**Curriculum Map**

**Course Title:** AP Biology **Grade:** 10-12

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| **Unit (Name/Number):** Unit 9: Animal Form & Function | **Pacing:** 12 Days |

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| **Essential Question(s):**  1. How do animals use negative and positive feedback to respond to changes in the environment?  2. How do cells communicate with nearby or distant cells?  3. How does specialization of organs in animals promote efficiency in use of energy and matter?  4. How does the movement of molecules through a cell membrane allow a cell to maintain homeostasis?  5. How does an animal’s nervous system allow it to respond to internal and external stimuli?  6. How do homeostatic mechanisms reflect common ancestry and divergence due to adaptations in different environments?  7. How do organisms regulate body temperature and metabolism  8. How do animals’ internal and external signals regulate physiological responses in coordination with environmental cycles and cues?  9. How do hormones use signal transduction pathways to link signal reception with cellular response?  10. How does immunological response to pathogens affect an organism’s health?  11. How does the specific immune response differ from the nonspecific?  12. How does viral replication result in genetic variation of the virus and its host? |

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| **Content/Key Concepts** | **Standards** | **Key Vocabulary** | **Learning Activities/Resources** | **Evidence of Learning**  (Assessments; Performance Tasks) |

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| Endocrine System & Homeostasis | Learning Objective  2.16-2.22, 2.28, 2.36-2.37, 2.39 | * Steroid hormone, peptide hormone, negative feedback, gland, endotherm, ectotherm, thermoregulation | Beta Cell Case Study, Bozeman Videos | Graded case study & Ch 45 Quiz |

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| Nervous System | Learning Objectives  2.39, 3.44-3.50 | * Sensory input, integration, motor output, action potential, chemical synapse, ligand-gated channels, receptors, neurotransmitters, depolarization, repolarization | Reflex Arcs Science Take Out Lab Model, Lights Camera Action Potential Lab, Circadian Rhythm Close Reading | Completed lab model, graded lab packet, graded close reading questions, Ch 48 & 49 Quiz |

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| Immune System & Viruses | Learning Objectives  2.29-2.30, 2.43, 3.29-3.31 | * Nonspecific immune system, specific immune system, leukocytes, lymphocytes, inflammatory response, prostaglandins, histamine, t-cells, b-cells, macrophages | Conflict Immunity Game, Nobel Prize Immune System Interactive, HIV Coloring Activity, Virus Close Reading | Completed games & interactives, graded close reading, Ch 43 Quiz |

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| Plant Hormones & Communication | Learning Objectives  2.16, 2.21, 2.36 | * Auxin, phototropism, photoperiodism, thigmotropism, gravitropism | Plant Hormone POGIL Activity | Completed plant hormone packet |