Unit 4 The Immune System

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| UNIT 8 – BLOOD / LYMPHATIC SYSTEMSSTANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.01 Identify the components of blood and their functions. (Erythrocytes, leukocytes, thrombocytes, plasma) | I will be able to visually identity, examine, and explain the immune system functions of leukocytes. |  2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 10 Blood (pp. 337 – 355)Leukocytes 342 – 347)Chapter 12 The Lymphatic System and Body Defenses (pp. 395 – 435) **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)Exercise 19 Blood (pp.235 – 242)Activity 2 Examine the Formed Elements of Blood Microscopically (pp. 236- 238)Exercise 19 Review Sheet Blood (pp.243 – 246)Composition of Blood (pp. 243 – 244)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 10 Blood (pp. 195 – 206)Composition and Functions of Blood (pp. 195 – 196)Question 2. Crossword puzzle (p. 196)Chapter 12 The Lymphatic System and Body Defenses (pp. 237 – 260)Body Defenses: Nonspecific (Innate) Body Defense (pp. 242 – 244)**PowerPoint Presentations**: THE IMMUNE SYSTEM; LeucocytesWhite Blood Cells**Videos**: Immune System, part 1 Crash Course A&P #45; Immune System, part 3 Crash Course A&P #47; Leukocytosis and Leukopenia | LeukocytesGranulocytesNeutrophilsEosinophilsBasophilsMacrophagesDiapedesisAgranulocytesLymphocytesMonocytesT lymphocytesB lymphocytesNatural Killer cells |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.02 Describe erythrocytes, including the structure of hemoglobin. | I will be able to visually identity, examine, and explain the shape and function of erythrocytes and the unique structure of hemoglobin within each erythrocyte. | 2 3 | **Pearson Essentials of Human Anatomy & Physiology text** by Marieb (2018)Chapter 10 Blood (pp. 337 – 355)Composition and Functions of Blood (pp. 337 – 345)Erythrocytes (pp. 340 – 342)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)Exercise 19 Blood (pp. 235 – 242)Activity 2 Examine the Formed Elements of Blood Microscopically(pp. 236–238)Exercise 19 Review Sheet Blood (pp.243 – 246)Composition of Blood, questions 2 and 3 (p. 243)**PowerPoint Presentations**: Blood Marieb; Videos: Hemoglobin Oxygen Binding and Red Blood Cells MCAT tutorial Part 1; Red Blood Cells (Hemoglobin); Blood, Part 2 - There Will Be Blood: Crash Course A&P #30;  | Erythrocytes or red blood cells (RBC)HemoglobinIronPorphyrin rings |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.04 Describe the process of hemostasis. (Vascular spasm, platelet plug formation, coagulation) | I will be able to examine and discuss the process of hemostasis involving platelet function. | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 10 Blood (pp. 337 – 355)Platelets (pp. 343 – 345)Hemostasis (pp. 347 – 349)Platelet plug forms (p. 347)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)Exercise 19 Review Sheet Blood (pp.243 – 246)Activity 5 Determining Coagulation Time (pp.240 – 241)**A Complete Study Guide Anatomy & Physiology**, 12th Edition Coloring Workbook (2018)Chapter 10 Blood (pp. 195 – 206) Hemostasis, question 9 (p.. 200)**PowerPoint Presentations**: Blood MariebVideos: Platelet Activation and Factors for Clot Formation  | PlateletsPlatelet plugHemostasis |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.06 Identify the antigens found on the erythrocytes and the antibodies that determine the ABO blood types and the Rh factor. | I will be able to scrutinize, analyze, and discuss how blood types and Rh Factor are determined by the antigen they carry. | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 10 Blood (pp. 337 – 355)Blood Groups and Transfusion (pp. 349 – 353)Table 10.3 ABO Blood Groups (p. 351)Chapter 12 The Lymphatic System and Body Defenses (pp. 398 – 435)Adaptive Body Defenses (pp. 410 – 141)Antigens (p. 412)Humoral (Antibody – Mediated) Immune Response (pp. 415 – 420)Antibodies (pp. 417 – 419)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)Exercise 19 Blood (pp.243 – 246)Blood Typing (pp. 341 – 242)Activity 6 Typing for ABO and Rh Blood Groups (pp.241 – 242)A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)Chapter 10 Blood (pp. 195 – 206)Blood Groups and Transfusions (p.. 201)**PowerPoint Presentations**: Blood Marieb**Videos**: Platelet Activation and Factors for Clot Formation | ABO blood typeAntigensAntibodiesRh Factor |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.07 Identify the following diseases or disorders associated with the blood. (Anemias, hemolytic disease of the newborn, hemophilia, leukemia, mononucleosis, polycythemia) | I will be able to research and discuss erythrocyte and leukocyte disorders. | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 10 Blood (pp. 337 – 355)Platelets (pp. 343 – 345)Hemostasis (pp. 347 – 349)Platelet plug forms (p. 347)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)Exercise 19 Review Sheet Blood (pp.243 – 246)Activity 5 Determining Coagulation Time (pp.240 – 241)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 10 Blood (pp. 195 – 206)Hemostasis, question 9 (p.. 200)**PowerPoint Presentations**: Blood Marieb**Videos**: Blood and Immune System Disorders | ErythrocyteLeukocyteAnemiaHemolytic disease of newbornsLeukemiaMononucleosisPolycythemia |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.08 Identify the components of the lymphatic system. (Tonsils, spleen, thymus, lymph nodes, bone marrow, lymph vessels) | I will be able to examine and discuss the structures of the lymphatic system.  | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 12 The Lymphatic System and Body Defenses (pp. 398 – 435)Part 1: The Lymphatic System (pp. 398 – 403)Lymphatic Vessels (pp. 399 – 400)Lymph Nodes (pp. 400 – 402)Other Lymphoid Organs (pp. 402 – 403)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 12 The Lymphatic System and Body Defenses (pp. 237 – 260)The Lymphatic System (pp. 237 – 260)Lymphatic Vessels (pp. 237 – 238)Lymph Nodes and Other Lymphoid Organs (pp. 239 – 241) **PowerPoint Presentations**: The Lymphatic System and Body Defenses; Immune System; **Videos**: Lymphatic System\_ Crash Course A&P #44;  | Lymphatic tissueTonsilsSpleenThymusLymph nodesBone marrowLymph vesselsLymph organs |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.09 Describe how lymph is moved through the body. | I will be able to study, analyze, and discuss how lymph moves throughout the body. | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 12 The Lymphatic System and Body Defenses (pp. 398 – 435)Part 1: The Lymphatic System (pp. 398 – 403)Lymphatic Vessels (pp. 399 – 400)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 12 The Lymphatic System and Body Defenses (pp. 237 – 260)Lymphatic Vessels (pp. 237 – 238)**PowerPoint Presentations**: The Lymphatic System and Body Defenses; Immune System; **Videos**: Lymphatic System Crash Course A&P #44;  | Lymph fluidLymphatic systemLymphatic vessels |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.10 Contrast antigens and antibodies. | I will be able to analyze and discuss the importance of antigens and antibodies to the Immune System. | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 12 The Lymphatic System and Body Defenses (pp. 398 – 435)Adaptive Body Defenses (pp. 410 – 141)Antigens (p. 412)Humoral (Antibody – Mediated) Immune Response (pp. 415 – 420)Antibodies (pp. 417 – 419)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 12 The Lymphatic System and Body Defenses (pp. 237 – 260)Specific (Adaptive) Body Defenses, The Immune System (pp. 245 – 250)**PowerPoint Presentations**: Immune System Dynamic Equilibrium; Immune System; THE IMMUNE SYSTEM**Videos**: Immune System, part 2\_ Crash Course A&P #46; Immune System, part 3 Crash Course A&P #47;  | Adaptive Defense SystemB LymphocytesT LymphocytesMemory cellsActive immunityPassive immunityMonoclonal antibodiesVariable (V) regionConstant (C) regionAntigen – binding siteNeutralizationAgglutinationPrecipitation |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.11 Describe the general roles of T-cells and B-cells in the immune response. | I will be able to examine and discuss the immune response roles of T – cells and B – cells  | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 12 The Lymphatic System and Body Defenses (pp. 398 – 435)Specific (Adaptive) Body Defenses, The Immune System (pp. 245 – 250)Cellular (Cell – Mediated) Immune Response (pp. 420 – 422)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 12 The Lymphatic System and Body Defenses (pp. 237 – 260)Specific (Adaptive) Body Defenses: The Immune System (pp. 245 – 253)Question 23. T – cell and B – cell similarities and differences (p. 248)**PowerPoint Presentations**: Immune System Dynamic Equilibrium; Immune System; THE IMMUNE SYSTEM**Videos**: Immune System, part 2 Crash Course A&P #46; Immune System, part 3 Crash Course A&P #47;:  | Adaptive Defense SystemHumoral immunityB LymphocytesT LymphocytesMemory cellsRegulatory T – cellsCell – Mediated immunity |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.12 Distinguish between active and passive immunity, and natural vs. artificial acquisition of immunity. | I will be able to examine and discuss the differences and similarities of active and passive immunity, and natural and artificial acquired immunity. | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 12 The Lymphatic System and Body Defenses (pp. 398 – 435)Figure 12.12 Primary and secondary humoral responses to an antigen (p. 416)Figure 12.14 Types of Humoral Immunity (p. 417)Specific (Adaptive) Body Defenses, The Immune System (pp. 245 – 250)Cellular (Cell – Mediated) Immune Response (pp. 420 – 422)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018) Chapter 12 The Lymphatic System and Body Defenses (pp. 237 – 260)**PowerPoint Presentations**: Acquired Immunity; Immunity Body’s Defense**Videos**: How Vaccines Work The Complete History of Vaccines; The Origin of Vaccines;  | Active immunityPassive immunityArtificial immunityAcquire immunityVaccinesAntibodiesImmunoglobulins |
| STANDARD08 Students will describe the components and functions associated with blood, and the structures and functions of the lymphatic and cardiovascular systems. | 08.13 Identify the following diseases or disorders associated with the lymphatic system. (AIDS, measles, mumps, rubella, tetanus) | I will be able to examine and research various diseases and disorder of the lymphatic system. | 2 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 12 The Lymphatic System and Body Defenses (pp. 398 – 435)Lymph nodes Homeostatic Imbalance (p. 402)Pus Homeostatic Imbalance (p. 406)Penicillin reaction Homeostatic Imbalance (p. 412)Disorders of Immunity (allergies, autoimmune diseases, and immunodeficiencies (pp. 425 – 428)AIDS: An Ongoing Pandemic A Closer Look (pp. 428 – 429) Part III: Developmental Aspects of the Lymphatic System and Body Defenses (pp. 429–431)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 12 The Lymphatic System and Body Defenses (pp. 237 – 260)Disorders of Immunity (p.254)Developmental Aspects of the Lymphatic System and Body Defenses (pp. 254 – 255) **PowerPoint Presentations**: Immunity Body’s Defense; WBC Pathophysiology; Diseases of Cardiovascular and Lymphatic Systems; Lymphatic System and Immunity**Videos**: Leukocytosis and Leukopenia; Leukopenia Causes; Measles (rubeola) - causes, symptoms, diagnosis, treatment (vaccines) & pathology; Pertussis (whooping cough) - causes, symptoms, diagnosis, treatment, pathology; The Immune System and AIDS Protection against Infection; Video 18 Blood and Immune System Disorders | Lymphatic systemAllergiesAutoimmune diseasesImmunodeficienciesPenicillin reactionMeaslesMumpsRubellaTetanusAIDSLeukocytosisLeukopenia |

Unit 5: The Nervous System

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| UNIT 6 - NERVOUS SYSTEM / SPECIAL SENSESSTANDARD05 Students will describe the structures and functions of the nervous system and special senses. | OBJECTIVES06.01 Restate the three broad functions of the nervous system: (sensory, integration, motor) | I will be able to explain and describe the three main functions of the nervous system: sensory, integration, and motor.  | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Organization of the Nervous System (pp. 225 – 227)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)Exercise 13 Neuron Anatomy and Physiology (pp. 151 – 162)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 7 The Nervous System (pp. 133 – 164)Nervous System – Structure and Function (pp. 134 – 141) **PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System;   | Sensory nerveMotor nerveInterneuronReflex arc |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.02 Describe the general organization of the nervous system. | I will describe how the nervous system is organized.. | 2 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Organization of the Nervous System (pp. 225 – 227)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)Exercise 14 Gross Anatomy of the Brain and Cranial Nerves (pp. 163 – 175)Exercise 14 Review Sheet Gross Anatomy of the Brain and Cranial Nerves (pp. 177 – 181)Exercise 15 Spinal Cord and Spinal Nerves (pp. 183 – 189)Exercise 15 Review Sheet Spinal Cord and Spinal Nerves (pp. 191 - 192)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)Chapter 7 The Nervous System (pp. 133 – 164)Organization of the Nervous System (p. 134) **PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System;:  | Central nervous systemPeripheral nervous systemAutonomic nervous system |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.03 List the functions and structures of neurons and neuroglial cells: (astrocytes, microglia, oligodendrocytes, ependymal cells, Schwann cells) | I will be able to describe the physical appearance and specific function of Neurons and neuroglial cells. | 3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Nervous Tissue: Structure and Function (pp. 227 – 229)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018) Chapter 7 The Nervous System (pp. 133 – 164)**PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System;:  | NeuronsInterneuronsAstrocytesMicrogliaOligodendrocytesEpendymal cellsSchwann cells |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.04 Sequence the major events when the nerve impulse (action potential) is initiated and transmitted through a neuron. | I will be able to describe the events that occur when a nerve is stimulated to produce an action potential that travels from one end of a nerve to the other end. | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Physiology: Nerve Impulses (pp. 234 – 236)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)Exercise 13 Neuron Anatomy & Physiology (pp. 151–162)Neuron Physiology: The Nerve Impulse (pp. 156 – 157)Exercise 13 Neuron Anatomy & Physiology (pp. 151–162)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 7 The Nervous System (pp. 133 – 164)Action Potential section (p. 139)**PowerPoint Presentations**: The Neuron; The Nervous System and Sensitivity; The Nervous System WRHS; **Videos**: The Nervous System, Part 2 - Action! Potential!\_ Crash Course A&P #9; The Nervous System, Part 3 - Synapses!\_ Crash Course A&P #10 | Action potentialAll or none responseSodium – potassium pumpDepolarizationRepolarization  |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.05 Contrast white and gray matter of nervous tissue. | I will be able to describe the specific nerve cells that are grouped together to comprise the macroscopic white and gray matter of the central nervous system.  | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Central Nervous System, Functional Anatomy of the Brain (pp. 239 – 246)Spinal Cord, White Matter of the Spinal Cord (p. 254) **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Exercise 14 Gross Anatomy of the Brain and Cranial Nerves (pp. 163 – 175)Activity 1 Identifying External Brain Structures (pp. 163 – 167)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 7 The Nervous System (pp. 133 – 164)Central Nervous System Brain (p. 145)Spinal Cord (p. 150)**PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System;: | Gray matterWhite matterSwann cellsNeuroglial cells |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.06 Identify the structures responsible for the maintenance and protection of the central nervous system. (Meninges, dura mater, arachnoid mater and pia mater]) | I will be able to identify and describe the brain structures responsible for protecting and maintaining the vital brain tissue.. | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Protection of the Central Nervous System (pp. 247 – 251)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Exercise 14 Gross Anatomy of the Brain and Cranial Nerves (pp. 163 – 175)Meninges of the Brain (pp. 167 – 168)Cerebrospinal Fluid (pp. 168 – 170)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 7 The Nervous System (pp. 133 – 164)Protection of the CNS (pp. 147 – 148)**PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System;:  | MeningesDura materArachnoid materPia materSubarachnoid space |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.07 Explain the role of each of the components of a reflex arc. (Reflex, reflex arc, receptor, sensory neuron, association [interneuron] neuron, motor neuron, effector) | I will be able to describe the components and roles of the different nerves that comprise the reflex arc | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Physiology: Reflexes (pp. 237 – 239)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Exercise 16 Human Reflex Physiology (pp. 193 – 197)Exercise 16 Review Sheet Human Reflex Physiology (pp. 199 – 200)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 7 The Nervous System (pp. 133 – 164)Somatic and Autonomic Reflexes (p. 139)Reflex Arc (p. 140)**PowerPoint Presentations**: Neurology Spinal Cord Reflexes**Videos**: Peripheral Nervous System Crash Course A&P #12; The Reflex Arc; What is a Reflex Arc? | Reflex arcSensory neuronInterneuronMotor neuron |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.08 Identify the four principle parts of the brain. (Cerebrum, cerebellum, brain stem, diencephalon) | I will be able to identify the physical appearance of the four main parts of the brain: cerebrum, cerebellum, brain stem, and diencephalon.  | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Central Nervous System, Functional Anatomy of the Brain (pp. 239 – 247)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Exercise 14 Gross Anatomy of the Brain and Cranial Nerves (pp. 163 – 175)Activity 1 Identifying External Brain Structures (163 – 167)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 7 The Nervous System (pp. 133 – 164)Central Nervous System, Brain (pp. 141 – 142)**PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System; | CerebrumCerebellumBrain stemDiencephalon |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.09 Describe the location and function of CSF. (Ventricles, subarachnoid space) | I will be able to identify the location and size of the structures responsible for producing the cerebrospinal fluid (CSF). | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Protection of the Central Nervous System (pp. 247 – 251)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Meninges of the Brain (pp. 167 – 168)Cerebrospinal Fluid (pp. 168 – 170)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 7 The Nervous System (pp. 133 – 164)Question 21 Figure 7 – 6: Ventricles (p 145)Protection of the CNS, 24 Meninges (p 147) and 25 Complete following statements (p. 148) **PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System;  | Cerebrospinal fluidVentriclesSubarachnoid spaceMeninges  |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.10 Describe the functions of the three structures of the brain stem. (Medulla oblongata, pons, midbrain) | I will be able to identify the appearance and location of the three brain stem structures: medulla oblongata, pons, and midbrain.  | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Central Nervous System, Functional Anatomy of the Brain (pp. 239 – 247)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Activity 1 Identifying External Brain Structures**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 7 The Nervous System (pp. 133 – 164)**PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System; | Brain stemMedulla oblongataPonsMidbrain |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.11 Describe the structures and functions of the diencephalon. (Thalamus, hypothalamus) |  I will be able to explain and describe the normal structures and function of the diencephalon’s Thalamus and Hypothalamus. | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Diencephalon (pp. 225 – 247)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Exercise 14 Gross Anatomy of the Brain and Cranial NervesActivity 1 Identifying External Brain Structures – Diencephalon (pp. 165 – 166)**PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System | DiencephalonThalamusHypothalamus |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.12 Describe the locations and functions of the four lobes of the cerebrum. (Frontal, parietal, temporal, occipital) | I will be able to identify the physical structure and function of the four lobes of the bran: frontal lobe, parietal lobe, temporal lobe, and occipital lobe.  | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Central Nervous System, Functional Anatomy of the Brain (pp. 239 – 247)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Exercise 14 Gross Anatomy of the Brain and Cranial Nerves (pp. 163 – 175)Activity 1 Identifying External Brain Structures (163 – 167)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 7 The Nervous System - Brain (pp. 1141 – 142)**PowerPoint Presentations**: Brain; Nervous System; The Nervous System WRHS; **Videos**: Basic Structure of the Human Brain; Central Nervous System Crash Course A&P #11; The CNS and Brain; The Nervous System Intro; The Central Nervous System  | BrainFrontal lobeParietal lobeOccipital lobeTemporal lobe |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.14 Identify the following diseases or disorders of the nervous system. (ALS, Alzheimer’s, bacterial meningitis, cerebral palsy, epilepsy, multiple sclerosis, Parkinson’s) | I will be able to explain the disorders of the Central Nervous system by understanding the normal appearance and function of the afflicted areas. | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 7 The Nervous System (pp. 225 – 277)Developmental Aspects of the Nervous System (pp. 269 – 273)**PowerPoint Presentations**: Diseases of the Nervous System; Nervous System Diseases**Videos**: Nervous System Diseases; 17 Disorders of the Nervous System | Amyotrophic lateral sclerosis (ALS)Alzheimer’sBacterial meningitisCerebral palsyEpilepsyMultiple sclerosisParkinson’s diseaseOther neurological diseases |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.15 Describe the principle anatomical structures of the eye. (Accessory structures [eyelid, conjunctiva, lacrimal apparatus, extrinsic muscles] layers of the eyeball (fibrous tunic [sclera, cornea], vascular tunic [choroid, ciliary body, iris, lens, pupil], nervous tunic [retina]) | I will be able to identify the special anatomical structures and function of the eye, | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 8 Special Senses (pp. 278 – 307)Part I: The Eye and Vision (pp. 279 – 289)Anatomy of the Eye – External and Accessory Structures (pp. 279 – 280)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Exercise 17 The Special Senses (pp. 201 – 227)Anatomy of the Eye, Activity 1 Identifying Accessory Eye Structures (201 – 202)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 8 Special Senses (pp. 165 – 182)The Eye and Vision (pp. 165 – 170)**PowerPoint Presentations**: The Senses; **Videos**: Eye Structure and Function; The Five Senses; The Sensational five The Inside Story of Your Senses; The Five Senses; Anatomy Eye Orbit and Eyelid; Anatomy – Eye Overview; The Sensor System | EyelidConjunctivaLacrimal glandsExtrinsic musclesFibrous tunicVascular tunicScleraCorneaChoroidCiliary bodyIrisLensPupilRetinaRodsConesVisual cortex |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses.. | 06.16 Describe the principle anatomical structures of the ear. (outer ear [auricle, auditory canal], middle ear [tympanic cavity, tympanic membrane, auditory (Eustachian) tube, auditory ossicles (malleus, incus, stapes)], inner ear [bony labyrinth, membranous labyrinth, semicircular canals, vestibule, cochlea, Organ of Corti]) | I will be able to visually identify and describe structures and function of the ear. | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 8 Special Senses (pp. 278 – 307)Part II: The Ear, Hearing, and Balance (pp. 290 – 298)**Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)**Exercise 17 The Special Senses (pp. 201 – 227)The Ear, Hearing, and Balance (pp. 209 – 215)**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)** Chapter 8 Special Senses (pp. 165 – 182)**PowerPoint Presentations**: Anatomy of the Ear; Hearing; The Senses;**Videos**: Anatomy – Middle Ear; Ear Physiology; How the Inner Ear Balance System Works; 2 – Minute Neuroscience – Vestibular System; The Sensory System | Outer earAuricleAuditory canalMiddle earTympanic membraneAuditory or eustachian tubeInner earMalleusIncusStapesBony labyrinthMembranous labyrinthVestibuleCochleaOrgan of Corti Semicircular canalsVestibuleCochleaOrgan of Corti |
| STANDARD05 Students will describe the structures and functions of the nervous system and special senses. | 06.17 Identify the following diseases or disorders associated with special senses. (Presbyopia, myopia, hyperopia, cataracts, conjunctivitis, deafness [conductive, sensorineural], glaucoma, macular degeneration, middle ear infection, strabismus, tinnitus, vertigo) | I will be able to visually identify and know the normal structure and function of the special senses (eye, ear, tongue, and nose).  | 23 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018); Chapter 8 Special Senses (pp. 278 – 307)Part IV: Developmental Aspects of the Special Senses (pp. 301 – 303):**A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**Chapter 8 Special Senses (pp. 165 – 182)Part IV: Developmental Aspects of the Special Senses (pp. 301 – 303)**PowerPoint Presentations**: Diseases and Disorders of the Ears; Disorders and Diseases of the Eyes; Diseases of the Eyes, Ears, Nose, and Throat**Videos**: Sensory disorders; Nervous System Diseases. | PresbyopiaMyopiaHyperopiaCataractsConjunctivitisConductive deafnessSensorineural deafnessGlaucomaMacular degenerationMiddle ear infection (Otis media)StrabismusTinnitusVertigoMeniere’s Disease |