Unit 4 The Immune System

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| UNIT 8 – BLOOD / LYMPHATIC SYSTEMS  STANDARD  08 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; Leucocytes White Blood Cells  **Videos**: Immune System, part 1 Crash Course A&P #45; Immune System, part 3 Crash Course A&P #47; Leukocytosis and Leukopenia | Leukocytes  Granulocytes  Neutrophils  Eosinophils  Basophils  Macrophages  Diapedesis  Agranulocytes  Lymphocytes  Monocytes  T lymphocytes  B lymphocytes  Natural Killer cells |
| STANDARD  08 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)  Hemoglobin  Iron  Porphyrin rings |
| STANDARD  08 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 Marieb Videos: Platelet Activation and Factors for Clot Formation | Platelets  Platelet plug  Hemostasis |
| STANDARD  08 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 type  Antigens  Antibodies  Rh Factor |
| STANDARD  08 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 | Erythrocyte  Leukocyte  Anemia  Hemolytic disease of newborns  Leukemia  Mononucleosis  Polycythemia |
| STANDARD  08 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 tissue  Tonsils  Spleen  Thymus  Lymph nodes  Bone marrow  Lymph vessels  Lymph organs |
| STANDARD  08 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 fluid  Lymphatic system  Lymphatic vessels |
| STANDARD  08 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 System  B Lymphocytes  T Lymphocytes  Memory cells  Active immunity  Passive immunity  Monoclonal antibodies  Variable (V) region  Constant (C) region  Antigen – binding site  Neutralization  Agglutination  Precipitation |
| STANDARD  08 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 System  Humoral immunity  B Lymphocytes  T Lymphocytes  Memory cells  Regulatory T – cells  Cell – Mediated immunity |
| STANDARD  08 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 immunity  Passive immunity  Artificial immunity  Acquire immunity  Vaccines  Antibodies  Immunoglobulins |
| STANDARD  08 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 system  Allergies  Autoimmune diseases  Immunodeficiencies  Penicillin reaction  Measles  Mumps  Rubella  Tetanus  AIDS  Leukocytosis  Leukopenia |

Unit 5: The Nervous System

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| UNIT 6 - NERVOUS SYSTEM / SPECIAL SENSES  STANDARD  05 Students will describe the structures and functions of the nervous system and special senses. | OBJECTIVES  06.01 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. | 2  3 | **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 nerve  Motor nerve  Interneuron  Reflex arc |
| STANDARD  05 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 system  Peripheral nervous system  Autonomic nervous system |
| STANDARD  05 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;: | Neurons  Interneurons  Astrocytes  Microglia  Oligodendrocytes  Ependymal cells  Schwann cells |
| STANDARD  05 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. | 2  3 | **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 potential  All or none response  Sodium – potassium pump  Depolarization  Repolarization |
| STANDARD  05 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. | 2  3 | **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 matter  White matter  Swann cells  Neuroglial cells |
| STANDARD  05 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.  . | 2  3 | **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;: | Meninges  Dura mater  Arachnoid mater  Pia mater  Subarachnoid space |
| STANDARD  05 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 | 2  3 | **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 arc  Sensory neuron  Interneuron  Motor neuron |
| STANDARD  05 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. | 2  3 | **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; | Cerebrum  Cerebellum  Brain stem  Diencephalon |
| STANDARD  05 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). | 2  3 | **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 fluid  Ventricles  Subarachnoid space  Meninges |
| STANDARD  05 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. | 2  3 | **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 stem  Medulla oblongata  Pons  Midbrain |
| STANDARD  05 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. | 2  3 | **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 Nerves  Activity 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 | Diencephalon  Thalamus  Hypothalamus |
| STANDARD  05 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. | 2  3 | **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 | Brain  Frontal lobe  Parietal lobe  Occipital lobe  Temporal lobe |
| STANDARD  05 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. | 2  3 | **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’s  Bacterial meningitis  Cerebral palsy  Epilepsy  Multiple sclerosis  Parkinson’s disease  Other neurological diseases |
| STANDARD  05 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, | 2  3 | **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 | Eyelid  Conjunctiva  Lacrimal glands  Extrinsic muscles  Fibrous tunic  Vascular tunic  Sclera  Cornea  Choroid  Ciliary body  Iris  Lens  Pupil  Retina  Rods  Cones  Visual cortex |
| STANDARD  05 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. | 2  3 | **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 ear  Auricle  Auditory canal  Middle ear  Tympanic membrane  Auditory or eustachian tube  Inner ear  Malleus  Incus  Stapes  Bony labyrinth  Membranous labyrinth  Vestibule  Cochlea  Organ of Corti  Semicircular canals  Vestibule  Cochlea  Organ of Corti |
| STANDARD  05 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). | 2  3 | **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. | Presbyopia  Myopia  Hyperopia  Cataracts  Conjunctivitis  Conductive deafness  Sensorineural deafness  Glaucoma  Macular degeneration  Middle ear infection (Otis media)  Strabismus  Tinnitus  Vertigo  Meniere’s Disease |