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Marking Period 1 (MP1)	Science Curriculum Pacing Guide Grade HS PHYSIOLOGY
MP1 **Standards for Science Content**	HS-LS1-1: Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. HS-LS1-2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. HS-LS1-3.: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. HS-LS1-4: Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms. HS-LS1-6: Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules. HS-PS1-2: Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. HS-PS1-6: Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.
MP1 **Topics**	1. An Orientation to The Human Body: 2. Basic Body Chemistry 3. Cells and Tissues 4. The Coverings of the Body
MP1 **Skills/Concepts**	An Orientation to the human body discusses the base skills and knowledge required to understand the complex workings of human physiology. This unit will ask students to recall and build upon concepts covered in Biology and Chemistry from previous years. This links the previous content areas of study to a new knowledge base. Basic Body Chemistry begins with the fundamental concepts related to matter and energy, then proceeds to show the breakdown of matter into its components. It then provides an overview of biochemistry, the importance of water, and energy. The section concludes with an explanation of how everything works together in all the metabolic processes of the body. Cells and tissues discusses the transitional material between microscopic and macroscopic anatomical study. Students are asked to observe and research the microscopic structure of individual cells, and subsequently combine them to form body tissues that perform specialized functions. The covering of the body builds upon the cell and tissue information presented in the previous topic, with a focus on skin and body membranes.
MP1 **Core Materials**	Pearson - Mastering Essential of Human Anatomy and Physiology (NASTA Ed)

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Marking Period 2 (MP2)	Science Curriculum Pacing Guide Grade HS PHYSIOLOGY
MP2 **Standards for Science Content**	HS-LS1-1: Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. HS-LS1-2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. HS-LS1-3.: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. HS-LS1-7: Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy. HS-LS2-8: Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce. HS-PS1-2: Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties
MP2 **Topics**	5. The Human Skeleton 6. The Muscular System 7. The Nervous System 8. The Body's Special Senses
MP2 **Skills/Concepts**	The Human Skeletal system is an overview of the many functions of bones. It explains how the internal framework of the body provides protection and movement. The Muscular Syste is an overview of the many functions of muscles. It explains how the muscles, as specialized organs, provide multiple functions for survival. The Nervous System is an overview of the special functions of the nervous system. The control center that monitors all changes of the internal and external environments. The Body's Special Senses is an overview of the special ways the human body has to detect the stimuli from the external environment.
MP2 **Core Materials**	Pearson - Mastering Essential of Human Anatomy and Physiology (NASTA Ed)

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Marking Period 3 (MP3)	Science Curriculum Pacing Guide Grade HS PHYSIOLOGY
MP3 **Standards for Science Content**	HS- LS2-8: Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce. HS-PS1-2: Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. HS-LS1-3.: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. HS-LS3-1: Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring HS-LS1-2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. HS-LS3-1: Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring HS-LS1-4: Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms HS-LS1-3: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. HS-PS1-6: Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium
MP3 **Topics**	The Endocrine System Blood The Cardiovascular System The Lymphatic and Immune Systems
MP3 **Skills/Concepts**	The Endocrine System: This section is an overview is the slow-acting communication system of the body that oversees many functions in the homeostatic processes of the body using chemicals called hormones. Blood: This section explores the key role of transport in the body and extends the study of nutrients, metabolic wastes, immune system cells and products, and oxygen. The Cardiovascular System: This section examines the complexity of the system and its significance to all other body systems, as it is the transport system to and from the organs The Lynphatic and Immune Systems: This section explores the key role of transport in the body and extends the study of nutrients, metabolic wastes, immune system cells and products, and oxygen.
MP3 **Core Materials**	Pearson - Mastering Essential of Human Anatomy and Physiology (NASTA Ed)

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Marking Period 4(MP4)	Science Curriculum Pacing Guide Grade HS PHYSIOLOGY
MP4 **Standards for Science Content**	HS-LS1-2: Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. HS-LS1-3: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. HS-LS1-7: Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy HS-PS1-4: Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy. HS-PS1-2: Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties HS-LS3-2: Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors
MP4 **Topics**	The Respiratory System The Digestive System The Urinary System The Reproductive System:
MP4 **Skills/Concepts**	The Respiratory System: This section examines how the respiratory system is intimately connected to the cardiovascular system, both in location and function. Together, they work to supply all body cells with oxygen and dispose of metabolic end products such as carbon dioxide. The Digestive System: This section examines the unique anatomy and physiology of digestive organs as a barrier to the external environment and deals with the nutritional and metabolic aspects of digestion on the chemical and tissue levels. The Urinary System: This section examines the unique anatomy and physiology of the kidneys and the many homeostatic functions that are linked to the human urinary organs. The Reproductive System: This section examines male and female specific characteristics along with the development of greater understanding of pregnancy and genetic variation as a function of reproduction.
MP4 **Core Materials**	Pearson - Mastering Essential of Human Anatomy and Physiology (NASTA Ed)