



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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Surveillance Errors and Disease

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Ask any student to name diseases that affect the human body and they can probably develop a pretty lengthy list of infectious and chronic conditions. The factors that can lead to disease are constantly working in our body – from exposure to microbes to simple DNA mutations. However, the body is able to stave off many diseases through surveillance mechanisms like the immune system, DNA replication self-editing, DNA double strand break repair, and misfolded protein degradation. It is when these surveillance mechanisms fail that catastrophe happens. Errors in surveillance can be classified into four major groups: surveillance is turned off, surveillance is overwhelmed, surveillance makes a mistake, or surveillance is overexcited. Students will have the opportunity to explore these various errors and diseases that happen as a result. This unit is aimed at students who are in high-school biology, anatomy and physiology, or molecular biology.

(Recommended for Biology, Anatomy, and Physiology, grades 10-12)

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