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Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
2019 Volume III: Human Centered Design of Biotechnology

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## **Human-Centered Design for Elementary Grades: Designing Assistive Technologies for the Human Body**

Guide for Curriculum Unit 19.03.01  
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This unit is written with fourth grade students in mind, although it can be adapted for any grade level.

We want to develop citizens who are knowledgeable problem-solvers as they tackle the challenges of improving the quality of life for themselves and the world around them. One approach that has been heavily utilized in universities and businesses in recent times is known as Design Thinking. It is a model adopted by famous companies such as Google, Apple and Airbnb and they have wielded it to notable effect. The design thinking model is an incredibly powerful and useful process for students to use whenever they are faced with designing solutions to help others. Like any process or skill, it will take practice to become good at it.

While the heart of this unit is the Design Thinking process, I have also connected it to life science concepts related to the human body as outlined in both NGSS and Connecticut State Standards. The unit should take nine or ten 45 minute lessons to complete, depending on the complexity of the projects to be prototyped and tested.

(Developed for STEM/Life Science, grade 4; recommended for STEM, grades 3-5)

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