PROJECT OCEANOLOGY

Gyotaku/Fish Anatomy Elementary NGSS Alignments

Overview

This lab is designed to allow students to explore diversities in fish anatomy while practicing modern modifications of historical art and data collection techniques. Students in this lab will learn of different parts of fish, identifying characteristics of osteichthyes (bony fish), and benefits/disadvantages of different tail and body shapes among fish. Students then will partake in making models of various fish and other marine life, using the historical fish printing technique (Gyotaku), made modern with rubber fish molds and paint.

Performance Expectations

3-LS2-1 Construct an argument that some animals form groups that help members survive.
Students will sort anatomy cards (body, shape, size, tail) by different similarities and differences that contribute to survival

4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
Students will identify variations in body shape, size and tail shape/size.

Science and Engineering Practices

Constructing Explanations and Designing Solutions
Students will analyze fish anatomy cards, sort, and explain reasoning behind various sortings

Engaging in Argument from Evidence
Students will utilize anatomy cards to sort fish by different characteristics, providing argument and reasoning based on physical evidence of different anatomies.

Developing and Using Models
Students will create fish print anatomy models

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Crosscutting Concepts

Structure and Function *Students will explore parts of algae and the function in each part*

Disciplinary Core Ideas

LS3.B: Variation of Traits *Students will explore different traits of various fish that contribute to mobility and survivorship*

LS4.C: Adaptation *Students will investigate different adaptations to tail shape and their benefits*