Comparative Anatomy and Physiology

Course Description

This one-year course engages students in rigorous study of the body's physiological systems and then compares these systems across many species in the animal kingdom (both vertebrates and invertebrates). Course assignments range from formal assessments to hands on dissections and labs. Additionally, this course places an emphasis on public speaking through scientific presentations and independent research to enhance scientific reading and writing skills. Students will also learn to read and interpret published scientific articles to examine evolutionary relationships between species, making connections that will be built on in later bioinformatics studies.

Course Objectives

- Demonstrate an understanding of academic honesty and ethics.
- Demonstrate effective communication skills, through team working, oral presentations, and good written communication.
- Develop and refine skills related to academic research and the effective communication of complex ideas.
- Demonstrate mastery of how different body systems work and relate to each other across or within an array of different species

Assessing Performance

Students are assessed by obtaining weekly grades from the following: Tests, Lab Reports, Communicative Projects, Group Reports, Dissections, Bioinformatics Project

Units

Introduction	**Anatomical Terms**	**Cells/Microbiology**	**Tissues**
Integument	**Skeletal**	**Muscular**	**Circulatory**
Respiratory	**Digestive**	**Urinary**	**Neurological**
Special Senses	**Reproductive**	**Bioinformatics**	

Materials

A desktop or laptop computer, access to 1-to-1 daily, and Internet. Chromebooks will not work for the virtual dissection software.

There are two options for this class.

Option 1: Actual Dissection

Hardware/Reusable Material	Recommended Unit	Cost/Unit
Complete Dissection kit (scalpel, blades, forceps)	1 per Classroom	$175

Dissection trays	1 per 6 students	$72
Consumable Material	**Recommended Unit**	**Cost/Unit**
Materials necessary for project	1 per Classroom	$400-600*

*Consumable one time uses items = Cost dependent on chosen dissection specimens

Option 2: Virtual Dissection

Software	**Recommended Unit**	**Cost/Unit**
Virtual dissection software and equipment	1 per 10 students	$250- $560*

*These range in price depending if you want supplemental material to be included or not and how many animals you want to dissect. The cost shown is for one animal for 10 individual activation codes