Anatomy and Physiology Activity Log

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| **Standard 1: Levels of Organization in the Human Body: Cellular** | AP.1.1 Investigate the forms of cellular transport within and across cell membranes. Explain how passive and active transport move materials through the body and into/out of cells. Describe the how simple diffusion differs from facilitated diffusion. Describe how vesicular transport moves materials within a cell. |
| AP.1.2 Develop a model which describes the stages of somatic cell division (mitosis), how it contributes to maintaining homeostasis, and why cellular differentiation is vital to development. |
| AP.1.3 Explore the homeostatic range to sustaining human life, the principal mechanism involved, and predict the consequences of what happens when homeostasis is not maintained. |
| AP.1.4 Introduce the basic step and control mechanisms of protein synthesis. |
| AP.1.5 Explore the vital ways that proteins contribute to the structure, metabolism, and defense of the body, as well as, the importance of shape to their function. |

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| **Standard 2: Levels of Organization in the Human Body: Tissue and Organs** | AP.2.1 Analyze how each hierarchical level of life contributes to complexity of anatomy and physiological functions (e.g. cells, tissues, etc.). Investigate the relationships among various tissue types as well as the molecular and cellular composition of these tissues. |
| AP.2.2 Investigate and be able to describe the histological structural and functional characteristics of the four basic tissue types. |
| AP.2.3 Identify the body cavities, their membranes, and the organs within each cavity. Investigate the major organ systems and describe their basic functional importance. |
| AP.2.4 Identify anatomical terms (including body direction, regions, planes) on a diagram, model, or through dissection. |

Aug 14 M- Rules and Intro Day.

Aug 15 T- Inside the Living Body Video

Aug 16 W- Finish Video, Intro Notes. Hmwk: Read Chapter 1, do Question 1-15 due Friday.

Aug 17 R- Finish Intro Notes. Pogil Model 1 Activity, p. 2

Aug 18 F- Pogil Model 2 Activity p. 5. Hmwk: Ch 1 Review in book due Monday.

Aug 21 M- Basic Chemistry notes part 1. Hmwk: Ch. 2 1-19 due Wed.

Aug 22 T- Basic Chem notes part 2- Reactions and Inorganic Chemistry

Aug 23 W- Atom Game Hmwk: Atom packet due Fri

Aug 24- R- Review and Recitation Day

Aug 25- F- Exam #1

Aug 28- M Basic Chem Part 3- Organic Compounds, Carbs and Fats Hmwk: Read Ch. 2, do Ch. 2 Review due Wed

Aug 29- T- Basic Chem Part 3- Proteins, DNA and RNa

Aug 30- W- Diet project Hmwk: Bio Honors Chem packet due Fri

Aug 31- R Review and Recitation

Sep 1- F Exam #2

Sep 4- M- Off Labor Day

Sep 5- T- Cell Structure and Function Notes Hmwk: Begin Organelle Project

Sep 6- W- Cell Part I Notes

Sep 7- R- Organelle Debate Work Day

Sep 8- F- Organelle Debates

Sep 11- M- Cells part II Notes Cellular Membranes Hmwk: Read Ch. 3 Do problems 1-27 Due Fri

Sep 12- T- Cells part III Notes DNA and RNA

Sep 13- W- Osmosis Lab

Sep 14- R- Review and Recitation

Sep 15 – F- Exam #3

Sep 18- M-Body Tissues- Connective Hmwk: Read Ch.3 Do problems 28-33 due Fri

Sep 19- T- Body Tissues- Epithelial

Sep 20- W- POGIL Epithelial Model 1, Coloring Activities

Sep 21- R- Review and Recitation

Sep 22- F- Exam # 4

Sep 25 – M- Muscle Tissues Hmwk: Do Chapter 3 Review due Fri

Sep 26- T- Nervous Tissue

Sep 27- W- POGIL Homestasis Models 1 and 2

Sep 28- R- Review and Recitation

Sep 29- F- Exam #5

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| **Standard 3: Movement and Support in the Human Body: The Integumentary System** | AP.3.1 Analyze the structural characteristics and functional importance of the integumentary system to maintaining homeostasis of the body. |
| AP.3.2 Investigate the injuries, diseases, and causes associated with the integumentary system and evaluate the consequences. |

Oct 2 M- Integumentary System part I Hmwk: Read Ch. 4 do questions 1-15 due Friday

Oct 3 T- Integumentary System park II

Oct 4- W- POGIL Epithelial Tissue Structure

Oct 5- R- Review and Recitation

Oct 6- F- Exam #6

Oct 9- M- Cancer and Skin disorders Hmwk: Read Ch. 4 do Ch 4 Review due Wed

Oct 10- T- Start Cancer and Skin Disorder projects

Oct 11- W- Cancer and Skin Disorder projects work day

Oct 12- R- Cancer and Skin Disorder presentations

Oct 13- F- Exam # 7

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| **Standard 4: Movement and Support in the Human Body: The Skeletal System** | AP.4.1 Develop a model to illustrate the structure, development, growth, and function of compact and spongy bone. |
| AP.4.2 Evaluate the general macroscopic characteristics of a typical long bone, then locate and identify individual bones and bone features. |
| AP.4.3 Identify and describe the structure of the major types of joints and how these structural components influence functional mobility and stability. |

Oct 16- M- Bones and Skeletal System Intro. Hmwk Read Ch.5 do ques 1-36 due F

Oct 17- T- Joints

Oct 18- W- POGIL Bone Tissue Section 1-3

Oct 19- R- Skeletal System Notes

Oct 20- F- Joints only Quiz

Oct 23- M- Finish Skeletal System Notes Hmwk: Do Ch. 5 Review due Wed

Oct 24- Review and Recitation

Oct 25- W- Exam # 8

Oct 26- R- Fall Break

Oct 27- F- Fall Break

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| **Standard 5: Movement and Support in the Human Body: The Muscular System** | AP.5.1 Compare and contrast the structural and functional similarities and differences between skeletal, cardiac, and smooth muscle. |
| AP.5.2 Investigate the molecular components of skeletal muscle fiber and how they function to bring about contraction and relaxation. |
| AP.5.3 Explain the molecular processes involved in the sliding filament model and biochemical mechanisms that provide energy for muscle contraction and relaxation. |
| AP.5.4 Describe how a neuromuscular junction functions and investigate how motor units influence the force and velocity of muscle contraction. |
| AP.5.5 Identify the major muscles on a diagram, model, or through dissection. |
| AP.5.6 Distinguish between isotonic and isometric contractions of skeletal muscle. Examine muscular hypertrophy and atrophy and discuss causes of these processes. |

Oct 30- M- Muscular System Intro Hmwk: read Ch. 6 do ques 1-15 due F

Oct 31- T- Muscular System part II

Nov 1 – W- POGIL Muscle Contraction

Nov 2- R- Review and Recitation

Nov 3- F- Exam #9

Nov 6- M- Dissection Intro.

Nov 7- T- Crayfish Dissection Day 1

Nov 8-W Crayfish Dissection Day 2

Nov 9- R- Review for Final

Nov 10- First Trimester Final Exam