

Bivalve or Univalve?

(Clam or Snail)?

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Subject: Science

Skills: observation, classification, measuring, communication, description, comparing, listing, sorting, research, small group work

Duration: 30 minutes

Group size: one class (approx. 25 students)

Setting: beach or classroom

Vocabulary: bivalve, univalve, mollusk, valve

SC Science Standards: Grade K-4 – Inquiry: IA1a, IA2a, IA4a, IB1b. Grade 1 – IVA2b. Grade 5 – Inquiry: IA1a, IA2a, IA4a.

Objectives

Students will learn:

- 1) to look carefully at shells and observe differences between species;
- 2) the names of common shells;
- 3) to sort through shells or pictures of shells to determine similarities and differences;
- 4) to group species according to specific criteria; and
- 5) to communicate to the class what their shell is by listing it on a chart.

Background

Shells are a very common item picked up at the beach and a popular item to be collected. Many people, even those that live near the beach, do not know the names of the shells they find or whether they are **bivalves** or **univalves** (clams or snails). It is important to learn the names of the shells we find on the beach and to be aware that these empty skeletons were once living organisms. It is important to learn about **mollusks** because many are important as a food

source (mussels and clams) or medicine (cone snails), and many are in decline because of our overuse or negative impact on their habitats. By better understanding the treasures we find at the beach, the more we will understand the problems facing them and we will be more willing to help protect them.

Materials

- a shell for each student or group of students, or
- colored pictures of shells for the students (available to print online at <http://oceanica.cofc.edu/shellguide.htm>)
- chalkboard or easel for chart to record bivalve/univalve

Procedure

Ask the class what "bi" and "uni" mean. Compare the words bivalve and univalve with other words such as bicycle and unicycle, biplane, unicorn, and so on. Have the class make a list of "bi" and "uni" words and see how many they can come up with. Make sure each student is comfortable in knowing the difference between "bi" and "uni." Now, pass out actual shells or high-resolution pictures on laminated cards to each student or group of students, depending on the number of shells you have and the number of students in class. Give the students approximately five minutes to discuss with other members of the class whether their shell is a bivalve or univalve. After decisions have been reached, ask the students what they think a **valve** is. Divide the class into a

bivalve group and a univalve group and have each student present their shell to the class. This exercise will familiarize each student with the name of each shell and will also be a time of public speaking and the sharing of knowledge. Create a chart on the board or paper that is divided into a bivalve and univalve column. Each student can write the name of their shell in the appropriate column, adding any additional information such as scientific name, size, color, range, etc.