



Sort it out!

Introduction

In the book ***Seashells by the Seashore*** the reader is introduced to twelve different seashells. In a Venn Diagram activity, students describe and compare the shells in the book, determining which are bi-valves and which are univalves.

Materials Needed

- ◆ A copy of the book ***Seashells by the Seashore*** by Marianne Berkes
- ◆ Venn Diagram template.
See: <http://www.graphic.org/venbas.html>
- ◆ Empty seashells from a beach, or shells purchased from a craft store if you cannot find all the ones that are in the book.
- ◆ 10 cafeteria trays

Key Concepts

- ◆ Students analyze in terms of order and systems
- ◆ Use knowledge and data to formulate explanation
- ◆ Objects have measurable and observable properties

For standards correlation please see our website.

Procedure

1. Place an assortment of all 12 seashells on 10 different trays.
2. Read ***Seashells by the Seashore***, noting the periwinkle shell on the side bar of the book, and the shells that follow as you turn each page.
3. Explain to students that there are two kinds of shells: univalves and bivalves. "Uni" means "one" so those mollusks only have one shell and glide around on a big, slimy foot. Many have a hard plate on the foot. When the snail hides in its shell, this plate closes the opening like a door. Which shells in the book are univalves?
4. "Bi" means "two" and those mollusks live between the two parts of a double shell, which is joined by a hinge. Their shells open and close like a suitcase. When danger threatens, the two shells quickly snap shut. Which shells in the book are bivalves?
5. Explain to students what a Venn diagram is and pass out blank copies.
6. Give pairs of students a tray filled with shells. Ask them to examine the characteristic of each shell and sort them into two categories, indicating on their Venn diagram which are bi-valves and which are univalves.
7. Use the intersecting portion of the Venn diagram to note what the shells have in common.
8. Older students may want to study the back matter in the book that can be used as an additional resource for this project.

Nature Connections

- ◆ Explain to students that seashells are made by the animals that live inside them, called mollusks. A mollusk has a soft body that needs the protection of a hard shell. Mollusks make a chalky juice that hardens into a shell. As the animal grows, it makes its shell larger. When mollusks die, their empty shells wash up on the beach for you to find.

Additional Resources

- ◆ Zoehfeld, K.W. 1994 *What Lives in a Shell*, HarperTrophy.
- ◆ Coldrey, J, and D. Bown, 1998 *Eyewitness Explorers: Shells*, Dorling Kindersley
- ◆ Dance, S. Peter. 2002, *Smithsonian Handbooks: Shells*
- ◆ Lember, B.H. 1997, *The Shell Book*, Houghton Mifflin





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