SP21 BIOL 2101-D03

Signature Assignment

Lab Experiment Topics

The Chemical Level of Organization

The Cellular Level of Organization

The Tissue Level of Organization

The Integumentary System

Osseous Tissue & Bone Structure (Skeletal System)

The Axial Skeleton

The Appendicular Skeleton

Articulations (Skeletal System)

Muscle Tissue

Neural Tissue/Brain & Cranial Nerves

Special Senses

Team goal:

Create a valid, virtual lab experiment on (1) topic from (1) body system. You will create and conduct an experiment on both anatomy and physiology from a body system. For example, Team #10 could choose the reproductive system (female) as their topic and create a virtual lab over what the experiment would cover/teach. Due to COVID-19, the lab experiment would need to be able to be conducted virtually but that doesn't mean lacking quality.

Team #10 Example:

Team #10 decides to create and conduct a virtual lab experiment on the female reproductive anatomy. They begin with a specific topic from the female reproductive system – ovulation, specifically, does increased hormone consumption in cow's milk, specifically estrogen, actually increase or change ovulation in the human female (hypothesis)? Team #10 has to create a virtual lab experiment that covers not only the anatomy involved in ovulation, but the physiology as well. The experiment must match the purpose/problem statement as well as the hypothesis, which is stated above. Their lab experiment design has to show proof of research of their hypothesis, the connection to the purpose/problem statement, and show specific details as to how

they are going to conduct the lab. These are the SLOs that will be part of your lab experiment creation:

1. Safety standards aren't necessarily explained since the lab is virtual.
2. Ethical standards.
3. Locating and identifying anatomical structures.
4. Appropriately utilizing laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
5. Working collaboratively to perform experiments.
6. Demonstrating the steps involved in the scientific method.
7. Communicating results of scientific investigations, analyzing data and formulating conclusions.
8. Using critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations and predictions.

Team Lab Report

The lab report the team creates must have written and visual images as they pertain to the flow of the lab as well as the findings from the experiment. The lab report must also:

- Have each student submit to the report individually and include a written paragraph explaining and reflecting upon their role and contributions to the lab experiment.
- This paragraph should be added to the end of the report before uploading the final document.

There are three parts to this Signature Assignment:

1. The creation of a virtual lab experiment on a particular topic within a body system. This information will be placed on the PPT slides (TSC template).
2. Slides must be narrated by team members who were responsible for the particular slide, explaining the slide and that part of the experiment.
3. The creation of a separate lab report that follows the TSC instructions and rubric.