

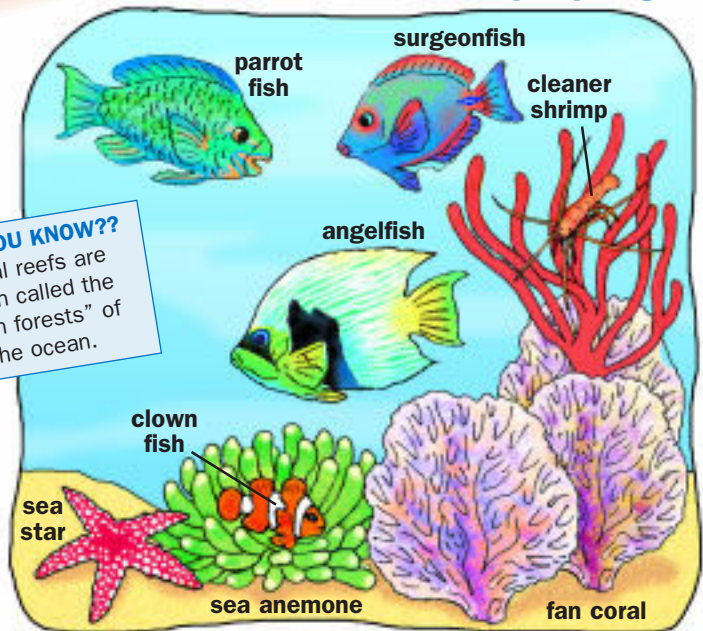
## Coral Reefs

## Level C

A **coral reef** (cor-al reef) is like a busy underwater city filled with color. A reef can grow best in places where the water is shallow, warm and salty. A coral reef is built by very tiny, soft animals called **coral polyps** (cor-al pol-y-ps). For **protection** (pro-tec-tion), they build stony cup-shaped houses around their soft bodies.

Polyps like to live close together. Their houses are **connected** (con-nec-ted) to one another like an apartment building. Some of these "apartment buildings" are shaped like brains or fingers. Others look like moose antlers or cabbages. It takes thousands of years to build a coral reef. Each coral reef is made up of millions of coral houses.

A coral reef is home to many other kinds of animals, too. More animals live



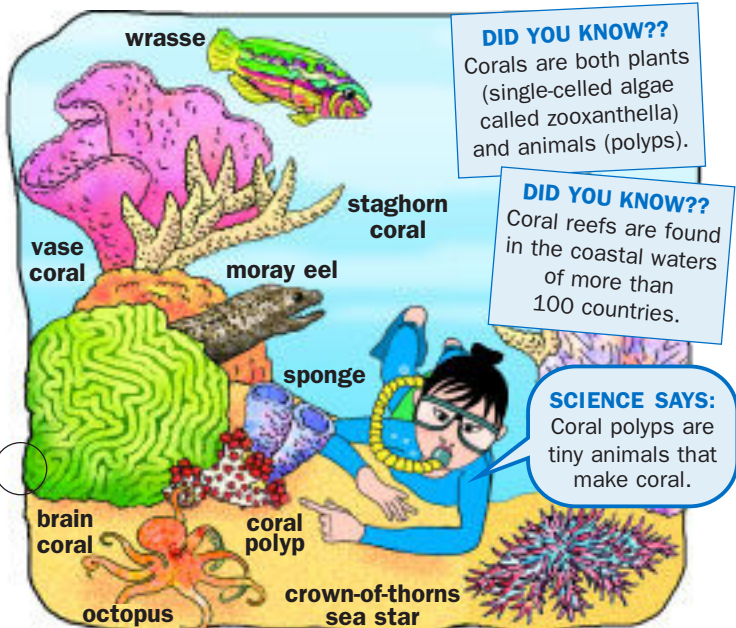
**DID YOU KNOW??**  
Coral reefs are often called the "rain forests" of the ocean.

on coral reefs than anywhere else in the ocean. Animals from other parts of the ocean often visit coral reefs to find food and have their babies.

Today, coral reefs are in danger. **Pollution** (pol-lu-tion) from land, water and air can poison them. Divers and ships can damage them. Changes in the Earth's **climate** (cli-mate) are making the oceans warmer. This can make corals sick.

In the coastal waters of Australia, the crown-of-thorns sea star helps to control coral reef growth. Sometimes, the reef may become **populated** (pop-u-lat-ed) by too many sea stars. When this happens, the sea stars may kill large numbers of polyps and actually destroy a reef's food chain.

To learn more about coral reefs around the world, read about them in books and on the Internet. You can also visit your local aquarium, science center or zoo.



**DID YOU KNOW??**  
Corals are both plants (single-celled algae called zooxanthella) and animals (polyps).

**DID YOU KNOW??**  
Coral reefs are found in the coastal waters of more than 100 countries.

**SCIENCE SAYS:**  
Coral polyps are tiny animals that make coral.

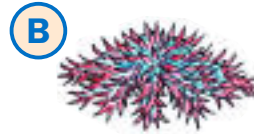


## Vocabulary

Who lives on the coral reef?

Write the name of the plant or animal below each picture.

1) fan coral



2) wrasse

3) sea anemone

4) crown-of-thorns sea star

5) parrot fish



6) brain coral

7) coral polyp

8) surgeonfish



## Weekly Lab

**Step 1:** Fill two large cups with 1 cup of water. Label the cup on the left A and the cup on the right B. Start a journal to record your predictions and observations as you perform this experiment.

**Step 2:** Place a fresh blueberry in cup A. Did it sink or float?

**Step 3:** Remove the blueberry and place it in cup B. Did it sink or float?

**Step 4:** Remove the blueberry and add 1 teaspoon of salt to cup B. Stir until the salt dissolves. Predict what will happen when a blueberry is dropped into Cup B.

**Step 5:** Put the blueberry back into cup B. Did it sink or float?

**Step 6:** Repeat steps 4 and 5 until you have added 6 teaspoons of salt to cup B. Did you observe any changes?

**Step 7:** Empty cups A and B and rinse with water. Repeat steps 1 to 6 using other small objects (such as grapes). Again make and record your predictions and observations.

### SCIENCE SAYS...

Some things sink in fresh water but float in saltwater. Let's find out more.

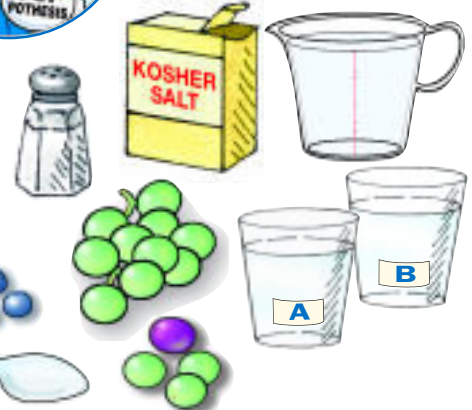


What will happen when we add a blueberry to the saltwater?



I predict the blueberry will float in saltwater.

**YOU NEED:**  
2 large cups  
(12 ounces or larger)  
teaspoon water  
measuring cup  
salt  
blueberries, grapes  
other small objects





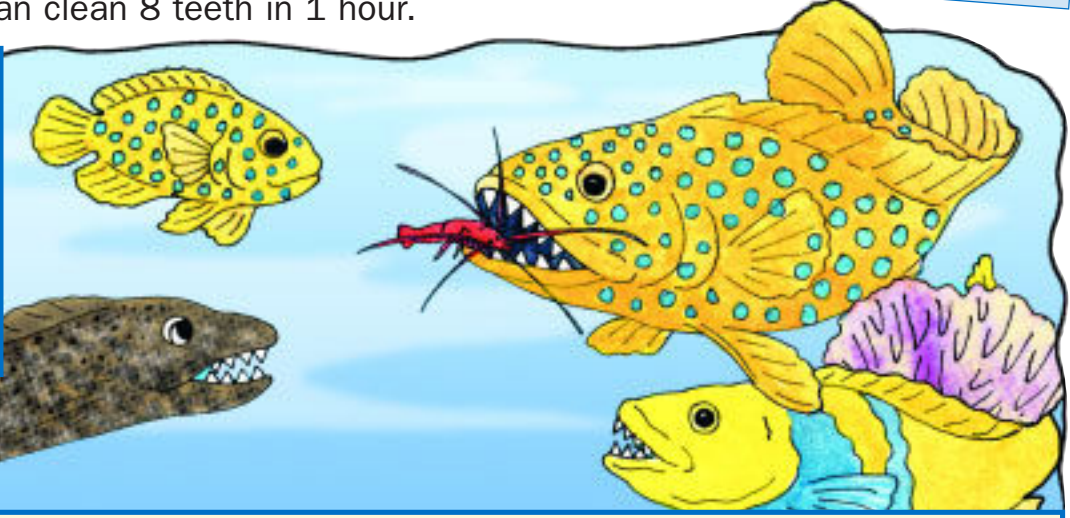


## Math

This cleaner shrimp cleans the teeth of the big fish!  
It can clean 8 teeth in 1 hour.

**DID YOU KNOW??**  
The longest coral reef is the Great Barrier Reef of Australia. It is 1,260 miles long.

How many hours will it take to clean all the teeth on these three fish?



Show how you solved the problem.

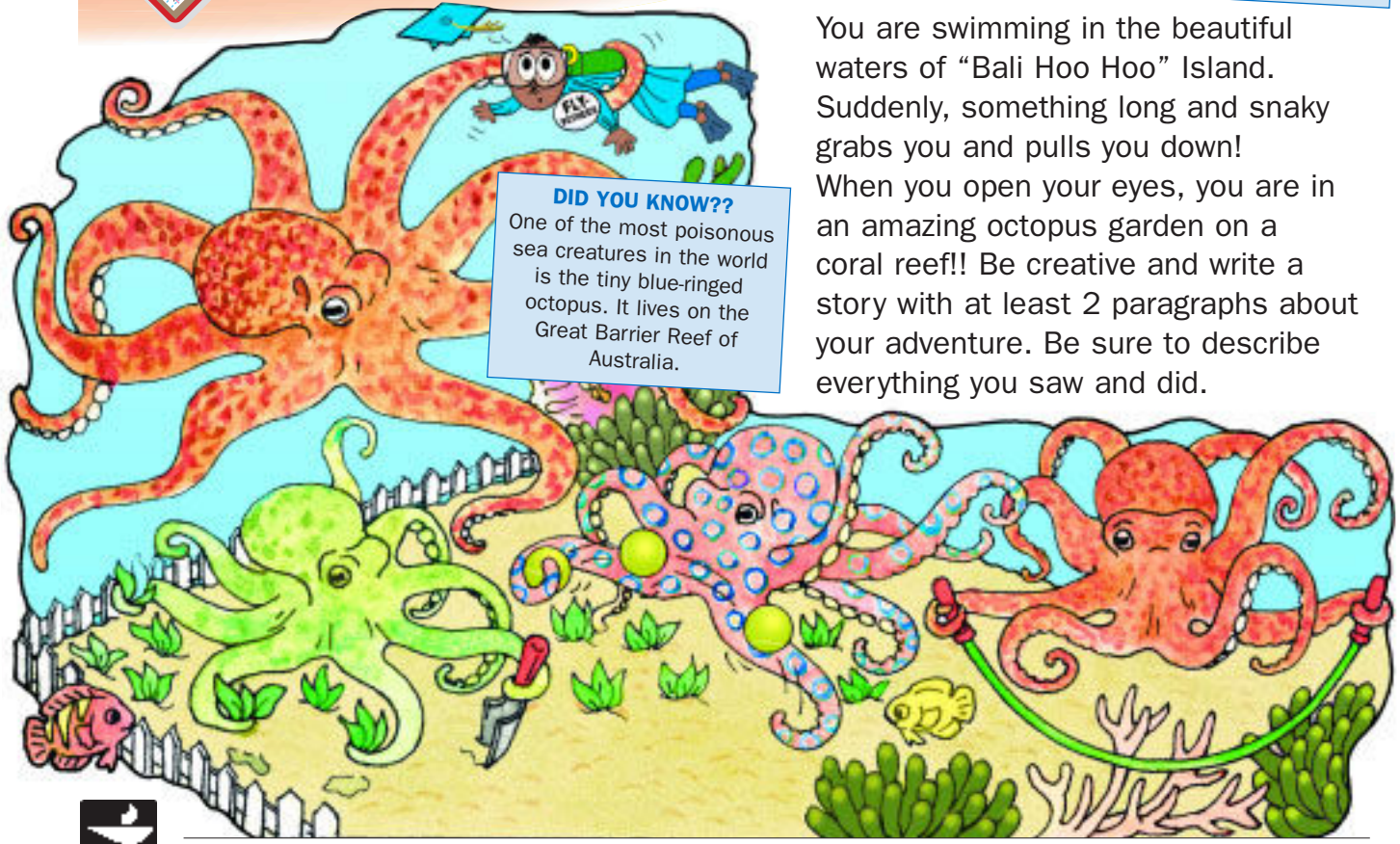


## Writing in Science

**DID YOU KNOW??**  
Nearly 1/4 of all sea creatures live at least part of their lives on a coral reef!!

You are swimming in the beautiful waters of "Bali Hoo Hoo" Island. Suddenly, something long and snaky grabs you and pulls you down! When you open your eyes, you are in an amazing octopus garden on a coral reef!! Be creative and write a story with at least 2 paragraphs about your adventure. Be sure to describe everything you saw and did.

**DID YOU KNOW??**  
One of the most poisonous sea creatures in the world is the tiny blue-ringed octopus. It lives on the Great Barrier Reef of Australia.

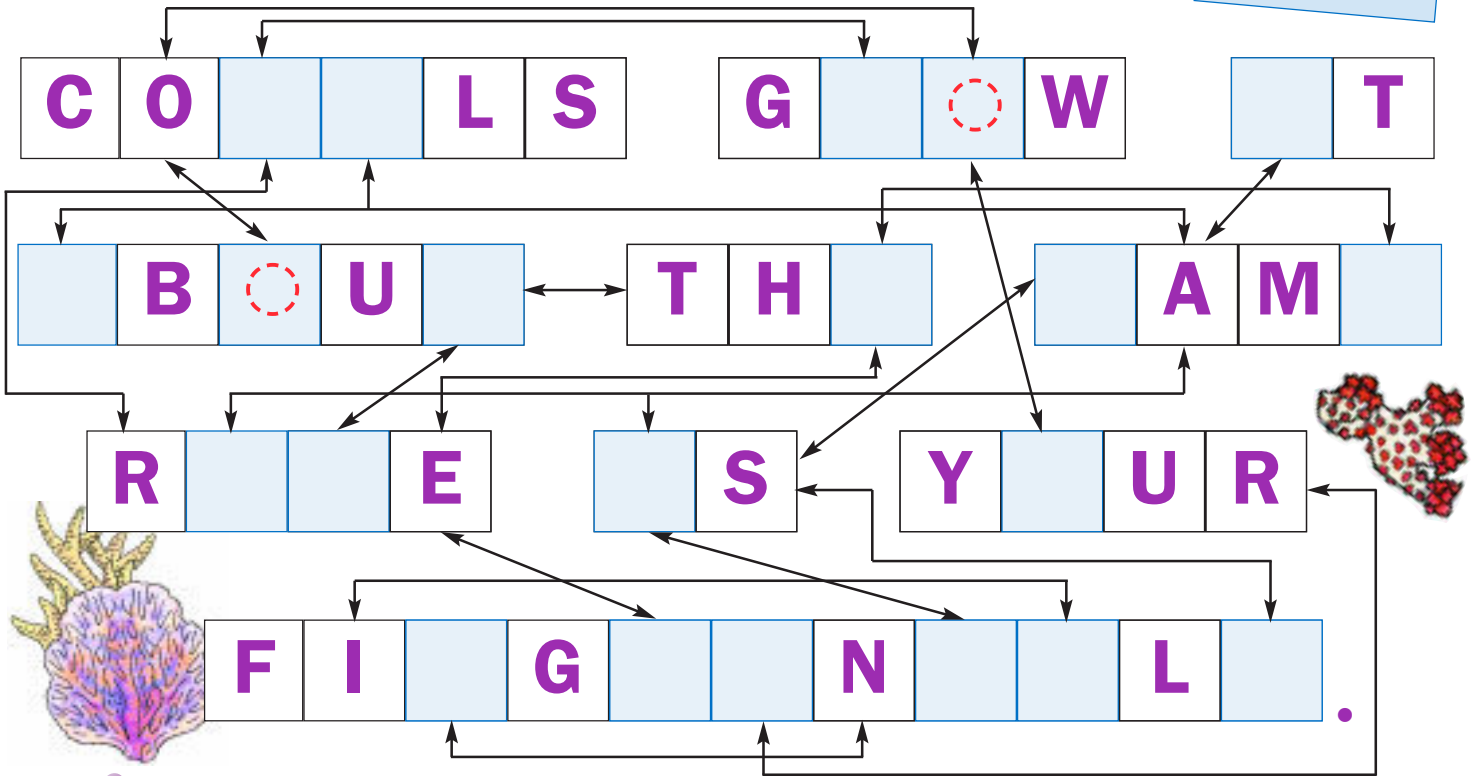




## Challenge

It takes coral reefs thousands of years to grow.  
Carefully follow the arrow clues and fill in the missing letters.  
Then you will know just how slowly coral reefs grow.

**DID YOU KNOW??**  
New medical research is using coral as a base to grow new bones for people.



## Puzzle

At night, some **corals** use their stinging tentacles to catch and eat tiny sea animals. They also get food during the daytime from tiny **algae** (al-gae) plants that live inside of them. What are these plants called and what else do they do for their coral hosts?

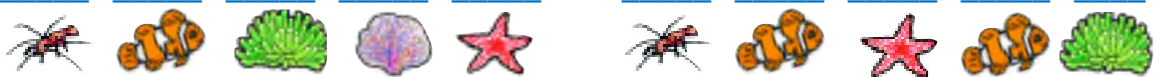
Crack the **Coral Reef Code** to find out! **They are called**

**DID YOU KNOW??**  
97% of all the world's water is in the oceans.



and they give

its



A	C	D	E	H	L	N
O	P	R	S	T	X	Z