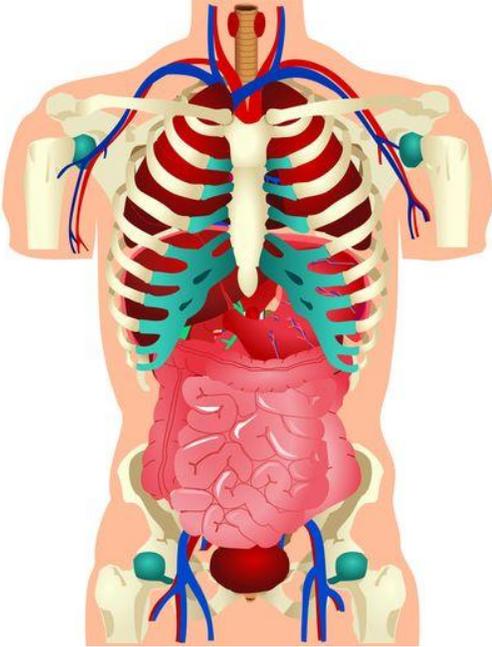


Human Body CT State Standards:

Grade Level Concept GRADE-LEVEL CONCEPT 7.2.b.	Grade Level Expectations and Expected Performances
1. Systems consist of parts that interact with and influence each other. Parts of a system work together to make the whole entity work. Similarly, each part of an animal body has a specific job to do, and all the different parts work together to support life.	3. Explain how the structure and function of multicellular organisms (animals) is dependent on the interaction of cells, tissues, organs and organ systems.
2. Although all cells have similar basic structures, in multicellular organisms cells have specialized shapes that enable them to perform specific roles (for example, muscle, nerve, and skin cells can be identified by their distinct shapes).	4. Investigate and explain in writing the basic structure and function of the human skeletal system.
3. Groups of similar cells are organized in tissues that have specific functions (for example, providing support, connecting parts, carrying messages, protecting internal and external surfaces).	5. Differentiate between the structures and range of motion associated with ball, socket and hinge joints and relate human joints to simple machines.
4. Different tissues work together to form an organ, and organs work together as organ systems to perform essential life functions.	6. Demonstrate how the muscles, tendons, ligaments and bones interact to support the human body and allow movement.
5. The human skeletal system includes bones joined together by ligaments. The skeletal system functions to shape and support the body, protect internal organs, enable movement, form blood cells, and store minerals such as calcium and phosphorous.	7. Label the major parts of the human respiratory system and explain in writing the function of each part (nasal cavity, trachea, bronchi, lungs and diaphragm).
6. Joints are places where two bones come together and body movement can occur. The structure of a joint (for example, ball and socket, hinge or pivot) determines the kind of movement possible at that point.	8. Label the major parts of the human circulatory system and explain in writing the function of each part (heart, veins, arteries and capillaries).
7. The human muscular system includes skeletal, smooth and cardiac muscles. The skeletal muscles are attached to bones by tendons and they are responsible for the movement of the body. The cardiac muscle is responsible for the pumping action of the heart and the smooth muscles are related to the movement of the internal organs.	9. Design and conduct controlled variable experiments to analyze the interaction between the circulatory and respiratory systems as the demand for oxygen changes.
8. The muscular and skeletal systems interact to support the body and allow movement.	10. Label the major parts of the human digestive system and explain in writing the function of each part in the chemical and physical breakdown of food (mouth, esophagus, stomach, small intestine, large intestine and rectum).



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<p>9. The major parts of the human respiratory system are the nose, trachea, bronchi and lungs. This system is responsible for breathing and exchange of gases between the body and its surroundings.</p>	<p>C16. Describe the structures of the human digestive, respiratory and circulatory systems and explain how they function to bring oxygen and nutrients to the cells and expel waste materials.</p>
<p>10. The major parts of the human circulatory system are the heart, arteries, veins and capillaries. The right side of the heart pumps blood to the lungs for gas exchange; the left side of the heart pumps the oxygenated blood around the body.</p>	<p>C17. Explain how the human musculoskeletal system supports the body and allows movement.</p>
<p>11. The blood is made of plasma, red and white blood cells, and platelets. Its main role is to carry small food molecules and respiratory gases (oxygen and carbon dioxide) to and from cells. Blood cells are also responsible for destroying invading particles, preventing diseases, and stopping bleeding after injuries.</p>	 An anatomical diagram of the human torso from the neck to the pelvis. The skeletal system is shown in light yellow, including the ribcage, spine, and shoulder/hip bones. The circulatory system is highlighted in red and blue, showing the heart in the center, with arteries and veins branching out to the lungs and the rest of the body. The digestive system is shown in shades of pink and red, including the stomach, small intestine, and large intestine. The diagram illustrates the integration of these systems within the body.
<p>12. The respiratory and circulatory systems work together to provide all cells with oxygen and nutrients. When the body's need for oxygen changes, the circulatory and respiratory systems respond by increasing or decreasing breathing and heart rates. These changes can be measured by counting breaths, heartbeats or pulses per minute.</p>	
<p>13. The major parts of the human digestive system are the mouth, esophagus, stomach, small intestine and large intestine. This system is responsible for breaking down food, absorbing nutrients and water, and eliminating waste. The liver and pancreas support the functions of the major digestive organs by producing and releasing digestive liquids into the digestive tract.</p>	
<p>14. The nervous, immune and excretory systems interact with the digestive, respiratory and circulatory systems to maintain the body's dynamic internal balance (homeostasis).</p>	