyze the endocrine system in relation to health and disease. The student will be able to:	
08.01 Apply medical terminology as related to the endocrine system.	**Narrative:** 316-346 (Chapter 8: The Endocrine System) **Application:** 351-354 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 8.1, 8.2, 8.3)

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Standards/Objectives/Indicators	Textbook Pages
08.02 Discuss and describe the structure and function of the endocrine system across the lifespan.	**Narrative:** 335 (Life Span Development: The Endocrine System) **Application:** 337 (In the Lab #2, 4)
08.03 Compare and contrast endocrine and exocrine glands.	**Narrative:** 318-319 (Anatomy of the Endocrine System) **Application:** 319 (Check Your Understanding #2) 324 (Know and Understand #3)
08.04 Compare and contrast negative and positive feedback loops.	**Narrative:** 16 (Negative Feedback, Positive Feedback) 320-321 (Hormonal Control) 322-323 (Hormones and Homeostasis) **Application:** 323 (Check Your Understanding #3-4) 352 (Lesson 8.1 Thinking Critically #3, 4)
08.05 Evaluate the relationship between the endocrine system and homeostasis in health and disease.	**Narrative:** 320-323 (Hormone Secretion Control) **Application:** 323 (Check Your Understanding #3, 4) 324 (Analyze and Apply #5) 352 (Lesson 8.1 Thinking Critically #3, 4)
08.06 Apply knowledge of cells and tissues in the endocrine system.	**Narrative:** 325-336 (Lesson 8.2: Major Endocrine Organs) **Application:** 325 (Check Your Understanding #1) 330 (Check Your Understanding #1) 333 (Check Your Understanding 2 #1-2) 337 (Analyze and Apply #5, 6; In the Lab #1, 3)
08.07 Identify and analyze common diseases and disorders of the endocrine system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 339 (Figure 8.12 Common Pituitary Disorders) 340 (Figure 8.14 Thyroid Disorders)

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Standards/Objectives/Indicators	Textbook Pages
	342 (Figure 8.16 Parathyroid Disorders) 343 (Figure 8.17 Adrenal Gland Disorders) 344 (Figure 8.19 Diabetes Mellitus) **Application:** 347 (Know and Understand #1-5; Analyze and Apply #1-5; In the Lab #1-3)
08.08 Discuss or research health careers related to the endocrine system.	**Narrative:** 348-349 (Career Corner) **Application:** 349 (Planning for a Health-Related Career)
08.09 Demonstrate knowledge of skills related to the endocrine system which may include recognizing the signs and symptoms of low blood sugar.	**Narrative:** 344-346 (The Pancreas and Diabetes Mellitus) **Application:** 346 (Check Your Understanding #1) 347 (Know and Understand #5; In the Lab #2)
09.0 Analyze the cardiovascular/circulatory system in relation to health and disease. The student will be able to:	
09.01 Apply medical terminology as related to the cardiovascular system.	**Narrative:** 394-422 (Chapter 10: The Blood) 430-472 (Chapter 11: The Cardiovascular System) **Application:** 427-428 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 10.1, 10.2, and 10.3) 478-480 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 11.1, 11.2, 11.3, and 11.4) 481 (Communicating about Anatomy & Physiology #1; Lab Investigations #2)
09.02 Discuss and describe the structure and function of the cardiovascular system across the lifespan.	**Narrative:** 406-407 (Life Span Development: The Blood) 438 (Life Span Development: The Cardiovascular System) **Application:**

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Standards/Objectives/Indicators	Textbook Pages
	407 (Life Span Review #1-2) 438 (Life Span Review #1-2)
09.03 Demonstrate knowledge of major blood vessels.	**Narrative:** 446-456 (Lesson 11.3: Blood Vessels and Circulation) **Application:** 449 (Check Your Understanding #1-5) 456 (Check Your Understanding #1-5) 481 (Lab Investigations #2)
09.04 Compare and contrast the structure and function of arteries, veins, and capillaries.	**Narrative:** 446-449 (Blood Vessels: The Transport Network) **Application:** 449 (Check Your Understanding #1-5) 461 (Know and Understand #2; Analyze and Apply #1) 479 (Lesson 11.3 Thinking Critically #2)
09.05 Analyze the interdependence between systemic and pulmonary circulation.	**Narrative:** 449-454 (Pulmonary Circulation, Systemic Circulation) **Application:** 456 (Check Your Understanding #1) 481 (Communicating about Anatomy & Physiology #1; Lab Investigations #2)
09.06 Design a map or flow chart depicting the normal pathway of blood flow through the heart.	**Narrative:** 435-436 (Blood Flow through the Heart) **Application:** 440 (In the Lab #3)
09.07 Design a map or flow chart depicting the normal electrical pathway through the heart.	441-444 (Internal and External Control of the Heart, The Conduction System) 442 (Figure 11.7 Conduction system of the heart) 445 (Know and Understand #4; In the Lab #2)
09.08 Apply knowledge of cells and tissues in the cardiovascular system.	**Narrative:** 84-85 (Muscle Tissue) 188 (Cardiac Muscle) 434 (Layers of the Heart)

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Standards/Objectives/Indicators	Textbook Pages
	Application: 85 (Check Your Understanding #2, 4) 87 (Analyze and Apply #5)
09.09 Demonstrate knowledge of the composition of blood to include formed elements and plasma.	**Narrative:** 397-406 (Composition of Blood) **Application:** 406 (Check Your Understanding #1-5)
09.10 Evaluate ABO blood types and Rh factor.	408 (Know and Understand #2, 4, 5, 7; Analyze and Apply #1; In the Lab #1-2)
09.11 Predict potential blood donors for a transfusion through the analysis of blood types with ABO and/or Rh compatibility.	**Narrative:** 409-411 (ABO Blood Types, The Rh Classification System) **Application:** 411 (Check Your Understanding #1) 412 (In the Lab #1-2)
09.12 Identify and analyze common diseases and disorders of the cardiovascular system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 415 (Figure 10.18 Acquired Anemias) 417 (Figure 10.20 Inherited Anemias) 419 (Figure 10.22 Other Blood Disorders) 465 (Figure 11.28 Valve Abnormalities) 467 (Figure 11.30 Inflammation/Infection of the Heart Walls and Heart Failure) 468 (Figure 11.31 Diseases of the Arteries) 470 (Figure 11.34 Other Cardiovascular Abnormalities) **Application:** 428 (Lesson 10.3 Thinking Critically #1, 3) 473 (Know and Understand #1-6; Analyze and Apply #2, 3, 5-8; In the Lab #2-3) 480 (Lesson 11.4 Thinking Critically #1-5) 481 (Communicating about Anatomy & Physiology #2, 3, 4)
09.13 Discuss or research health careers related to the cardiovascular system.	**Narrative:** 474-475 (Career Corner)

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Standards/Objectives/Indicators	Textbook Pages
	Application: 475 (Planning for a Health-Related Career)
09.14 Demonstrate knowledge of skills related to the cardiovascular system which might include assessing pulse.	**Narrative:** 456-460 (Measuring Vital Signs, Know Your Numbers) **Application:** 459 (Check Your Understanding #2) 461 (Know and Understand #5-7; Analyze and Apply #4; In the Lab #1) 481 (Lab Investigations #3)
10.0 Analyze the lymphatic and immune systems in relation to health and disease. The student will be able to:	
10.01 Apply medical terminology as related to the lymphatic and immune systems.	**Narrative:** 482-528 (Chapter 12: The Lymphatic and Immune Systems) **Application:** 524-526 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 12.1, 12.2, 12.3, 12.4)
10.02 Discuss and describe the structure and function of the lymphatic and immune systems across the lifespan.	**Narrative:** 491 (Life Span Development: The Lymphatic and Immune Systems) **Application:** Life Span Review #1-2)
10.03 Explain the importance of the accessory organs (thymus, tonsils, spleen, appendix, Peyer's patch) promoting the effectiveness of the lymphatic and immune system.	**Narrative:** 488-492 (Lymphatic Cells, Tissues, and Organs) **Application:** 492 (Check Your Understanding #1-3)
10.04 Compare and contrast passive and active immunity.	**Narrative:** 508-509 (Primary and Secondary Immune Responses) **Application:** 509 (Check Your Understanding #2)
10.05 Discuss the impact of B cells and T cells on diseases of the immune system.	**Narrative:** 488-489 (Lymphatic Cells) **Application:**

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Standards/Objectives/Indicators	Textbook Pages
	492 (Check Your Understanding #1) 493 (Know and Understand #6)
10.06 Evaluate and discuss the body's defense mechanisms in relation to common communicable diseases.	**Narrative:** 494-501 (Lesson 12.2 Nonspecific Defenses) **Application:** 502 (Know and Understand #2-4)
10.07 Apply knowledge of cells and tissues in the lymphatic and immune systems.	**Narrative:** 488-492 (Lymphatic Cells, Tissues, and Organs) 497-499 (Cellular and Chemical Defenses) 504-505 (Immune System Cells) 506-508 (Humoral Immunity) 509 (Cellular Immunity) **Application:** 492 (Check Your Understanding #1-4) 500 (Check Your Understanding 1 #3-4) 502 (In the Lab #1) 505 (Check Your Understanding #1-3) 509 (Check Your Understanding #1-2)
10.08 Identify and analyze common diseases and disorders of the lymphatic and immune system including etiology, prevention, pathology, diagnosis, and treatment/rehabilitation.	**Narrative:** 513 (Figure 12.18 Diseases and Disorders of the Lymphatic and Immune Systems) **Application:** 514 (Check Your Understanding #1-2) 516 (Check Your Understanding #3) 517 (Check Your Understanding 1 #1-2; Check Your Understanding 2 #1) 519 (Know and Understand #3, 7; Analyze and Apply #1-4; In the Lab #1, 2, 4)
10.09 Discuss or research health careers related to the lymphatic and immune systems.	**Narrative:** 520-521 (Career Corner) **Application:** 521 (Planning for a Health-Related Career)

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Standards/Objectives/Indicators	Textbook Pages
11.0 Analyze the respiratory system in relation to health and disease. The student will be able to:	
11.01 Apply medical terminology as related to the respiratory system.	**Narrative:** 356-384 (Chapter 9: The Respiratory System) **Application:** 389-391 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 9.1, 9.2, 9.3)
11.02 Discuss and describe the structure and function of the respiratory system across the lifespan.	**Narrative:** 372-373 (Life Span Development: The Respiratory System) **Application:** 372 (Life Span Review #1-2)
11.03 Evaluate the interrelatedness of the cardiovascular and respiratory systems.	**Narrative:** 358 (Lesson 9.1 introduction) **Application:** 374 (Know and Understand #1) 392 Communicating about Anatomy & Physiology #2)
11.04 Apply knowledge of cells and tissues in the respiratory system.	**Narrative:** 358-364 (Lesson 9.1 Anatomy of the Respiratory System) **Application:** 362 (Check Your Understanding #1-5) 364 (Check Your Understanding #1-3) 365 (Know and Understand #2-7; Analyze and Apply #3-6; In the Lab #1)
11.05 Identify and analyze common diseases and disorders of the respiratory system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 376 (Figure 9.13 Upper Respiratory Tract Illnesses) 378 (Figure 9.16 Lower Respiratory Tract Illnesses) 379 (Figure 9.17 Chronic Obstructive Pulmonary Diseases and Other Lung Disorders) 384 (Figure 9.23 Other Respiratory System Diseases) **Application:** 378 (Check Your Understanding #1-3) 381 (Check Your Understanding #1-3)

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Standards/Objectives/Indicators	Textbook Pages
	385 (Know and Understand #3, 5, 6-8; Analyze and Apply #2-5; In the Lab #1, 3)
11.06 Discuss or research health careers related to the respiratory system.	**Narrative:** 386-387 (Career Corner) **Application:** 387 (Planning for a Health-Related Career)
11.07 Demonstrate knowledge of skills related to the respiratory system which might include monitoring respirations.	**Narrative:** 366-368 (Respiration) 370-373 (Lung Volume) **Application:** 374 (In the Lab #1-2) 393 (Lab Investigations #1-2)
12.0 Analyze the digestive system in relation to health and disease. The student will be able to:	
12.01 Apply medical terminology as related to the digestive system.	**Narrative:** 537-564 (Lesson 13.2 Anatomy and Physiology of the Digestive System, Lesson 13.3 Disorders and Diseases of the Digestive System) **Application:** 569-570 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 13.2 and 13.3)
12.02 Discuss and describe the structure and function of the digestive system across the lifespan.	**Narrative:** 555 (Life Span Development: The Digestive System) **Application:** 555 (Life Span Review #1-2)
12.03 Apply knowledge of cells and tissues in the digestive system.	**Narrative:** 539-541 (Layers of the GI Tract) 541-555 (Digestive Organs and Their Functions) **Application:** 541 (Check Your Understanding #1-2) 556 (Know and Understand #2-9; Analyze and Apply #1, 3-5; In the Lab #2)
12.04 Identify and analyze common diseases and disorders of the digestive system including etiology, prevention, pathology, diagnosis and	**Narrative:** 558 (Figure 13.22 Diseases and Disorders of the GI

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treatment/rehabilitation.	Tract) 562 (Figure 13.24 Diseases and Disorders of the GI Accessory Organs) **Application:** 565 (Know and Understand #1-8; Analyze and Apply #1-6; In the Lab #1) 570 (Lesson 13.3 Learning Key Terms and Concepts and Thinking Critically questions) 571 (Communicating about Anatomy & Physiology #2)
12.05 Discuss or research health careers related to the digestive system.	**Narrative:** 566-567 (Career Corner) **Application:** 657 (Planning for a Health-Related Career)
12.06 Demonstrate knowledge of skills related to the digestive system which might include a nutritional self-assessment.	**Narrative:** 530-535 (Lesson 13.1 Nutrition) **Application:**
13.0 Analyze the urinary system in relation to health and disease. The student will be able to:	
13.01 Apply medical terminology as related to the urinary system.	**Narrative:** 572-602 (Chapter 14: The Urinary System) **Application:** 607-608 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 14.1, 14.2, 14.3) 609 (Communicating about Anatomy & Physiology #2)
13.02 Discuss and describe the structure and function of the urinary system across the lifespan.	**Narrative:** 591 (Life Span Development: The Urinary System) **Application:** 591 (Life Span Review #1-2)
13.03 Justify the interrelatedness of the urinary and cardiovascular system in promoting homeostasis.	**Narrative:** 586-587 (Hormonal Regulation of Urine Volume and Composition) **Application:** 588 (Check Your Understanding #6) 578 (Check Your Understanding #1-2)

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	579 (Analyze and Apply #1-2) 602 (Know and Understand #2, 5) 607 (Lesson 14.2 Thinking Critically #2)
13.04 Apply knowledge of cells and tissues in the urinary system.	**Narrative:** 574-578 (Anatomy of the Kidney) 588 (Urine Storage) **Application:** 578 (Check Your Understanding 1 #3-4) 579 (Know and Understand #5, 7, 8) 607 (Lesson 14.1 Thinking Critically #1-2; Lesson 14.2 Learning Key Terms and Concepts #2)
13.05 Identify and analyze common diseases and disorders of the urinary system including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 595 (Figure 14.12 Diseases and Disorders of the Urinary System) **Application:** 602-603 (Know and Understand #2-5, 8, 9); Analyze and Apply #2, 3, 5, 6; In the Lab #2)
13.06 Discuss or research health careers related to the urinary system.	**Narrative:** 604-605 (Career Corner) **Application:** 605 (Planning for a Health-Related Career)
13.07 Demonstrate knowledge of skills related to the urinary system which may include how to use urine test strips.	593-594 (Assessing Renal Function) 594 (Check Your Understanding #1-3) 603 (In the Lab #1)
14.0 Analyze the both the male and female reproductive systems in relation to health and disease. The student will be able to:	
14.01 Apply medical terminology as related to the each of the male and female reproductive systems.	**Narrative:** 610-650 (Chapter 15: The Male and Female Reproductive Systems) **Application:** 655-658 (Learning Key Terms and Concepts and Thinking Critically questions for Lessons 15.1, 15.2, 15.3, 15.4, 15.5)
14.02 Discuss and describe the structure and function	**Narrative:**

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of both reproductive systems across the lifespan.	621 (Life Span Development: Adult Male Reproductive System) 631 (Life Span Development: Female Reproductive System) **Application:** 621 (Life Span Review #1-2) 631 (Life Span Review #1-2)
14.03 Apply knowledge of cells and tissues of both reproductive systems.	**Narrative:** 618-620 (Male Reproductive Anatomy) 623-627 (Female Reproductive Anatomy) 627-628 (Oogenesis) **Application:** 621 (Check Your Understanding 1 #1; Check Your Understanding 2 #2) 622 (Know and Understand #1-8; Analyze and Apply #1,2) 627 (Check Your Understanding #1-5) 631 (Check Your Understanding #1, 5) 632 (Know and Understand #2-7)
14.04 Identify and analyze common diseases and disorders of both reproductive systems including etiology, prevention, pathology, diagnosis and treatment/rehabilitation.	**Narrative:** 643 (Figure 15.19 Diseases and Disorders of the Reproductive Systems) **Application:** 651 (In the Lab #1) 657-658 (Lesson 15.5 Learning Key Terms and Concepts #1-8; Thinking Critically #1-7)
14.05 Discuss or research health careers related to both reproductive systems.	**Narrative:** 652-653 (Career Corner) **Application:** 653 (Planning for a Health-Related Career)
14.06 Explain fetal development with regard to trimesters and measuring according to the fetal growth chart.	**Narrative:** 636-638 (Development of the Embryo, Placenta, and Fetus) **Application:**

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	641 (In the Lab #2)
15.0 Identify and explain factors relating to genetics and disease. The student will be able to:	
15.01 Discuss DNA and its role in human heredity.	**Narrative:** 56-57 (DNA) 68-74 (DNA, RNA, and Proteins, The Life Cycle of a Cell) 612 (Types of Reproduction) **Application:** 92 (Lesson 2.1 Thinking Critically #4) 612 (Check Your Understanding #2)
15.02 Describe the role of human genetics in relation to genetic diseases.	**Narrative:** 50 (What Research Tells Us about Glycogen Storage Diseases) 173 (Rheumatoid Arthritis) 218 (Muscular Dystrophy) **Application:** 95 (Communicating about Anatomy & Physiology #2) 173 (Check Your Understanding 2 #2) 227 (Lesson 5.4 Learning Key Terms and Concepts #6)
15.03 Discuss or research current issues related to genetic research.	**Narrative:** 70 (What Research Tells Us about Polymerase Chain Reaction) 71 (What Research Tells Us about Checkpoint Inhibitors) 648 (What Research Tells Us about Stem Cells and Gene Therapy) 650 (What Research Tells Us about Genetic Research and Cancer Treatment Breakthroughs) **Application:** 648 (Taking It Further) 650 (Taking It Further #1-3)
15.04 Explore the relationship between mutation, cell cycle and uncontrolled cell growth that can result in	**Narrative:** 73-74 (Cancer)

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Standards/Objectives/Indicators	Textbook Pages
cancer.	114 (What Research Tells Us about High-Risk HPVs and Cancer) **Application:** 74 (Check Your Understanding #3) 75 (Analyze and Apply #5) 114 (Taking It Further)
15.05 Explore how environmental factors contribute to an individual's overall wellness and quality of life.	**Narrative:** 30 (What Research Tells Us about Research) 34 (Rachel Carson) 322-323 (Example: The Endocrine System at Work) **Application:** 36 (Check Your Understanding #3) 37 (Analyze and Apply #5)
16.0 Evaluate and apply the principles of disease transmission and control to real-world scenarios. The student will be able to:	
16.01 Discuss and explain the direct and indirect transmission of disease.	112-117 (Infections of the Skin and Membranes) 494-495 (Microbial and Other Disease-Causing Challenges)
16.02 Discuss and apply the principles of the chain of infection to real-world scenarios.	**Narrative:** 495 (Chain of Infection) **Application:** 496 (Check Your Understanding #3, 4)
16.03 Categorize the common morphology of microorganisms affecting the human body.	**Narrative:** 113-115 (Viral Infections) 115-116 (Fungal Infections) 116-117 (Bacterial Infections) 513 (Figure 12.18 Diseases and Disorders of the Lymphatic and Immune Systems) 517 (HIV and AIDS) **Application:** 517 (Check Your Understanding #1) 519 (Analyze and Apply #4)
16.04 Identify and analyze common diseases caused	**Narrative:**

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by microorganisms.	112-117 (Infections of the Skin and Membranes) 116 (Figure 3.16 Viral Infections of the Skin) 117 (Figure 3.18 Fungal and Bacterial Infections of the Skin) **Application:** 117 (Check Your Understanding #1-4) 123 (Know and Understand #5; In the Lab #2)

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