Curriculum Units by Fellows of the National Initiative 2017 Volume VI: Engineering of Global Health

## **Cure for the Common Cold: Fantasy or Reality?**

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A cure for the common cold, whether fantasy or reality, has been written off for students studying middle school life science. In this unit, students expand on their understanding of cells and genetics to determine the functions of tissues, organs, and systems following the Next Generation Science Standards (NGSS). Through the course of the curriculum, all living and nonliving components of the common cold are explored, by studying the intertwining operations of the respiratory, immune, and lymphatic systems in their response to viruses. After determining how viruses infect the body and how it reacts to the infection, students investigate why there is not a cure, or a preventative vaccine. Through the best practice of Model Based Inquiry (MBI), learning occurs in four parts, anchoring the unit in a puzzling phenomena and essential question, using explanatory models to revise their thinking throughout, tracking the class consensus of understanding through summary charts (after activities, readings, investigations, simulations, etc.) and sharing their ideas with one another through meaningful and productive discourse. The simulation of an infectious disease epidemic will aid in providing students with a memorable experience when addressing the ethical issues that come along with mandated vaccines.

(Developed for Life Science, grade 7; recommended for Life Science, grades 6-8, and Biology, grades 9-12)

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