

JUST FOR U.S.*

GRADES 4 - 6

* UNDERSTANDING SCIENCE

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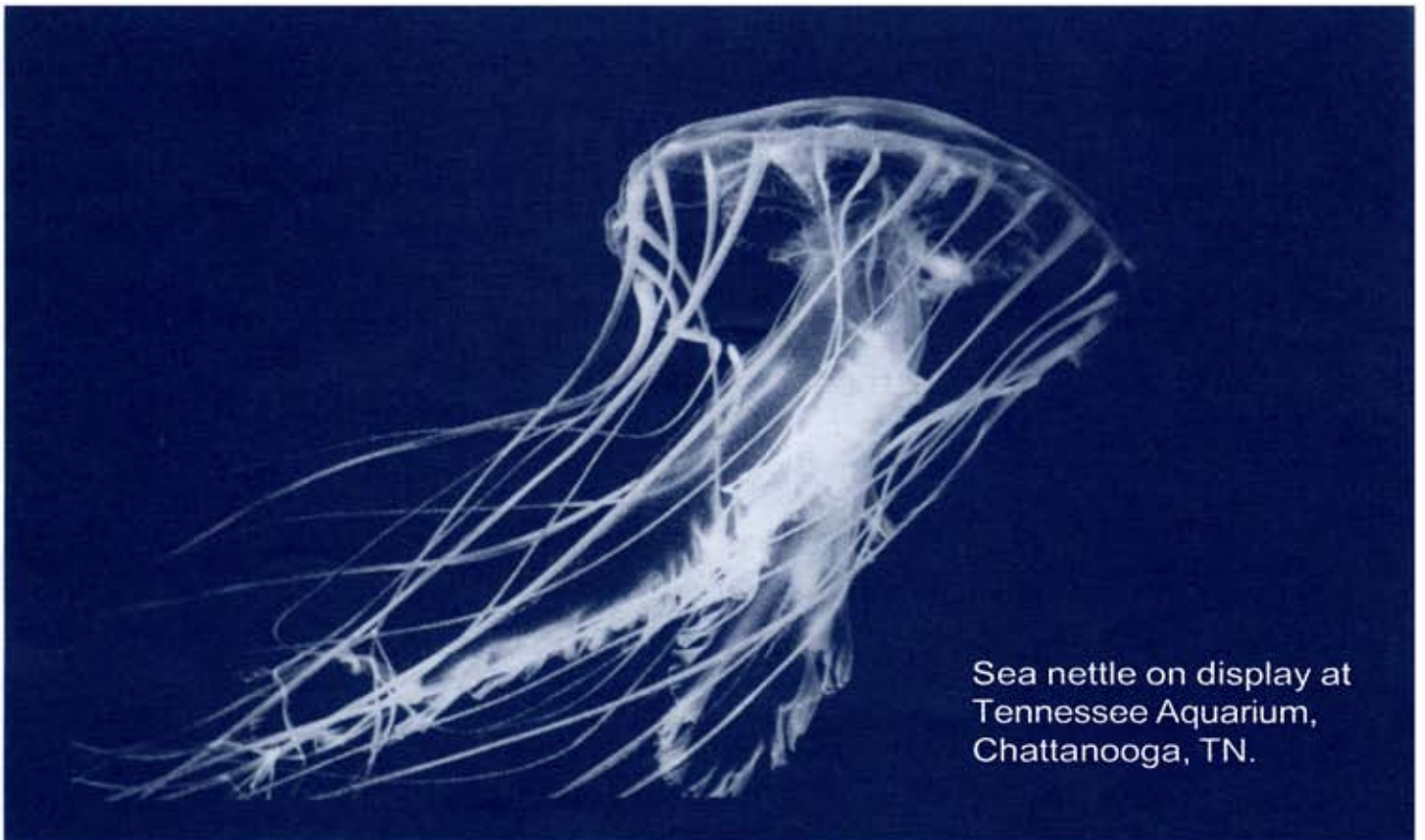
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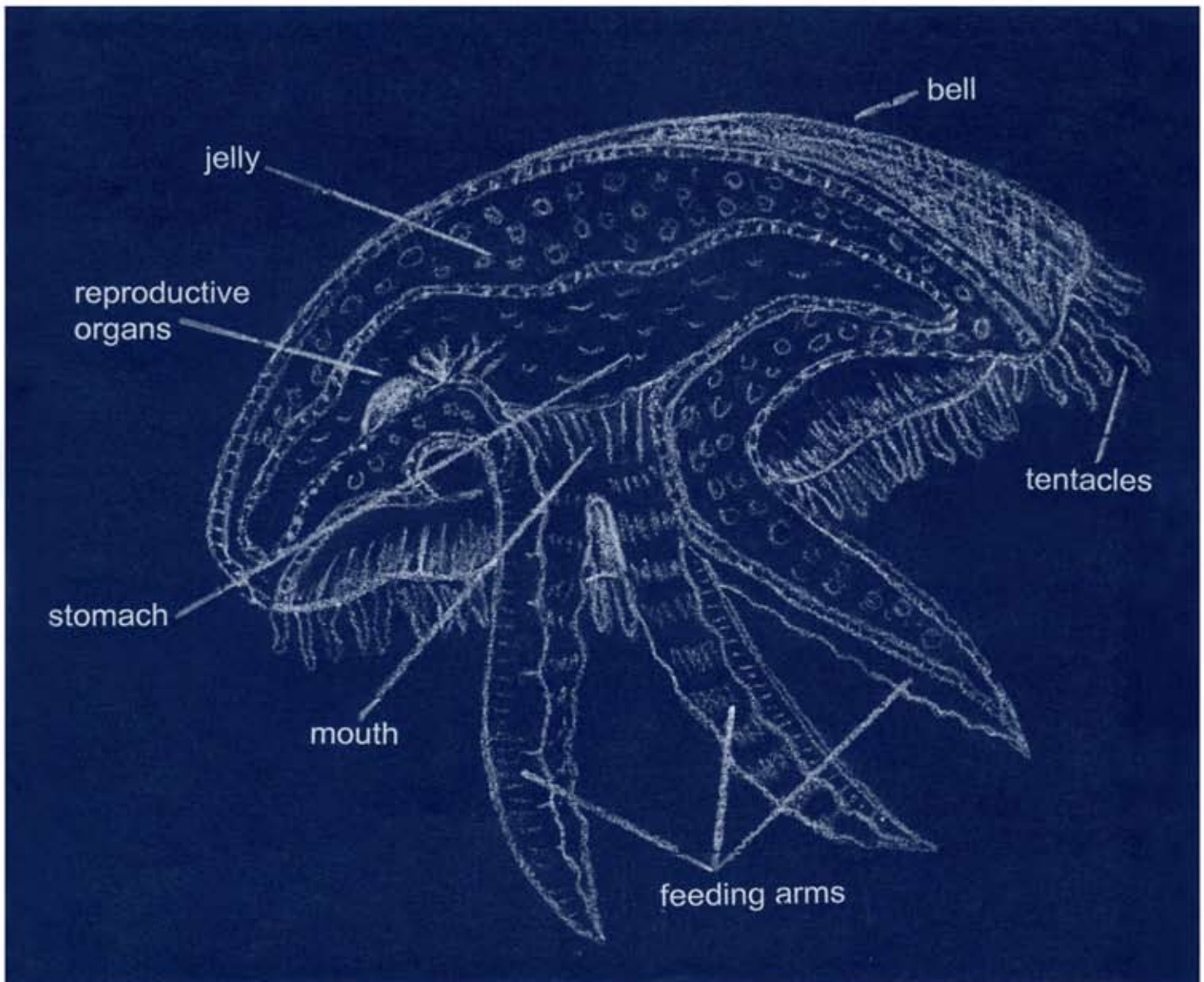
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SEA JELLIES

Often called jellyfish, graceful sea jellies are nothing like fish. But jelly is a perfect name. Their clear, boneless bodies look and feel much like jelly. These unusual animals are 97% water. Some jellies live in fresh water, but most of the 2000 kinds live in the oceans of the world.



Sea nettle on display at Tennessee Aquarium, Chattanooga, TN.

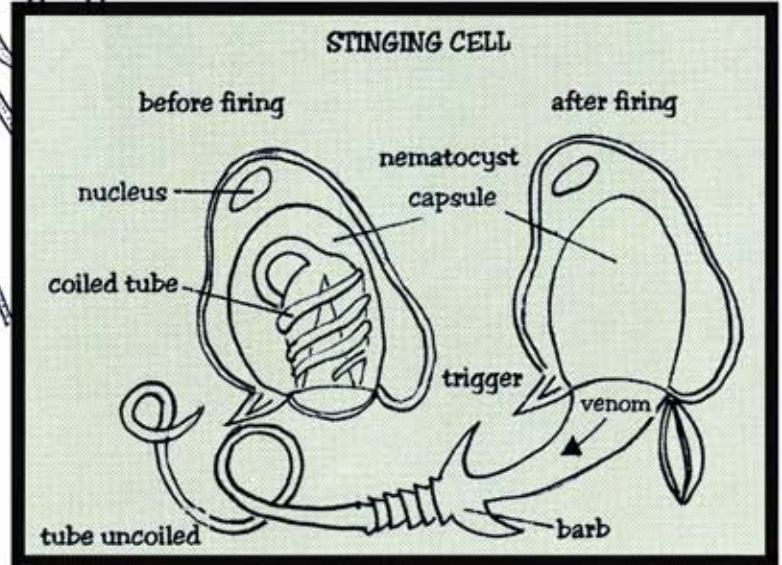
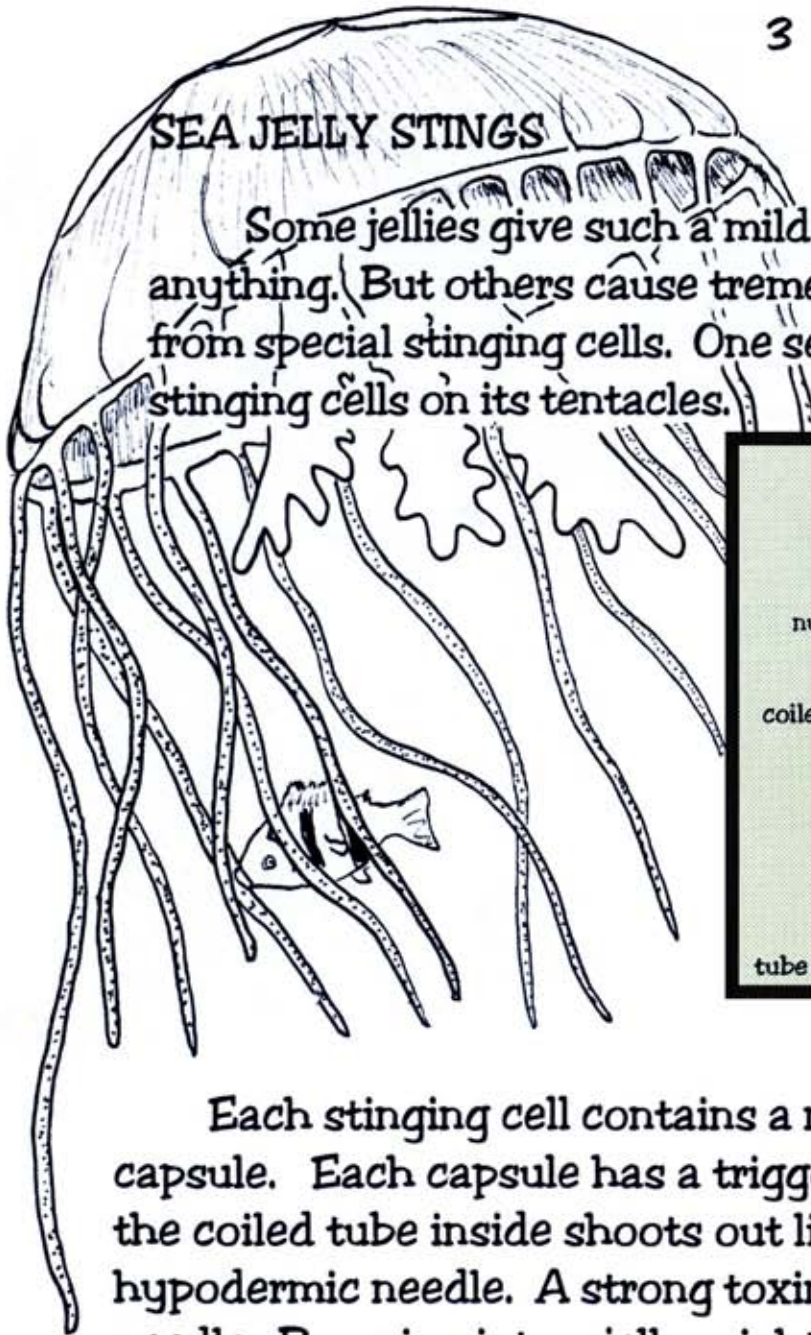


A sea jelly has a mouth and a stomach, but it has no brain. There are tiny cells that work as sense organs scattered over its bell and tentacles. Some of the sense organs respond to light. Since the sun is always above the water, these organs help the jelly tell which way is up.

Sea jellies are mostly drifters. The animal has muscles to open and close its umbrella-shaped bell. Closing the bell sends water out and pushes the sea jelly in the opposite direction. Delicate sea jellies are no match for the winds and waves caused by storms. Every year, thousands are washed up on beaches where they quickly die.

SEA JELLY STINGS

Some jellies give such a mild sting that a person barely feels anything. But others cause tremendous pain. The sting comes from special stinging cells. One sea jelly has thousands of tiny stinging cells on its tentacles.

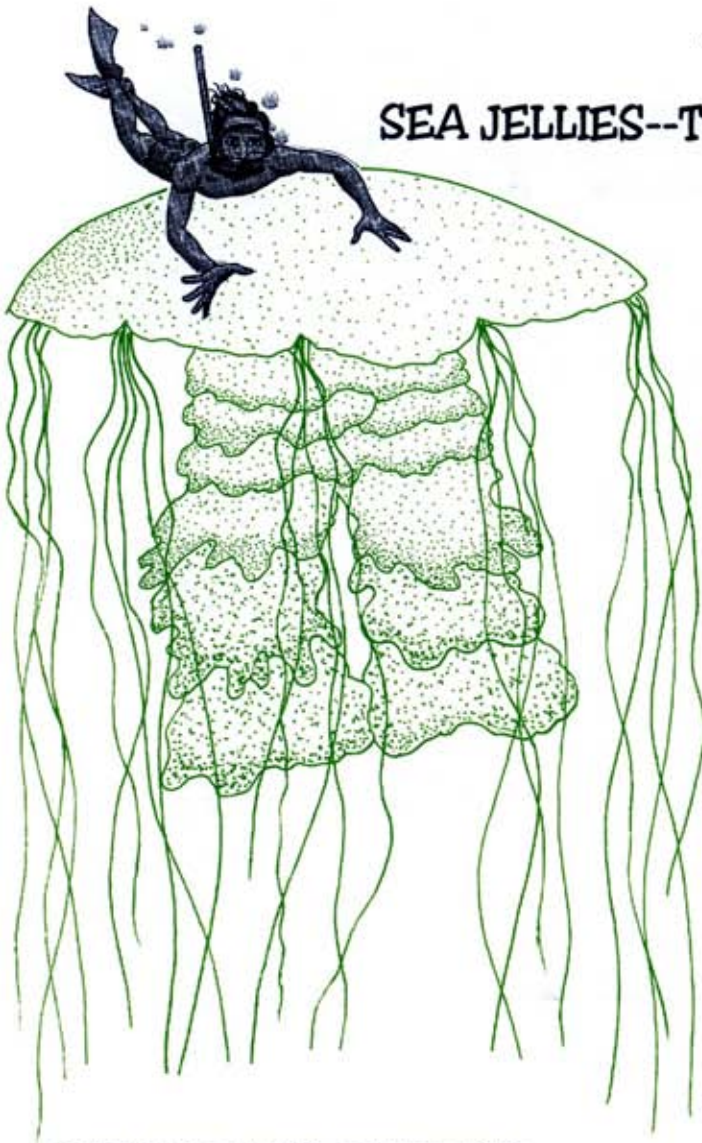


Each stinging cell contains a nematocyst (*knee-mat-o-sist*) capsule. Each capsule has a trigger. When a trigger is touched, the coiled tube inside shoots out like a tiny harpoon with a hypodermic needle. A strong toxin (venom) shoots through the needle. Bumping into a jelly might cause thousands of stinging cells to fire at the same instant. The toxin can paralyze a small animal or cause pain in a large one—like you!

A nematocyst fires whenever its trigger is touched. It can be used only once. The tube falls out or is pulled out by the victim. The sea jelly grows new nematocysts to take the place of used ones.

When a sea jelly dies, its nematocysts can still fire for a few hours. You can get stung by stepping on a dead jelly or by touching a tentacle that has broken off and is floating in the water.

SEA JELLIES--THE BIGGEST AND THE DEADLIEST



Sea jellies have been around since long before the dinosaurs. They live in all the oceans of the world.

The largest jelly is the lion's mane jelly. Its bell can be 6 to 8 feet across and its tentacles can be more than 100 feet long.

The most deadly jelly is the sea wasp, or box jelly, which lives in warm seas. Sixty people have died from its stings in the south-east Pacific and Indian Oceans. No one has died in the oceans off America.

WHAT EATS JELLIES?

People eat jellies. The sea jellies are usually dried, salted and eaten as snacks. One book described the taste like "chewing on old rubber bands."

Sea turtles, blue rockfish, ocean sunfish, and birds eat sea jellies and do not seem to mind being stung. Bigger jellies eat smaller ones, too.



WHAT DO SEA JELLIES EAT?

Sea jellies eat almost anything they bump into--or that bumps into them. They eat plankton, larval fish, sea slugs, small shrimp, and other jellies. A sea jelly stings, traps (using sticky pads on its tentacles) and drags prey into its mouth. After digesting a meal, the jelly spits out the leftovers.

A JELLY LOOK-ALIKE

One of the best known jelly type animals is the Portuguese man-o-war. The man-o-war is not a single animal like a real sea jelly. It is a colony of organisms that cannot live individually. The venom is not deadly to humans but it produces sharp severe pain. The venom also causes muscle weakness and breathing problems.



1998 International
Year of the Ocean

The United Nations named 1998 the Year of the Ocean. The United States Pavillion at the Exposition in Lisbon, Portugal, is about the ocean. The oceans are the largest ecosystems on our planet. They cover $\frac{2}{3}$ of the earth's surface and provide food for half the world's population. Oceans influence weather and serve as major "highways" for moving products around the globe.

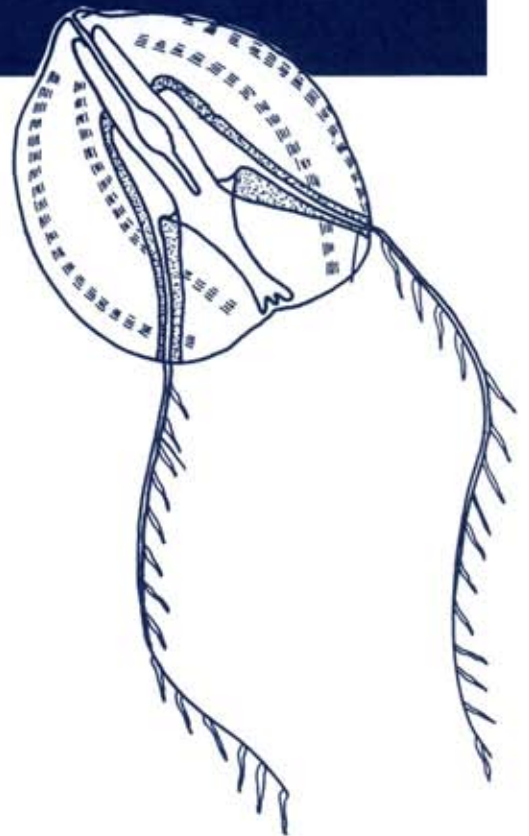
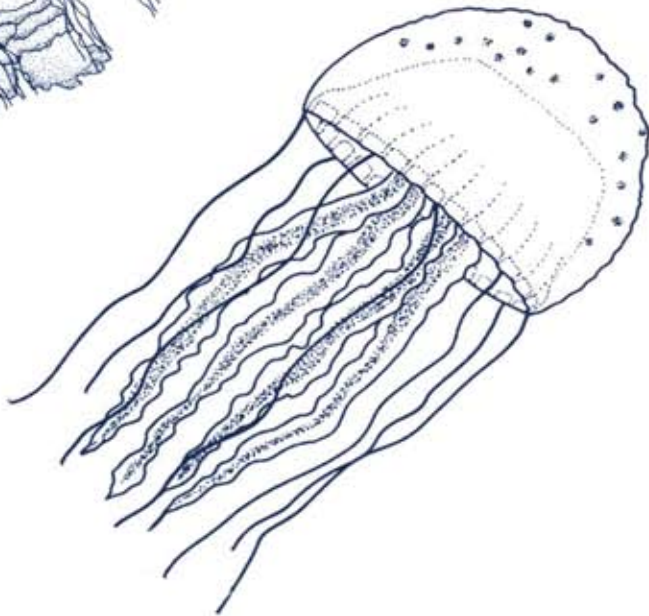
Your turn...



1. There are two thousand kinds of sea jellies in the world. One thousand nine hundred and thirty are not known to have ever stung a person. How many kinds of jellies have stung humans?

2. Many kinds of sea turtles are endangered species. One reason is the loss of habitat for nesting. But another problem is that sea turtles die from swallowing plastic bags and other clear plastic trash. Why do you think they eat the plastic bags?

3. One kind of sea jelly travels up and down in the ocean in search of food. It moves upward 600 yards each day and goes back down each night. How far does this creature travel in one week?



This issue of *Just for U.S.* was written by Ginny Johnston. Artwork and photographs by Judy Cutchins.



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