

Topic: Organization and Development of Living Organisms- Digestion	
Included Standards: SC.912.L.14.45 SC.912.L.14.46 SC.912.L.18.2 SC.912.L.18.3 SC.912.L.18.4 SC.912.L.18.11 SC.912.L.14.6 SC.912.L.16.10 SC.912.N.1.1	
Subject: Anatomy and Physiology	
Score 4.0	In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught. <ul style="list-style-type: none"> Based on experimentation, what can be predicted about the digestive system?
Score 3.0	<p>The student will understand the organization and development of human digestion and be able to describe the role nutrition has in this system.</p> <p>Performs complex skills:</p> <ul style="list-style-type: none"> Summarize with an overview, the digestive system. Compare and contrast the different digestive system organs and their relationships. Classify the functional anatomy of the digestive system. Classify the physiology of chemical digestion and absorption. Evaluate the developmental aspects of the digestive system (including heredity and environmental factors). Deduce the role that diet and nutrition play in the digestive system. Summarize with an overview of metabolic reactions. Trace the development of the metabolism of major nutrients. Draw conclusions about the metabolic states of the body. Trace the development of the metabolic role of the liver. Draw conclusions about the energy balance of the digestive system. Summarize the developmental aspects of nutrition and metabolism. <p>The student exhibits no major errors or omissions regarding the score 3.0 content.</p>
Score 2.0	<p>The student:</p> <p>Recognizes or recalls specific terminology:</p> <p>histology, alimentary canal, organ, cell processes (growth, maintenance, reproduction, and homeostasis), hierarchy (functional and structural), biosphere, multicellular organisms, organ systems, physiology of the digestive system (including mechanical digestion, chemical digestion, absorption and the neural and hormonal mechanisms of control), monosaccharaides, disaccharides, polysaccharides, carbohydrates, macromolecules, energy, metabolic pathways (primarily photosynthesis and cellular respiration), fatty acids, triglycerides, phospholipids, steroids, lipids, cell membranes, proteins, amino acids, reactions, enzymes, catalysts, activation energy, biochemical reactions, factors (pH and temperature, genetic, environmental), pathogenic agents, biotechnology, medical issues, ethical issues, DNA, genetic information, genes, biological molecules, genetically modified organisms,</p>

	<p>reproduction, species, systematic observations, empirical evidence, explicate, natural phenomena ,inferences, scientific argumentation, scientific inquiry, scientific knowledge</p> <p>Performs basic skills:</p> <ul style="list-style-type: none"> • Describe the key parts of the digestive processes • Summarize the process of human ingestion. • Explain ways in which propulsion, mechanical digestion and chemical digestion work in the digestive process. • Recognize the process of defecation. • Explain the basic functional concepts within the digestive system. • Diagram and explain the mouth, the associated organs and the digestive processes: mouth to esophagus. • Diagram and explain the stomach, small Intestine, large intestine and associated structures • Explain the structure of fatty acids, triglycerides, phospholipids, and steroids. • Summarize absorption. • Explain the role of metabolism for carbohydrates, lipids and proteins. • Illustrate and explain energy intake and energy output. • Describe how obesity occurs in humans and the need for regulation of food intake. • Describe how metabolic rate and heat production plays a role in the regulation of body temperature. <p>No major errors or omissions regarding the score 2.0 content.</p>
Score 1.0	With help, I know some of 2.0 and 3.0.
Score 0.0	Even with help, I am unable to understand.

Topic: Anatomy and Physiology- Reproductive System	
Included Standards: SC.912.L.16.13 SC.912.L.14.41 SC.912.L.16.8 SC.912.L.16.10 SC.912.L.14.6 SC.912.N.1.1	
Subject: Physical Science	
Score 4.0	In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught. <ul style="list-style-type: none"> Investigate mammalian dissection.
Score 3.0	<p>The student will understand the functions of the reproductive system of the human body.</p> <p>Performs complex skills:</p> <ul style="list-style-type: none"> Compare and contrast the anatomy of the male and female reproductive systems. Compare and contrast the physiology of the male and female reproductive systems. Distinguish between the different sexually transmitted infections. Identify the developmental aspects of the reproductive system. Trace the development from a zygote to an egg. Trace the events of embryonic development: zygote to blastocyst implantation. Trace the events of embryonic development: gastrula to fetus. Trace the events of fetal development. Research the effects of pregnancy on the mother. Identify issues of parturition (birth). Diagnose the adjustments of the Infant to extra uterine life. Research the lactation process. Compare and contrast assisted reproductive technology (ART) and reproductive cloning. Classify systems when researching mammalian dissection. <p>The student exhibits no major errors or omissions regarding the score 3.0 content.</p>
Score 2.0	<p>The student:</p> <p>Recognizes or recalls specific terminology: fetal circulation, circulatory system, anatomy, physiology, human reproductive system, human development, fertilization, trimester of pregnancy, Heredity, DNA, genetic information, genes, encoded, genetic information, generation, commercial production of biological molecules, genetically modified organisms, survival of species, mutation, cell cycle, uncontrolled cell growth, cancer, biotechnology, society, environment, medical and ethical issues, genetic factors, environmental factors, pathogenic agents</p> <p>Performs basic skills:</p>

	<ul style="list-style-type: none"> • Identify the anatomical structures of the male reproductive system (scrotum, testes, penis, male duct system, accessory glands). • Explain male sexual response, spermatogenesis, and hormonal regulation of male reproductive function. • Identify the anatomical structures of the female reproductive system (the ovaries, the female duct system, external genitalia, mammary glands, uterine). • Explain female sexual response, oogenesis, the ovarian cycle the hormonal regulation of the ovarian cycle and extra uterine effects) • Describe the effects of sexually transmitted diseases (Gonorrhoea, Syphilis, Chlamydia, Trichomoniasis, Genital Warts, Genital Herpes, HIV/AIDS and HPV) • Describe embryological and fetal events. • Describe the effects of puberty. • Describe declining ovarian function. • Explain the process of human development from zygote to egg. <p>No major errors or omissions regarding the score 2.0 content.</p>
Score 1.0	With help, I know some of 2.0 and 3.0.
Score 0.0	Even with help, I am unable to understand.

Topic: Organization and Development of Living Organisms- Urinary System	
Included Standards: SC.912.L.14.47 SC.912.L.14.48 SC.912.L.6 SC.912.N.1.1	
Subject: Human Anatomy and Physiology	
Score 4.0	<p>In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.</p> <ul style="list-style-type: none"> • Investigate diseases associated with the urinary system. • Investigate factors that affect personal and public health concerning the urinary system.
Score 3.0	<p>The student will understand the anatomy and physiology of the urinary system.</p> <p>Performs complex skills:</p> <ul style="list-style-type: none"> • Deduce the gross anatomy of the kidney and its coverings. • Categorize the physiology of the kidney and the mechanisms of urine formation (glomerular filtration, tubular reabsorption, tubular secretion, regulation of urine concentration, volume and Renal Clearance) • Trace the formation of dilute versus concentrated urine. • Identify the problems with abnormal urine components. • Trace the embryonic development of the urinary organs. • Identify the factors that determine body water content and describe the effect of each factor. • Contrast the overall effects of electrolytes and nonelectrolytes. • Diagnose the importance of water balance and ECF osmolality. • Diagnose the importance of electrolyte and acid-base balance. • Distinguish between acidosis and alkalosis resulting from respiratory and metabolic factors. • Deduce why infants and the aged are at greater risk for fluid and electrolyte imbalances than are young adults. <p>The student exhibits no major errors or omissions regarding the score 3.0 content.</p>
Score 2.0	<p>The student:</p> <p>Recognizes or recalls specific terminology: physiology, urine, kidney, anatomy, histology, ureters, urinary bladder, urethra, genetic factors, environmental factors, pathogenic agents</p> <p>Performs basic skills:</p> <ul style="list-style-type: none"> • Describe the location, internal and external anatomy of the kidneys. • Trace the blood and nerve supply within and around the kidneys. • Describe the anatomy of nephrons. • Describe the physical characteristics and chemical composition of urine. • Describe the general location, structure, and function of the ureters, urinary bladder, and the urethra. • Define micturition and describe its neural control.

	<ul style="list-style-type: none"> • Indicate the relative fluid volume and solute composition of the fluid compartments of the body. • Describe factors that determine fluid shifts in the body. • Describe feedback mechanisms that regulate water intake and hormonal controls of water output in urine. • Describe the influence of ADH (antidiuretic hormone). • Describe disorders of water balance (dehydration, hypotonic hydration, and edema). <p>No major errors or omissions regarding the score 2.0 content.</p>
Score 1.0	With help, I know some of 2.0 and 3.0.
Score 0.0	Even with help, I am unable to understand.