



The Mini Page

Issue 30, 2022

Founded by Betty Debnam

Next Week:
Who were the Mayans?

At Home in the Sea



photo by Jason Marks

Mini Fact:

A triton sea snail moves along the seafloor on its "stomach foot."

Have you ever hunted for seashells at the seashore? Did you know that they were once the homes of animals from a strange, watery world?

Sea animals with shells belong to a group known as **mollusks** (MAH-lusks). Mollusks also include some animals with no shells, such as the octopus.

Pre-owned homes

Some animals move into the shells of other animals after the original owner dies. Shells offer them shelter.

Shells help protect animals with soft bodies and no backbones, or **vertebrae** (VER-tuh-bray). Soft-bodied animals with no backbone are called **invertebrates** (in-VER-tuh-brits). Most animals are invertebrates.

Seashells protect invertebrate sea animals. These marine animals, or creatures living in the water, build shell homes and live inside them.

Building a home

Shells are made of a rocklike material, which is formed from calcium and other minerals, like our bones are. Sea animals get these minerals from the water.

Shelled marine animals have a special skinlike covering over their bodies. This is called a **mantle**. The mantle **secretes** (si-KREETS), or produces and spreads, the material for the shell all around the animal's body.

Sea animals build their shells over time, layer by layer. You can tell how old a shellfish was by counting the layers spreading out over the shell, much like counting the rings of a tree.

Shellfish don't build their shells at a steady rate. They have growth spurts.

Colorful layers

The beautiful colors on the shell vary depending on the animals' diets and how fast they are secreting the shell material.

Shellfish in warmer waters, where there is a big variety of food, will usually have many more colors than shellfish in colder waters.



photo by Florida Fish and Wildlife Conservation Commission

A queen conch snail looks out of its shell. The pink mother-of-pearl that coats the inside of the shell is smooth and comfortable against the snail's soft body.

What is mother-of-pearl?

Mother-of-pearl is the colorful part of seashells. This protective, smooth coating provides a cushion between the rougher outer shell and the animal's soft body.



photo courtesy LBL

Mother-of-pearl is the same substance that makes up pearls. When a shellfish such as an oyster feels something like a grain of sand irritating its mantle, it secretes a protective pearl coating around the irritant.

One shell or two?

Single-shelled marine animals belong to a group called **gastropods** (GAS-truh-pods). "Gastro" means stomach, and "pod" means foot.

People gave them this name because it looks as if the animals are moving along on their stomachs. This is not what is really happening. They are really pulling themselves along with a big muscle.



A sinuous whelk

photo courtesy AFSC/NOAA

Animals such as snails build single shells to live in. Sea snails such as the conch or whelk usually build shells in a spiral shape.



The giant clam is the largest bivalve on Earth. It can weigh up to 500 pounds.

photo by Peter Craig, courtesy NPS

Sea animals such as clams and oysters have two shells joined together with a kind of hinge. This type of shellfish is called a **bivalve** (BYE-valve).

Have you noticed that you usually find only one half of a shell? When the animal dies or is eaten, the hinge usually breaks, and the two halves of the shell separate.

Resources



On the Web:

- youtu.be/TUfGN8do5ss

At the library:

- "Seashells: More Than a Home" by Melissa Stewart

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Try 'n' Find

Words that remind us of seashells are hidden in this puzzle. Some words are hidden backward or diagonally, and some letters are used twice. See if you can find:



ANIMAL, BIVALVE, CLAM, COLOR, CONCH, FOOD, GASTROPOD, HOME, INVERTEBRATE, LAYER, MANTLE, MARINE, MOLLUSK, OYSTER, PEARL, PROTECT, SEASHELL, SHELLFISH, SNAIL, WATER, WHELK.

F I N V E R T E B R A T E X J
Y W O M A R I N E S S Z M D C
L L Y H Z H W L N H L O R H P
A R S O Y A T A E A L M O C R
N A T M T N I L Y L E A L N O
I E E E A L L E U E H L O O T
M P R M I F R S Y G S C C C E
A D L G I D K B I V A L V E C
L G A S T R O P O D E L Q C T
B W H Z E K L E H W S D O O F

Cook's Corner

Squash and Cheese Casserole

You'll need:

- 1 1/2 pounds yellow squash, sliced
- 1 medium onion, diced
- 1/2 teaspoon salt
- 1 teaspoon sugar
- 2 tablespoons butter

- 4 eggs, lightly beaten
- 1/2 cup shredded cheddar cheese
- 1/2 cup lowfat milk
- 1/8 to 1/4 teaspoon cayenne pepper
- 1/4 cup freshly grated Parmesan cheese



* You'll need an adult's help with this recipe.

What to do:

1. Combine squash, onion, salt and sugar in a pan with enough water to cover.
2. Bring to a boil; reduce heat and simmer for 10 minutes until tender.
3. Drain the squash mixture; place in a bowl and mash.
4. Add butter and mix well. Stir in eggs, cheddar cheese, milk and pepper.
5. Spoon into a buttered 8-by-8-inch baking pan. Sprinkle with Parmesan cheese.
6. Bake at 350 degrees for 30 to 45 minutes, until set. Serves 4 to 6.

7 Little Words for Kids

Use the letters in the boxes to make a word with the same meaning as the clue. The numbers in parentheses represent the number of letters in the solution. Each letter combination can be used only once, but all letter combinations will be necessary to complete the puzzle.



1. a red one tells you to stop (4) _____
2. wide street (6) _____
3. it has an answer (8) _____
4. shut (5) _____
5. this pole is in the Arctic (5) _____
6. make very cold (6) _____
7. leader of a state (8) _____

NUE	FRE	GN	ER
CL	GOV	EST	NOR
ION	SI	OSE	NOR
TH	EZE	AVE	QU

Answers: sign, avenue, question, close, North, freeze, governor.

Mini Jokes



Sheila: What did Cinderella wear to swim in the ocean?
Shel: Glass flippers!

Eco Note



Many parts of the Middle East have suffered from an unusual series of blinding sandstorms this spring, sending thousands of people to hospitals with respiratory problems. Businesses and schools were forced to close due to the storms. One sandstorm expert says unusual heat and drought this year in East Africa, the Middle East and Asia could have made some sandstorms worse. Others point to climate change and mismanagement of water resources as important factors in the more frequent sandstorms.

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For later:

Look in your newspaper for articles about ocean animals.

Teachers: Follow and interact with The Mini Page on Facebook!



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