Unit 1 Basic Chemistry Principles of the Human Body

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| **WRHS STANDARD**  02 Students will explain basic principles of body chemistry. | 02.01 Review the following terms and concepts. (States of matter, elements, basic components of the atom [nucleus, electrons, protons, and neutrons])  02.02 Identify the most common, least common, and trace elements of the human body.  (Carbon, hydrogen, oxygen, nitrogen)  02.03 Compare and contrast between a compound and a molecule.  02.04 Differentiate between a cation and an anion.  02.05 Recognize and describe the characteristics of ionic, covalent, and hydrogen bonds. | I will be able to describe elements and the basic atomic structure.  I will be able to describe the elements that make up the human body.  I will be able to compare the properties of compounds and molecules.  I will be able to describe positive and negative charged ions characteristics..  I will be able to describe uniqueness of ionic, covalent, and hydrogen bonds. | 2  3  2  3  2 | **Pearson Essentials of Human Anatomy & Physiology** by Marieb (2018);  Chapter 2 Basic Chemistry (pp. 24 – 61)  Concepts of Matter and Energy (pp. 24 – 26)  Composition of Matter (pp. 26 – 28)  Identifying Elements (pp. 28 – 31)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology (2018)** No Basic Chemistry Activities in Laboratory Manual  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**  Chapter 2 Basic Chemistry (pp. 17 – 32)  Molecules, Chemical Bonds, and Chemical Bonds (pp. 20 – 22)  **PowerPoint Presentations:**  Pearson’s Essentials of Human Anatomy Chapter 2 Basic Chemistry  .  **Videos**:  What are CHNOPS? These Chemicals Elements = 98% of Life  Elements of Life  Chemistry in the Human Body  Elements That Make Up the Human Body  **Word or PDF paper documents, handouts, and worksheets**  Blank Periodic Table of Elements to place only human body elements  Cornell Notes format for assigned HAP videos or PowerPoint presentations  Periodic Table cards  Vocabulary definitions using the Frayer Method | Atom  Elements  Nucleus  Electrons  Protons  Neutrons  Periodic Table  CHNOPS  Essential Element  Trace Elements  Nuclear fusion  Big Bang nucleosynthesis  Compounds  Molecules  Catons  Anions  Covalent bonds  Hydrogen bonds  Ionic bonds |
| **WRHS STANDARD**  02 Students will explain basic principles of body chemistry. | 02.06 Define pH and categorize acidic, basic, or neutral solutions based on the pH of a solution.  02.07 Distinguish between  “neutral” pH and the “average”  pH range of the blood. (Neutral  pH= 7.0, average pH of blood =  7.35 to 7.45)  02.08 Describe the properties of water and how it is utilized in the human body. (Universal solvent, transport, lubricant, heat capacity, chemical reactions) | I will be able to define pH and tell the difference between acidic, basic, and neutral solutions.  I will be able to tell the difference in blood pH levels.  I will be able to describe the properties of water within the human body. | 2  3  2 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Biochemistry: The Chemical Composition of Living Matter (pp. 38 – 55)  Inorganic Compounds (pp. 39 – 42)  Water: (p. 39)  Characteristics of Acids (p 40)  Characteristics of Bases (p. 40 – 41)  Acids, Bases, and Neutralization (p. 41)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**  Chapter 2 Basic Chemistry (pp. 17 – 32)  Biochemistry: The Composition of Living Matter (pp. 23 – 28)  **PowerPoint Presentations:**  Pearson’s Essentials of Human Anatomy Chapter 2 Basic Chemistry  .  **Videos**: | pH  Acids  Base  Neutralization  Water  Salts  Electrolytes  Proton donors  Proton acceptors  Buffers  Solution  Solvent  Lubricant |
| **WRHS STANDARD**  02 Students will explain basic principles of body chemistry. | 02.09 Distinguish between inorganic and organic compounds. (Inorganic compounds do not contain carbon, are small molecules, and usually form ionic bonds. Organic compounds usually contain carbon, are large molecules, form covalent bonds, and flammable)  02.10 Describe the structures and functions of carbohydrates, proteins, lipids, and nucleic acids.  02.11 Describe how the body produces energy during cellular respiration.  (ATP ↔ ADP + P + ENERGY) | I will be able to describe the characteristics of organic and inorganic compounds.  I will be able to describe the structures and functions of the macromolecules of carbohydrates, proteins, lipids, and nucleic acids.  I will be able to describe how solar energy is used to create usable energy for cellular respiration. | 2  3  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Biochemistry: The Chemical Composition of Living Matter (pp. 38 – 55)  Inorganic Compounds (pp. 39 – 42)  Organic Compounds (pp. 42 – 55)  Carbohydrates (pp. 43 – 44)  Lipids (pp. 44 – 48)  Proteins (pp. 48 – 52)  Nucleic Acids (pp. 52 – 55)  Adenosine Triphosphate (ATP) (p. 55))  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook (2018)**  Chapter 2 Basic Chemistry (pp. 17 – 32)  Biochemistry: The Composition of Living Matter (pp. 23 – 28)  **PowerPoint Presentations:**  Pearson’s Essentials of Human Anatomy Chapter 2 Basic Chemistry  .  **Videos**: | Inorganic compounds  Organic compounds  Monomers  Polymers  Carbohydrate  Monosaccharides  Dehydration synthesis  Disaccharides  Lipids  Triglycerides  Fatty acids  Unsaturated fats  Trans fats  Phospholipids  Hydrophilic  Hydrophobic  Steroids  Cholesterol  Proteins  Amino acids  Fibrous proteins  Globular proteins  Functional proteins  Enzymes  Catalyst  Nucleic acids  Nucleotides  DNA  Deoxyribose sugar  Adenine nucleotide  RNA  Messenger RNA  Transfer RNA  Ribosomal RNA  Adenosine triphosphate (ATP)  Adenosine diphosphate (ADP) |

Unit 2 Cells, Tissues, and Integumentary System

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| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | OBJECTIVES  03.01 Identify the four principle parts  of a generalized animal cell and their functions. (nucleus, cytosol, organelles  & cell membrane) | I will be able to visually and functionally identify the four main animal cell parts, which are the nucleus, cytosol, organelles, and the cell membrane. | 2 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 1­: Cells (pp. 62 – 88)  The Cytoplasm (pp. 67 – 74)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 3 The Cell (pp. 19 – 27)  Anatomy of Composite Cell (pp. 19 -22)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33 – 57)  Anatomy of a Generalized Cell (pp. 34 – 37)  **PowerPoint Presentations**: A View of a Cell; Cell Biology WRHS; Cell Organization and Division; Cell Process – Membrane and Transport; Cell Theory Membranes; Plasma Membrane Homeostasis; The Cell – A Look Inside; and The Cell – What Are Cells?  **Videos**: Biology – Cell Structure; Eukaryopolis – The City of Animal Cells (Crash Course Biology); Introducing the Cell (with PDF Cloze); The Cell Structure and Function (with PDF Cloze); Understanding Cells (with PDF Cloze) | Animal cell  Organelles  Nucleus  Cytosol  Cell membrane  Nucleus  Golgi complex  Rough endoplasmic reticulum  Smooth endoplasmic reticulum  Ribosome |
| :  STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.02 Describe the structure and function of the cell membrane. | I will describe the physical appearance and function of the cell membrane. | 2 | **Pearson Essentials of Human Anatomy & Physiology** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 1: Cells (pp. 62 – 88)  The Plasma Membrane (pp. 64–66)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 3 The Cell (pp. 19 – 27)  Plasma Membrane (pp. 20 – 21)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33 – 57)  Figure 3–2: Diagram portion of plasma membrane (p. 35)  **PowerPoint Presentations**: See list of presentations above.  **Videos**: See list of videos above. | Plasma membrane  Fluid Mosaic model  Semipermeable membrane  Polar heads of phospholipids  Non–polar heads of phospholipids  Filaments of cytoskeleton  Cytoplasm  Extracellular fluid  Glycoprotein  Glycolipid |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.03 Describe a selectively permeable membrane and factors which influence permeability. | I will explain how the cell membrane selectively allows and disallows certain substances from entering into the Cell’s interior. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62–108)  Part 1: Cells (pp. 62–88)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 4 Cell Membrane Transport Mechanisms (pp. 29–34)  Exercise 4 Review Sheet Cell Membrane Transport Mechanisms (pp. 35–36)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33–57)  Cell Physiology Membrane Transport (pp. 38–40)  **PowerPoint Presentations**: See list of presentations above.  **Videos**: See list of videos above. | Selective permeable  Protein channel  Adenosine triphosphate  Adenosine diphosphate  Simple diffusion  Osmosis  Facilitated diffusion  Active transport  Solute pump  Sodium–potassium (Na+K+) pump  Exocytosis  Endocytosis  Phagocytosis  Pinocytosis  Receptor–mediated endocytosis |
| STANDARD  03 Students will describe  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.04 Contrast intracellular and extracellular fluid in terms of location and composition. | I will understand and be able to describe the differences and similarities off fluid inside and outside the cell. | 2  3 | No resources found in Pearson text, laboratory manual and Coloring book.  **PowerPoint Presentations**: Water & The Body Fluids; Body Fluids and Edema; Fluid, Electrolyte, & Acid-Base Balance Marieb 8th Ed; Fluid, Electrolyte, & Acid-Base Balance Marieb 9th Ed.  **Videos**: Intracellular and Extracellular Compartments Fluids; Intravascular, Intracellular, and Extracellular Fluids in the Body; Fluid and Electrolytes – Introduction; Fluid and Electrolyte System Body Fluids. | Cytosol  Intracellular fluid  Extracellular fluid  Intravascular fluid  Edema  Plasma  Acid – base  Electrolytes |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.05 Describe each of the following cellular transport processes and classify them as active or passive. (Passive processes – diffusion, osmosis, facilitated diffusion, dialysis, and filtration. Active processes -- phagocytosis, exocytosis and active transport) | I will describe and explain the differences, similarities, and reasons why the active and passive cellular transport processes moves substances across the selective cell membrane. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 1: Cells (pp. 62 – 88)  Cell Physiology (pp. 76 – 82)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 4 The Cell Membrane Transport Mechanisms (pp. 29 – 34)  Exercise 4 Review Sheet Cell Membrane Transport Mechanisms (pp. 35 – 36)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33 – 57)  Cell Physiology (pp. 38 – 40)  **PowerPoint Presentations**: See list of presentations above.  **Videos**: See list of videos above | Active transport  Phagocytosis  Exocytosis  Endocytosis  Pinocytosis  Adenosine triphosphate  Adenosine diphosphate  Passive transport  Diffusion  Osmosis  Facilitated diffusion  Dialysis  Filtration |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.05 Describe each of the following cellular transport processes and classify  them as active or passive. (Passive processes – diffusion, osmosis, facilitated diffusion, dialysis, and filtration. Active processes – phagocytosis, exocytosis and active transport) | I will be able to describe the processes of tiny and large substances enter and leave the cell though processes like active and passive cellular transport. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 1: Cells (pp. 62 – 88)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 3 The Cell (pp. 19 – 27)  Exercise 4 Cell Membrane Transport Mechanisms (pp. 29 – 33)  Exercise 4 Review Sheet Cell Membrane Transport Mechanisms (pp. 35 – 36)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33 – 57)  Cell Physiology; Membrane Transport (pp. 38 -40).  **PowerPoint Presentations**: See list of presentations above.  **Videos**: See list of videos above. | Passive transport  Diffusion  Facilitated diffusion  Simple diffusion  Osmosis  Facilitated diffusion  Active transport  Solute pump  Sodium–potassium (Na+K+) pump  Exocytosis  Endocytosis  Phagocytosis  Pinocytosis  Receptor–mediated endocytosis |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.06 Review the osmotic effects that occur when a cell is placed in an isotonic, hypotonic, or hypertonic  solution. | I will be able to describe what happens to the flow of fluids into and out of the cell through the process of osmosis when cells are immersed in solutions that are isotonic, hypotonic, and hypertonic. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 1: Cells (pp. 62 – 88)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 3 The Cell (pp. 19 – 27)  Activity 2 Observing Diffusion Through Nonliving Membranes (p. 31)  Activity 3 Investigation Diffusion Through Living Membranes (p. 33)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33 – 57)  **PowerPoint Presentations**: See list of presentations above.  **Videos**: See list of videos above. | Osmosis  Hypotonic solution  Hypertonic solution  Isotonic solution |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.07 Describe the function of the following structures within the cell. (nucleolus, gene, chromatin, chromosome, DNA, ribosomes, endoplasmic reticulum, Golgi complex,  mitochondria, lysosomes, vacuole, peroxisomes, microfilaments,  microtubules, centrioles, centrosomes  flagella, cilia, microvilli) | I will be able to describe the specific appearance and functions of the different organelles found inside the cell. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 1: Cells (pp. 62 – 88)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 3 The Cell (pp. 19 – 27)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33 – 57)  **PowerPoint Presentation and Videos:** See list of presentations above. | Nucleolus  Gene  Chromatin  Chromosome  DNA  Ribosomes  Endoplasmic reticulum  Golgi complex  Mitochondria Lysosomes  Vacuole  Peroxisomes  Microfilaments  Microtubules  Centrioles  Centrosomes  Flagella Cilia Microvilli |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.08 Compare and contrast mitosis and meiosis. | I will be able to describe the similarities and differences of the two cell division processes – mitosis and meiosis. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 1: Cells (pp. 62 – 88)  Cell Division (pp. 82 – 85)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 3 The Cell (pp. 19 – 27)  Cell Division: Mitosis & Cytokinesis (pp. 23–24.  Exercise 3 Review Sheet The Cell – Anatomy and Cell Division (pp. 25 – 27)    **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33 – 57)  Cell Division (pp. 41 -44)  **PowerPoint Presentations**: Cell Cycle & Reproduction; Mitosis and Meiosis; Meiosis  **Videos**: The Cell Cycle and Cancer; Mitosis and Meiosis; Cell Cycle Regulation; Meiosis Square Dance; Meiosis – The Great Divide; Meiosis – Where the Sex Starts (Crash Course Biology); Mitosis | Cell division  Cell life cycle  DNA Replication  Mitosis  Prophase  Chromatids  Centromere  Mitotic spindle  Metaphase  Anaphase  Telophase  Cytokinesis  Metaphase II  Anaphase II  Telophase II  Haploid  Diploid |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.09 Identify the general characteristics and functions of each of the four principle types of tissues. (Epithelial - strategies for tissue identification [arrangement & cell shape]; Connective - adipose, cartilage, dense fibrous, blood, bone; Muscular – skeletal, smooth, cardiac; and Nervous) | I will be able to describe the general cellular characteristics shared by the four main types of tissues: epithelial, connective, muscular, and nervous tissue. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 2: Body Tissues (pp. 88 – 102)  Epithelial Tissue (pp. 88 – 93)  Connective Tissue (pp. 93 – 98)  Muscle Tissue (pp. 98 – 100)  Nervous Tissue (pp. 100 – 102)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 5 Classification of Tissues (pp. 37 – 53)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 3 Cells and Tissues (pp. 33 – 57)  Body Tissues (pp. 46 – 52)  **PowerPoint Presentations**: Cells and Tissues (Marieb); Ch3 Cells and Tissues; Epithelial and Connective Tissues; Tissues by Holes A&P  **Videos**: Tissues Part 1, Crash Course A&P; Tissues Part 2 Epithelial Tissue Crash Course A&P; Tissues Part 3 Connective Tissue Crash Course A&P; Tissues Part 4 Types of Connective Tissue Crash Course A&P; Epithelial and Connective Tissue by Kahn Academy; Connective Tissue – The Basics; Types of Human Body Tissues; Tissue Types. | Epithelial tissue  Connective tissue  Muscular tissue  Nervous tissue  Simple epithelium  Stratified epithelium  Squamous epithelium  Cuboidal epithelium  Columnar epithelium  Bone  Cartilage  Dense connective tissue  Tendons  Areolar connective tissue  Adipose connective tissue  Skeletal muscle  Cardiac muscle  Smooth muscle  Neurons  Neuroglia |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.10 Contrast exocrine and endocrine glands. | I will be able to understand and explain the two types of epithelial glands: endocrine and exocrine. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 3 Cells and Tissues (pp. 62 – 108)  Part 1: Cells (pp. 62 – 88)  Epithelial Tissue (pp. 88 -93)  Glandular Epithelium (p. 93)  Chapter 9 The Endocrine System (pp. 308 – 336)  The Major Endocrine Organs (pp. 312 – 315)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 18 Functional Anatomy of the Endocrine Glands (pp. 229 – 232)  Exercise 18 Review Sheet Functional Anatomy of he Endocrine Glands (pp. 233–234)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 9 The Endocrine System (pp. 183 – 194)  **PowerPoint Presentations**: Epithelium Glandular Repaired]; The Endocrine System; Responses in the Human Endocrine-System1; Integumentary System 2;  **Videos**: Responses in the Human Endocrine System; Epithelium Glandular (Repaired); | Epithelial glands  Exocrine gland  Endocrine gland  Endocrine system |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system.  . | 03.11 Differentiate between the four basic types of membranes. (Mucous, serous, synovial, cutaneous) | I will be able to describe similar and differing characteristics of the four membranes: mucous, serous, synovial, and cutaneous. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 4 Skin and Body Membranes (pp. 109 – 133)  Classification of Body Membranes (pp. 109 – 112)  Developmental Aspects of Skin and Body Membranes (pp. 127 – 130)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 4 Skin and Body Membranes (pp. 59 – 73)  Classification of Body Membranes (pp. 59 – 60)  Developmental Aspects of Skin and Body Membranes (p. 68)  **PowerPoint Presentations**: Integumentary System 2;  **Videos**: | Mucous membrane  Serous membrane  Synovial membrane  Cutaneous membrane |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.12 Describe the structures and functions of the integumentary system components. (Skin, glands, hair, nails) | I will be able to describe the physical and functional characteristics of the four components of the integumentary system | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 4 Skin and Body Membranes (pp. 109 – 133)  The Integumentary System (Skin) (pp. 112 – 127)  Appendages of the Skin (pp. 119 -123)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 6 The Skin (Integumentary System (pp. 55 – 68)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 4 Skin and Body Membranes (pp. 59 – 73)  Integumentary System (Skin) (pp. 51 – 68)  **PowerPoint Presentations**: Integumentary System 1 and 2; Integumentary System & Disorders;  **Videos**: The Integumentary System, Part 1 & 2 – Skin Deep; Anatomy & Physiology Integumentary System Overview; Integumentary System (Bozeman Science) | Integumentary System  Skin  Glands  Hair  Nails |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.13 Describe the major layers of skin. (Epidermis, dermis, subcutaneous [hypodermis]) | I will be able to describe the physical appearance and function of the major layers of the skin: Epidermis, Dermis, Subcutaneous, and Hypodermis. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 4 Skin and Body Membranes (pp. 109 – 133)  The Integumentary System (Skin) (pp. 112 – 127)  Appendages of the Skin (pp. 119 -123)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 6 The Skin (Integumentary System (pp. 55 – 68)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 4 Skin and Body Membranes (pp. 59 – 73)  Integumentary System (Skin) (pp. 51 – 68)  **PowerPoint Presentations**: Integumentary System 1 and 2; Integumentary System & Disorders;  **Videos**: The Integumentary System, Part 1 & 2 – Skin Deep; Anatomy & Physiology Integumentary System Overview; Integumentary System (Bozeman Science): | Skin  Epidermis  Dermis  Subcutaneous  Hypodermis |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.14 Describe the functions of sudoriferous (sweat) and sebaceous (oil) glands. | I will be able to describe the physical appearance and  function of sweat and oil glands. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 4 Skin and Body Membranes (pp. 109 – 133)  The Integumentary System (Skin) (pp. 112 – 127)  Appendages of the Skin (pp. 119 -123)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 6 The Skin (Integumentary System (pp. 55 – 68)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 4 Skin and Body Membranes (pp. 59 – 73)  Integumentary System (Skin) (pp. 51 – 68)  **PowerPoint Presentations**: Skin Appendages; The Integumentary System Ch4; Integumentary System 2  **Videos**: Oil and Sweat Glands; The Integumentary System, Part 2 – Skin Deep; What’s in Sweat (holocrine, Apocrine, Merocrine Glands) Khan Academy; | Sudoriferous glands  Sweat gland  Sebaceous gland  Oil glands  Holocrine glands  Apocrine glands  Merocrine glands |
| STANDARD  03 Students will describe basic  concepts of structures and functions  of cells, tissues, and the  Integumentary system. | 03.15 Identify the following diseases or disorders of the integumentary system. (Acne, skin cancers [basal cell carcinoma, squamous cell carcinoma, malignant melanoma], decubitus ulcers) | I will be able to identify the appearance and severity of various integumentary disorders, such as acne, skin cancers, and decubitus ulcers. | 2  3 | **Pearson Essentials of Human Anatomy & Physiology Text** by Marieb (2018);  Chapter 4 Skin and Body Membranes (pp. 109 – 133)  The Integumentary System (Skin) (pp. 112 – 127)  Homeostatic Imbalances of Skin (pp. 123 – 127)  **Pearson Laboratory Manual Essentials of Human Anatomy & Physiology** (2018)  Exercise 6 The Skin (Integumentary System (pp. 55 – 68)  **A Complete Study Guide Anatomy & Physiology, 12th Edition Coloring Workbook** (2018)  Chapter 4 Skin and Body Membranes (pp. 59 – 73)  Integumentary System (Skin) (pp. 51 – 68)  **PowerPoint Presentations**: Skin Appendages’ ch08 Integumentary System The Protective Covering; Disorders of the skin Videos: NCLEX Practice Quiz about Integumentary System Disorders; Integumentary Disorders; | Acne  Rosacea  Basal cell carcinoma  Squamous cell  Malignant melanoma  Decubitus ulcers |