

Find the Day 1 Full Lesson Plan Here-

https://docs.google.com/document/d/1i5wZ3ookaTVIH5MO_TUrMC8nTFeNKU_VdPzdqEib-00/edit?usp=sharing

Lesson Title: Exploring Mollusk Diversity
Lesson Summary: Students will do collaborative research on mollusks using Padlet, and then choose a question to dive into further. After picking a research question, students will make a multimodal presentation of their choice to share their findings.
Grade Level and Subject: 11th and 12th Grade Marine Biology
Context in Larger Unit: Students in Marine Biology covered invertebrates after talking about general survival strategies for life in the ocean and discussing simpler groups of organisms (microorganisms, seaweed and algae, plants). Mollusks are covered towards the middle of the invertebrates unit.
Why I Chose this Lesson to Revamp: I usually rely upon the excitement of dissections and the use of anatomy coloring pages to engage students in learning about different animal groups. Because this is not as effective for a virtual schooling set-up, I wanted to spend some time re-thinking how I can help students to explore this content.
Learning Goals (SWBAT): <ul style="list-style-type: none">-Explain the difference between basic groups of mollusks-Analyze the benefits and costs of different mollusk body plans-Analyze the role that mollusks play in the studies of evolution, ecology, and engineering-Responsibly utilize collaborative learning space
Instructional Strategies: This lesson utilizes a variety of instructional strategies. During the beginning of the lesson, the teacher utilizes class discussion and multimedia resources. During the Padlet phase of the lesson, the teacher utilizes collaborative learning and student-driven learning. During the individual project phase of the lesson, the teacher utilizes student-driven learning.
Technology Usage: <ul style="list-style-type: none">-Share learning on Padlet (sample: https://padlet.com/russe552/vc4jf3vht6wyhk6u)-Use the internet to research a scientific question-Make evidence of learning visible using a multimedia method (see rubric for full list)-Use Google Docs to organize research and sources
Assessment Strategy: Students will be assessed on a) their contribution to collaborative group research b) the quality of research done for their individual project contribution and c) their individual final product. Formative assessments can be done along the way by examining student contributions to the initial discussion (via the included worksheet or via verbal contribution),

via contributions to Padlet, and via informal discussions during research periods

Lesson Summary:

Day 1

Students will be shown [representatives from the major mollusk groups](#) (chitons from polyplacophora, slugs and snails from gastropoda, scallops and mussels from bivalva, octopi and squids from cephalopoda). The class will generate a list of similarities and differences. Then, the teacher will show a diagram showing the anatomical similarities between mollusk groups, along with the theoretical “ancestral mollusk”. The class will then watch the “[Shape of Life](#)” video about mollusks, which outlines both the evolutionary strategies of different groups of mollusks and the reasons for mollusks being so prolific. While watching, students will take notes on what the benefit of each group seems to be (see [Body Shape Comparison Worksheet](#)). The class will discuss their findings. Then, the teacher will introduce the whole-class guiding question of “Why should we study mollusks?”. The class will brainstorm potential answers and come up with more questions (see the [sample Padlet](#) for possible categories of study). After this brainstorming session, the teacher will introduce Padlet and explain the group research activity. The class will discuss [each segment of the rubric](#) and define what a “thoughtful” question and response look like.

Day 2-3

Students will complete the group research activity. Students will be instructed to record questions that they have about mollusks on the padlet as they think of them.

Day 4-6

Students will choose a research question inspired by the class’s findings on the Padlet board. Students will research to gain insight into the question. Students will ultimately be responsible for creating a multi-model artifact of their learning (video, animation, podcast, or blog post with embedded media).

Day 7

Students will explore and provide feedback for one another’s learning artifacts. The class will discuss how their methods might look similar to how science is communicated in the real world, and will discuss the value of sharing scientific findings in multiple ways.

Supplementary Materials:

- [Slides](#)
- [Body Shape Comparison Worksheet](#)
- [Padlet Account Set-Up Instructions](#)
- [Padlet Research Guiding Document and Rubric](#)
- [Sample Padlet](#)
- [Final Creation Rubric](#)