Introduction to Human Anatomy and Physiology. Molecules, Cells and Tissues

High School Human Anatomy Introduction	Links
Introduction to Human Anatomy and Physiology. Molecules, Cells and Tissues Standards HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. Feedback mechanisms maintain a living system internal conditions within certain limits. Feedback mechanisms can encourage (through positive feedback) or discourage (through negative feedback) what is going on inside the living system (Human body) LS1.A	
21st Century Learning Expectations: • Hinsdale students will communicate through various means • Hinsdale students will be able to solve problems	Link for 21st Century Learning Expectations
Enduring Understandings (cross cutting concepts): Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level. Feedback mechanisms maintain homeostasis in the human body.	

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Learning Competencies (engineering practices)	Essential Questions (core ideas)
Students will be able to: (NGSS Science and Engineering practices) Explain that the human body is composed of atoms, that come together to form molecules, that certain molecules form cells, that cells come together to form four types of tissue, that these tissues are part of organs, and organs work together to perform specific functions and that all organ systems work in unison to maintain homeostasis.	How is the Human Body Organized? How are humans similar to other organisms? What is the difference between Anatomy and Physiology? How do the different organ systems in the human body work together to maintain homeostasis?
Performance Task Samples and learning activities Performance/Transfer Tasks Solving puzzles about levels of organization and organs, organ systems and function matching.	

Essay writing: How do all organ systems work together to maintain homeostasis

Learning Plans
Learning Activities • Levels of Organization review. • Systems matching game. • Homeostasis and feedback mechanisms. • Language of Anatomy, Anatomical Terms. (positions, body regions, directions and sections) • Body Cavities. • Review Atoms, Bonds and the Molecules of life. • Review of cell functions and organelles. • Review of Mitosis and Cell Cycle • The four types of tissue in the body. • Review of use and care of the Microscope
Materials Illustrations of organs, systems and cards with functions. Computers with internet access. Microscopes. Prepared slides of tissues.

Technology Integration

Body regions activities:

http://www.wisc-online.com/objects/ViewObject.aspx?ID=AP15405

http://www.wiley.com/legacy/college/bio/tortora366927/resources/student/anatomydrill/ch1.html

Tissue activities: http://www.mhhe.com/biosci/ap/histology_mh/start_histology.html

Human homeostasis game: http://www.pbslearningmedia.org/asset/tdc02_int_bodycontrol/