



YALE NATIONAL INITIATIVE

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Curriculum Units by Fellows of the National Initiative
2011 Volume VII: Organs and Artificial Organs

The Perfect Team—Our Heart and Lungs

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Odds are, neither you nor your students think about the approximately 21,000 breaths you take or 100,000 times your heart beats each day. Yet, these two simple actions are so important that if either ceased, we would die in a matter of minutes. This physiology unit, designed for a senior-level biology class, examines the heart and the lung as individual organs and integrated systems. Students will begin by learning where these organs are found in the body and how they work, the ways in which they affect other organs and tissues, and why they are so important to the body's overall function. They will then examine the body on a more philosophical level by looking into health issues concerning these organs and the ethics of transplantation. The content of the unit is supplemented with labs and activities, and students will create various types of multimedia to present in an online portfolio. This gives the students not only the knowledge behind these two important organs, but the means to share it. It is my hope that students will complete this unit with a newfound appreciation for their heart and lungs, and the empowerment to communicate this to others.

(Developed for IB Biology, grades 12; recommended for Advanced Biology [IB or AP] and Anatomy and Physiology, grades 11-12; and Health, grades 9-12)

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