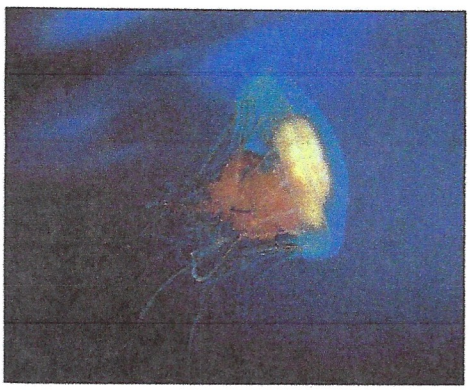
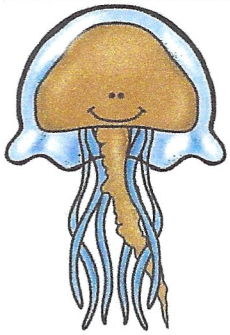
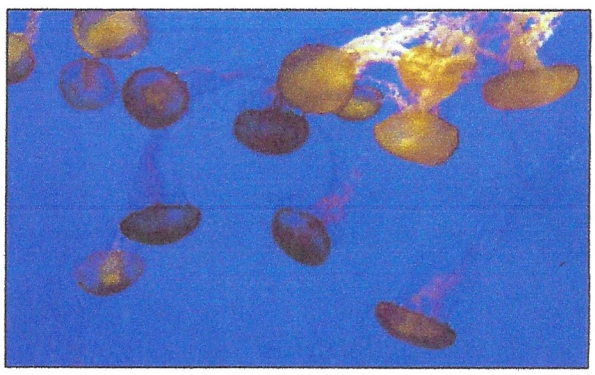


All About Jellyfish



Even if the word "fish" is in the word jellyfish, they are not fish!

Jellyfish come in many shapes and sizes. Their body is shaped like a bell or umbrella. It is made of the jelly, which is called mesoglea, and skin. The size of a jellyfish bell can be very small or very big in different species. The bells can be half an inch wide to seven feet wide. Under the bell is their mouth. Long tentacles hang from their umbrella. Jellyfish do not have a brain. They are made of more than 90% water. Jellyfish come in all colors. Some jellyfish can be difficult to see as they are **transparent** or **translucent**.



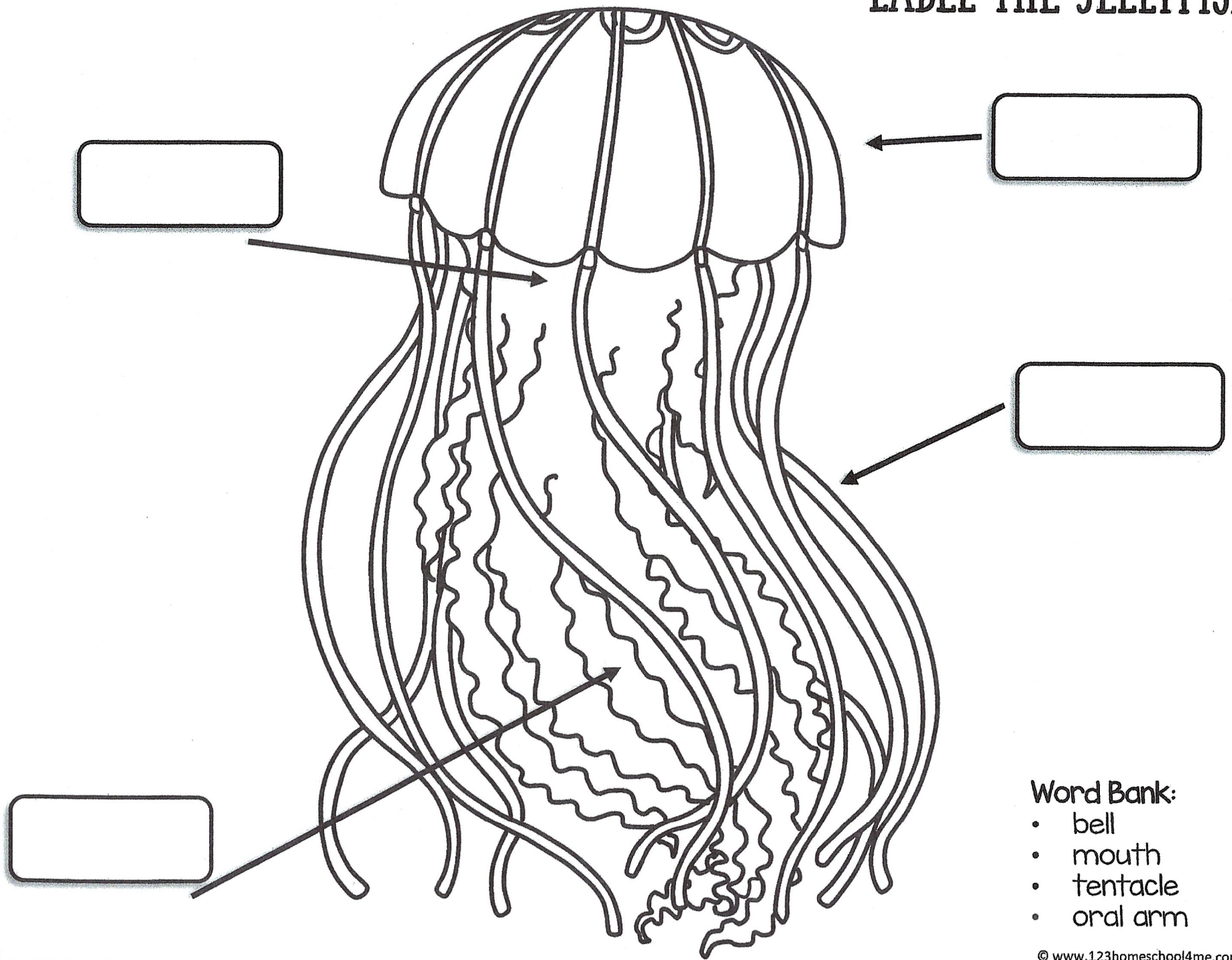
Jellyfish live in all oceans, both in open ocean and along the **coastline**. They can be deep down at the ocean floor or at the top of the water. Jellyfish live in groups called a bloom or a swarm. A group can have over 100,000 jellyfish.

Jellyfish have poison in their tentacles. They can use their tentacles to sting. Their tentacles help them scare predators. They also help them to stun their prey before they eat them. Jellyfish stings can make animals feel no pain, a lot of pain, or even kill them. That depends on the type of jellyfish. Jellyfish eat foods like plankton, fish eggs, crustaceans, and small fish.

Jellyfish **reproduce** and grow very quickly. They also do not have many predators. Instead they are predators to many ocean animals. Because of this, the jellyfish **population** is actually growing as their predators, like sea turtles, are becoming endangered.

Name; _____

LABEL THE JELLYFISH

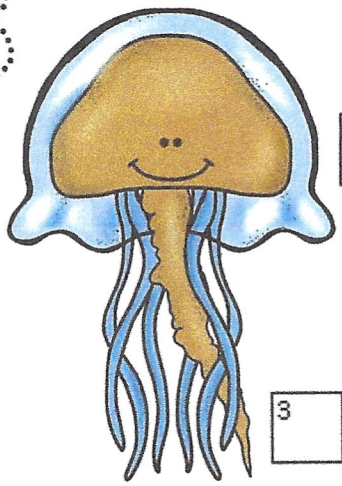


Word Bank:

- bell
- mouth
- tentacle
- oral arm

Name: _____

All About Jellyfish



Across ➡

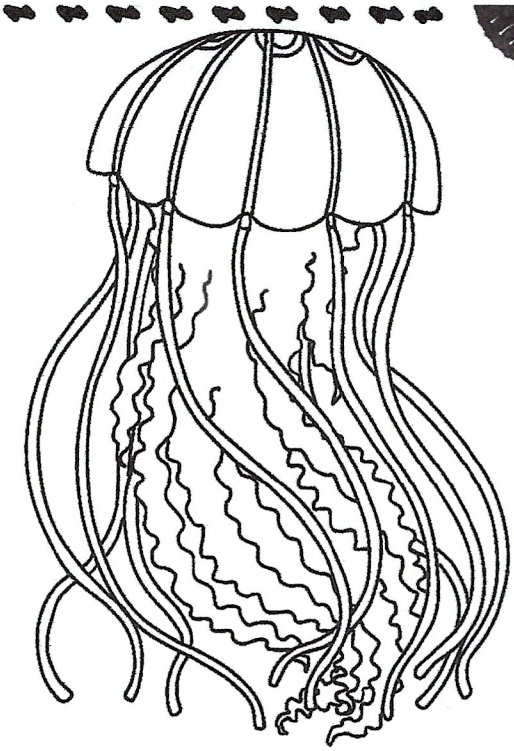
1. completely see through
3. Jellyfish have poison in these
5. somewhat see through
7. Unlike jellyfish, sea turtles are _____, so their population is lowering.

Down ⬇

2. the number of animals in an area
4. The jelly is called _____.
6. the area along the coast, where the water meets land
8. when a species makes more of itself

ALL ABOUT JELLYFISH

By: _____

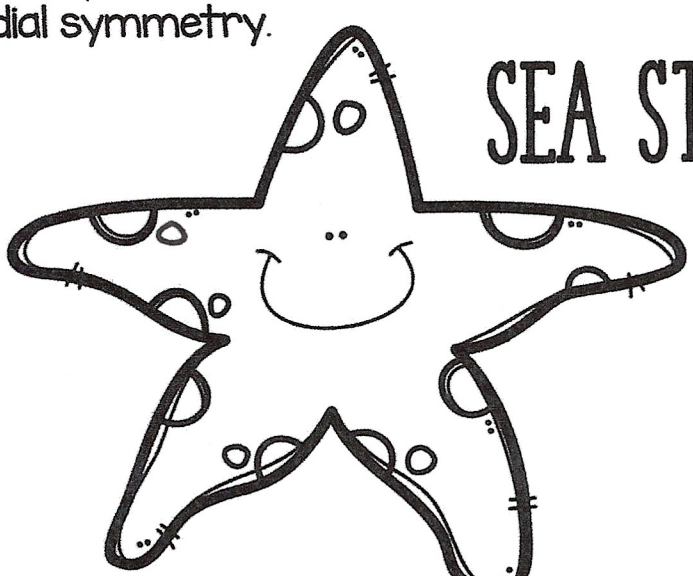


ECHINODERMS

Echinoderms are sea animals with spiny skin. Animals in this group include sea cucumbers, feather stars, brittle stars, sea urchins, sand dollars, and starfish. All these spiny-skinned creatures have some things in common: no eyes, no brain, and tube feet. In addition, during their adult stage they are benthic animals, spending most of their time on the bottom of the ocean.

Animals in this classification use tubular strands with suction cups on the end to move by pushing or pulling across a surface such as a rock, bivalve, or ocean floor. The **tube feet** also allow echinoderms to breathe by taking in oxygen through gills that stick out from the tube feet. Finally, tube feet allow them to taste as they touch objects (*like we learned a crab does in our Crustacean lesson*)

Each echinoderm (except the sea cucumber) has a mouth in the center of its body and the rest of its body radiates out from the center. This is called **radial symmetry**.

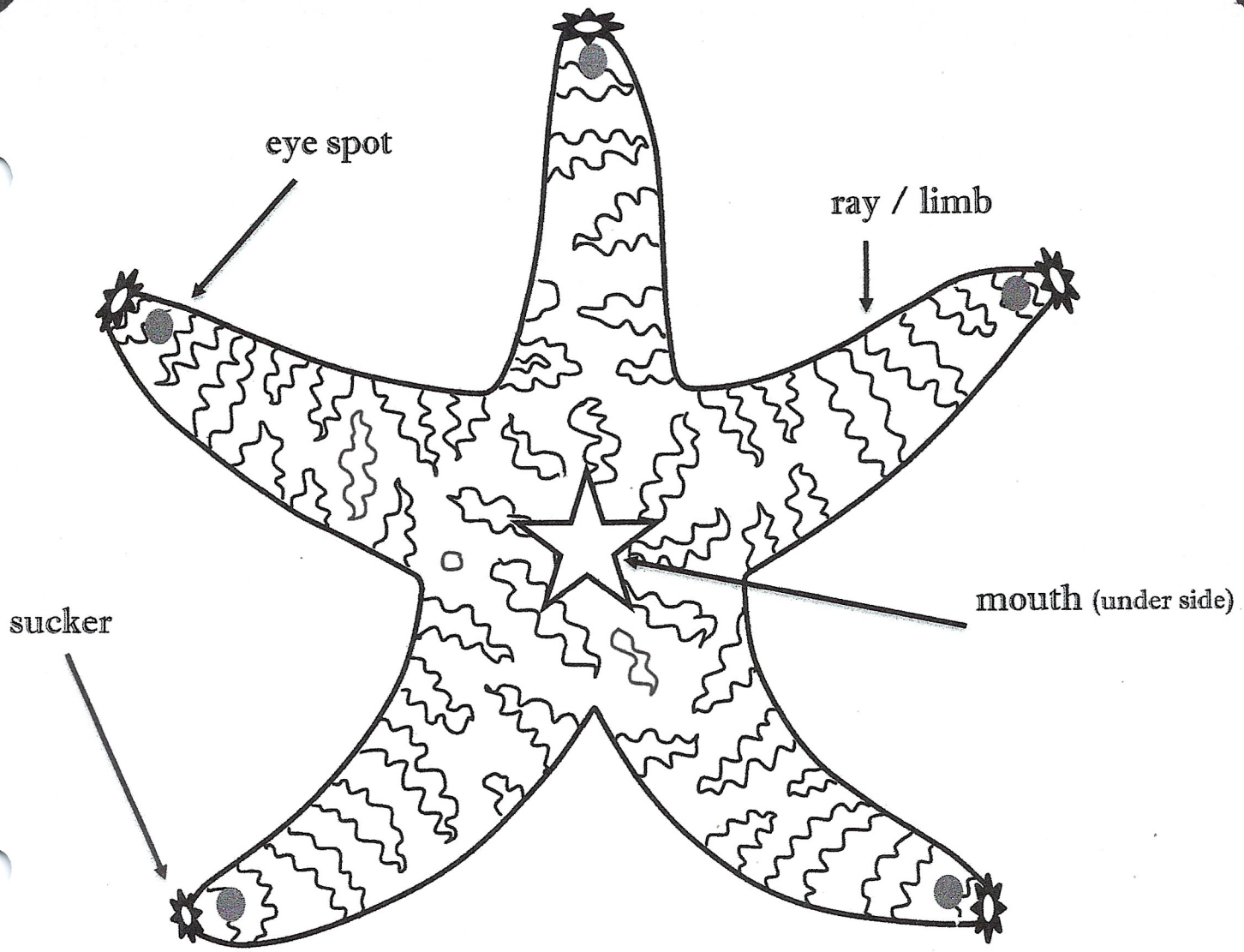


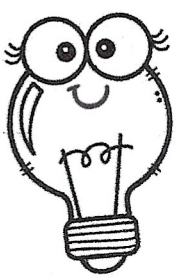
SEA STARS

Sea stars are found all over the ocean; they can be as small as your pinky finger or up to 3 feet across. Their arms are called **rays** and they radiate from the central disk where their mouth is in the middle

The way star fish eat is very interesting. They use their **tube feet** to crawl on top of their prey - such as a bivalve. It will wrap its suction-footed rays around the clam and start pulling a clam open. The clam is strong and can resist a while, but eventually the prey gets tired and opens a crack. At this point, the sea star's stomach will leave its mouth and can creep in the bivalve's shell through even a small hole to begin digesting its meal. When it is fully digested, waste will leave from the anus which is situated on the top side of the starfish (opposite the mouth).

A sea star's tube feet are filled with groves that run up and down each ray. These canals, called **water vascular system** transport oxygen, food, and other things to the various parts of their body. They have no blood.





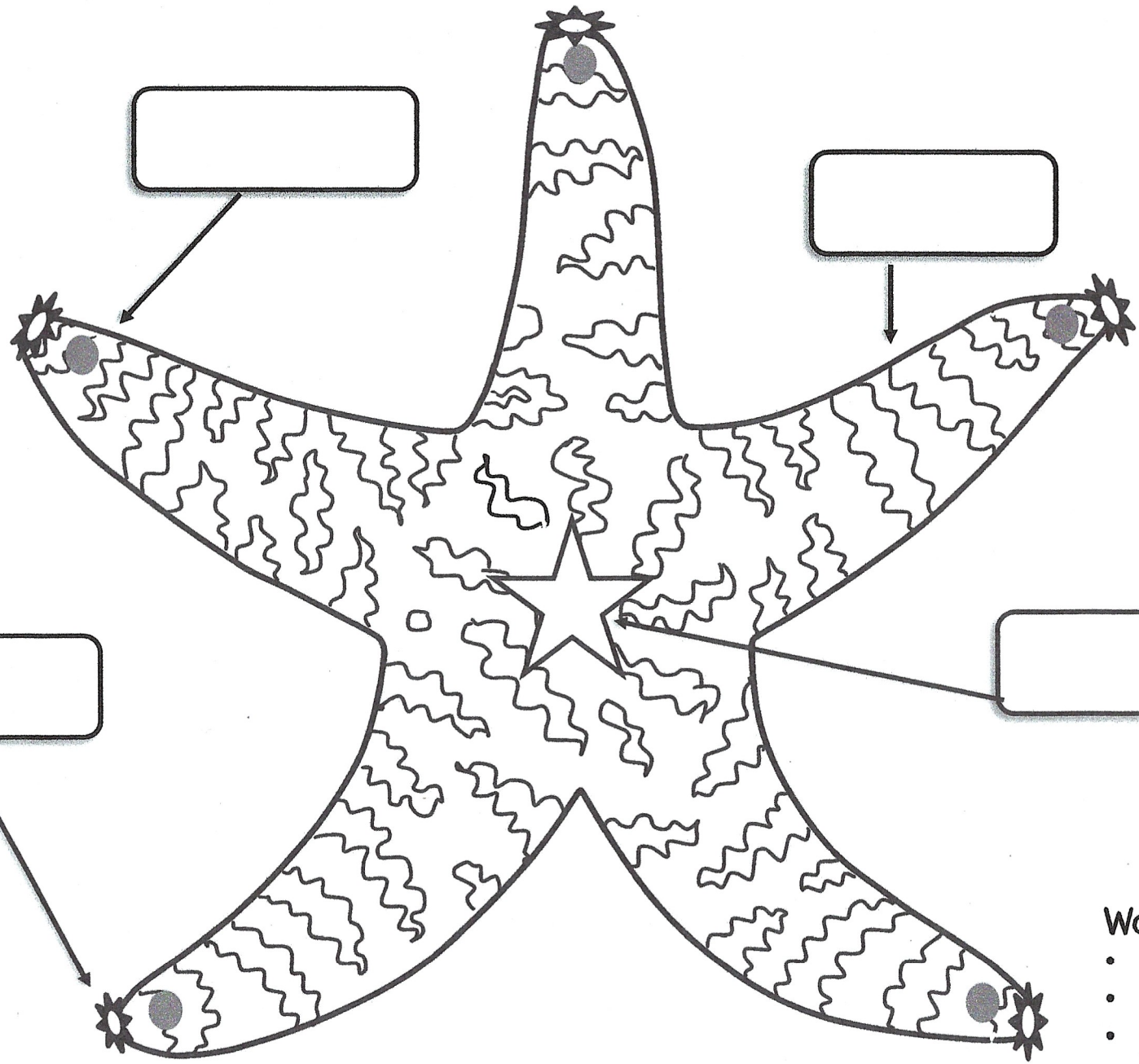
If sea stars have more than 5 rays, they have more in multiples of five, so they could have 5, 10, 15, or up to 30 arms.

Sea stars don't respond to touch very quickly, but if you turn it over you will see little moving feet on the bottom. In addition, on each arm they have an eye spot (slightly darker than the rest) - although not a true eye, it can distinguish between light and dark.

Like other animals such as crabs and lizards, sea stars can **regenerate** (grow again) body parts. If a sea star's leg is cut off it can make a new one. Sometimes, sea stars will break off their own rays and not only will they regrow a ray, but the separated ray will regrow the rest of the body. You end up with two complete sea stars that are exact copies, or clones, of each other.

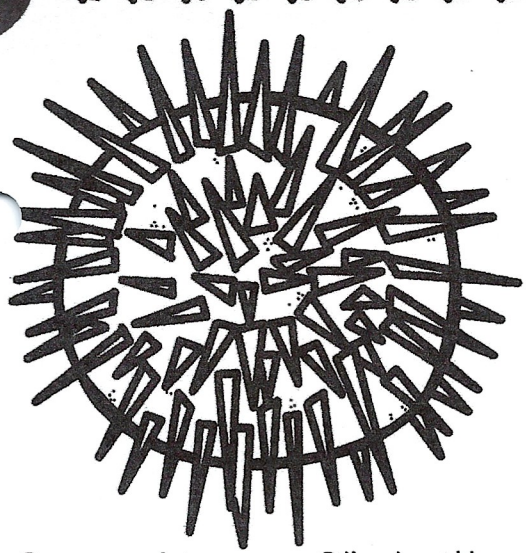
Name; _____

LABEL THE SEA STAR



Word Bank:

- eye spot
- sucker
- mouth
- ray

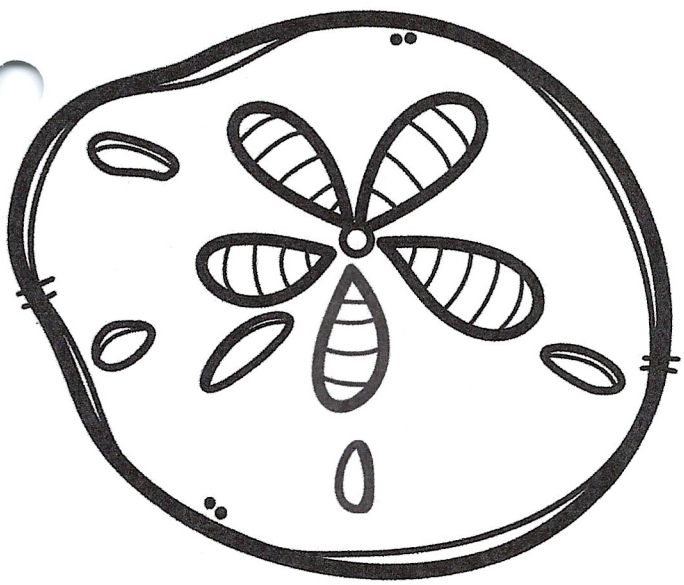


SEA URCHINS

A **sea Urchin** looks like a spiky ball; it resembles a pincushion. They come in many colors such as red, purple, green, or other colors. Their spines protect them from being eaten by most sea creatures, but they are prey to sea otters who crack them open with rocks. You may be wondering what could be so yummy inside?

Sea urchins are filled with millions of eggs that are harvested and eaten just like caviar - fish eggs.

They live with other sea urchins in tropical waters. Using their tube feet, they can move about slowly holding onto rocks. As with other echinoderms, sea urchins can taste what they step on with their tube feet to find tasty algae or other debris. When a sea urchin dies, it will loose all its spines and look like a shell ball. Since it is not technically a shell, scientists call it a **test**.



SAND DOLLARS

The **sand dollar** is a flattened sea urchin with many tiny spines. This echinoderm has tube feet, but it doesn't use it to move. The tube feet that come out of the tiny holes in the middle of the sand dollar flower pattern are used to breath. The sand dollar can move or dig using its tiny spines.. On the underside of a sand dollar you will see a hole in the middle - that is its mouth. Coming out of the center are grooves called **food groves**. Here the sand dollar filters sand and water to catch plankton and debris; the tiny hairs called cilia move the food to the grove where it then travels to the mouth.

The sand dollars you find on the beach are not living and therefore have no spines and are bleached white from the sun.