**IB Biology SL Unit Plan**

**Instructor:** Joshua Amiel

**Subject / Grade**: IB Biology SL (Nerves, hormones and homeostasis)

**IB Biology SL PLO’s:**

6.5.4: Define resting potential and action potential (depolarization and repolarization).

6.5.5: Explain how a nerve impulse passes along a non-myelinated neuron.

6.5.6: Explain the principles of synaptic transmission.

**Summative Assessment**

Action potential graphic organizers; action potential and synaptic transmission quiz.

**Resources:**

IB Biology texts (Clegg and Damon *et al*.).

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| **Date** | **Lesson Topic** | **Subject PLO’s** | **Student Activities** | **Teacher Activities** |
| Mar. 2 | Ch. 7 Nerves, hormones and homeostasis (Clegg, pp. 211-214). | 6.5.4: Define resting potential and action potential (depolarization and repolarization). | * Watch action potential video. * Actively read and take notes on action potentials. * Begin action potential graphic organizer. | * Review nerve transmission and reflex arc. * Set up action potential graphic organizer. |
| Mar. 4 | Ch. 7 Nerves, hormones and homeostasis (Clegg, pp. 211-216). | 6.5.5: Explain how a nerve impulse passes along a non-myelinated neuron.  6.5.6: Explain the principles of synaptic transmission. | * Watch action potential video as review and follow the transport of ions. * Create a human wave to visualize an action potential. * Complete action potential graphic organizer **(due)**. * Complete hand out on synaptic transmission using text. | * Review action potentials and ion transport. * Have students create a human wave to visualize the transmission of an action potential down a non-myelinated neuron. * Introduce synaptic transmission and relate it to muscle contraction. |
| Mar. 6 | Ch. 7 Nerves, hormones and homeostasis (Clegg, pp. 211-216).  Ch. 7 Reproduction (Clegg, pp. 224-226). | 6.5.4: Define resting potential and action potential (depolarization and repolarization).  6.5.5: Explain how a nerve impulse passes along a non-myelinated neuron.  6.5.6: Explain the principles of synaptic transmission.  6.6.1: Draw and label diagrams of the adult male and female reproductive systems. | * Ask questions before quiz. * One student completes a diagram of synaptic transmission for the class, class asks questions. * **QUIZ.** * Read about reproduction and draw female reproductive tract. | * Review action potential, resting potential and synaptic transmission. * Facilitate student synaptic transmission example. * Proctor quiz. * Introduce reproduction. * Class construction of female reproductive tract. |