Daily Lesson Plan Template

Lesson Title: BONES

Overview

This activity will focus on homologous structure and how they can show us relation in different animals. It will have a focus on skeletal structures of several different animals showing the same structure in its different shapes. Students will draw hypothesis from this information on how the creature may be related. They will also learn trends that different animals show in their jaw and limb structures.

Process Standards

Apply standard techniques in laboratory investigations to measure physical quantities in appropriate units and convert quantities to other units as necessary

Clearly communicate their ideas and results of investigations verbally and in written form using tables, graphs, diagrams and photographs.

Recognize that their explanations must be based both on their data and other known information from investigations of others.

Content Standards

Use anatomical and molecular evidence to establish evolutionary relationships among organisms.

Essential Questions

How do we determine the relations between different species? What evidence can we use without availability of electronic magnification tools?

Objectives

The students will be able to…

Identify trends visible between carnivorous and herbivorous animals

Define homologous structures, homoplastic structures, and convergent structures.

Co-Teaching Model

This lesson lends itself well to the idea of co-teaching. The students will have to visit different stations to look at the sample structures which will be grouped. This allows the teachers to divide and teach/answer questions on a certain concept and teach in groups.

Procedures

Describe your procedures for each of the following:	
Preparation needs (lab or presentation materials,	The skeletons need to be placed into their respective groups

etc.)	so the students will be able to visit stations in an orderly manner. There should be a guided set of notes for the students to record observations on during the lab.
ENGAGE/Introducing the lesson (Describe how you will engage students, assess prior knowledge, present the question /problem/challenge)	The introduction to the lesson will be simple. I plan to show the students the skeletons of a horse and a large cat and ask what differences they can see and what information they might infer based on these observations.
Student instructions	At each station students will fill in the corresponding section of the notes and identify any trends that they can identify for the station. Also denote any questions they have in the bottom or back of the note sheet.
Activities or teacher presentations (Procedures/Plans)	The end of the lab will feature an overview of some of the important trends the students recognize and also cover any that the students are not able to identify.
Productive Questions you anticipate using	Why night the teeth of herbivores be different in their shape? What are the differences between homoplastic and homologous structures?
How/when will you assess learning	At the beginning the engage is an informal assessment and at the end the wrap up asking the students for trends and reviewing them will be another informal assessment. The formal assessment will be done at the end of the section.
Closure: concept recap, preview, assignment	The students will be given an assignment to pick an animal not shown in the lab, and compare this animal to one we did use in the lab.

Resources/Materials

Skeletons from a variety of different animals, a scripted notes section that will guide the students in their note taking, and a review for the end of the lab will all need to be prepared before the lab.

Assessment/Evaluation

The assessments done in this lesson will all be informal until the end of the section at which time there will be a quiz or a test on the entire segment.

References and Resources

No handouts at this time.