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Curriculum Units by Fellows of the National Initiative
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The Cardiovascular System: Mechanics and Dynamics

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The cardiovascular (or circulatory) system is one of the most vital systems in the human body. This system provides a transport mechanism for oxygen through the body as a fuel source for cellular respiration, and then the return transport of carbon dioxide, a byproduct of cellular respiration, that the body expels as waste through breathing. It also provides for the transport of amino acids, nutrients, hormones, and the other components that make up blood.

Seventh-grade life science in Georgia is a general study of biology including an introduction to the kingdoms of life, the interdependence of life, and the structure of life. The state standards require students to understand the structure of cells and their functions as well as how cells form tissues, organs, and organ systems. This unit takes an alternate approach, to provide an interesting backdrop about one body system and its functions. Through the instruction of this unit students will be able to redefine their understanding of cell structure and apply it to an understanding of oxygen transport in the body through the circulatory system, blood pressure, and flow of blood.

(Developed for Life Science, grade 7; recommended for Life Science, Middle School grade 7, and Biology, grade 9)

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