3D Science Unit Planner

Marietta City Schools

Grade & Course: Zoology	**Topic:** Unit 3: **Animal Adaptations and Behaviors**	**Duration:** 2 Weeks
Teachers: Zoology PLC Teachers		

SZ4a: Construct explanations to relate structure and function of animals to ecological roles, including morphological, physiological, and behavioral adaptations

Narrative / Background Information		
Prior Student Knowledge: (REFLECTION – PRIOR TO TEACHING THE UNIT) Students are expected to have background knowledge from their Biology class and previous Zoology units which includes the understanding of basic cell structures, levels of organization, evolution, geologic history of life, and basic taxonomy and classification.		
Year-Long Anchoring Phenomena: (LEARNING PROCESS) There is a wide variety of animal diversity across the planet.		
Unit Phenomena (LEARNING PROCESS) **Phenomenon:** Animal variety in form and function is still a field of discovery**.** **Inquiry Statement:** Animal diversity is influenced by natural selection and adaptations.		
Global Context: SCIENTIFIC AND TECHNICAL INNOVATION - -How do we understand the world we live in? - Modernization, industrialization and engineering has an influence on Earth and its organisms.		
Approaches to Learning Skills: **SEP** -Constructing Explanations -Develop and Analyze Models. -Compare and Contrast	**Disciplinary Core Ideas: (KNOWLEDGE & SKILLS)** **CORE IDEAS** Distinguishing characteristics of animal groups with emphasis on evolution of transitional body structures and comparison of body systems, including human and animal interactions and relationships.	**Crosscutting Concepts: (KNOWLEDGE & SKILLS)** ● Systems and Systems Model ● Stability and Change ● Scale, Proportion, and Quantity ● Cause and Effect ● Patterns

Possible Preconceptions/Misconceptions: (REFLECTION – PRIOR TO TEACHING THE UNIT)

- All behaviors are determined at birth.
- Organisms adapt to their environment in their lifetime.
- Organisms are perfectly adapted to their environments.
- All aspects of an organism's traits are adaptive.
- The strongest always win and reproduce.
- DNA determines your destiny.
- The biggest animal is the best animal.

Key Vocabulary: (KNOWLEDGE & SKILLS)

Evolution, survival, fitness, adaptation, behavior, mating, species, habituation, conditioning, natural selection, relationships, life cycles.

Inquiry Questions:

Factual

How do scientists observe animal behavior and adaptations in the field?
What characteristics distinguish Chordates from other organisms?
Do animal behaviors evolve through natural selection?
What is animal behavior?
What is an adaptation?

Conceptual

Explain the mechanisms that drive adaptations.

Why do complex behaviors and adaptations drive evolution?
How do structural differences in animals function to meet similar needs?

Debatable

Is one type of adaptation or behavior more beneficial in the survival of a species than another?

Summative assessment	
Unit project Midterm Presentation	Relationship between summative assessment task(s) and statement of inquiry: The tasks allow students to demonstrate their knowledge of animal adaptations and behaviors. Students will ask questions to then research/ gather information. They will create a written presentation of their research and orally present/argue with their peers.

Unit Objectives: - Teaching and learning is focused on effective teamwork and collaboration

Inquiry & Obtain: (LEARNING PROCESS)	**Evaluate: (LEARNING PROCESS)**	**Communicate: (LEARNING PROCESS)**

Week 1 Research and research poster creation	- Students will research how adaptations and/or animal behavior impact their survival. - Students will compile their research into a presentation format of their choice. (such as Google Slides, PowerPoint, Canva)	- Students will self-check their research against a rubric to ensure their group is meeting the criteria. Rubric will be given in class.
Week 2 Midterm Presentations and Feedback	● Students will present the findings of their research topic in a group setting (EX: Socratic seminar)	- Students will discuss their research with each other in a friendly setting. They will ask questions and respond appropriately.

Resources (hyperlink to model lessons and/or resources):

- Shape of Life website videos and activities
- Youtube videos of Dissections of specific animals
- Eyewitness videos
- Preserved specimens slides for observation and dissection
- BBC nature documentaries
- Schoology school course

Reflection: Considering the planning, process and impact of the inquiry

Prior to teaching the unit	During teaching	After teaching the unit