

LEARNING WORKSHEETS THIRD GRADE



NAME: _____

Our Mission: To foster understanding, wonder, and respect for Hawaii's marine life.
E paipai i ka 'i'ini e ulu ai ka 'ike ku'una Hawai'i e ola mau ka nohona moana.

Fish and Their Shapes!

Fish come in many different shapes, sizes and colors. To complete the next page, you will be asked to observe and make predictions about fish based on their shapes. Here is some helpful information about common fish shapes:

Body Shape - **Directly related to the lifestyle of the fish**

Streamlined: Also called Fusiform, these fish are fast swimmers, gliding through water with less resistance. Usually fish that are this shape swim for long distances and are found in the open ocean.

Example: Jacks, Barracuda, Wrasse, Sharks

Laterally compressed: These fish are tall and their compressed, or flattened, body allows them to fit into narrow places and turn quickly. They are slower swimmers but can speed up for short bursts.

Example: Yellow Tang (surgeonfish), Butterflyfish, Damselfish, Unicornfish

Depressed (flat): These fish are well suited to living on or near the bottom or even in the sand.

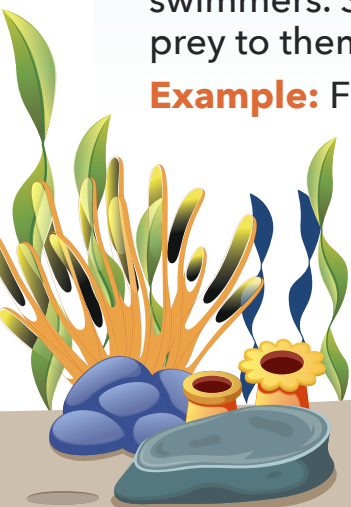
Example: Stingrays, Flounders

Elongated: These fish have long bodies and are slow swimmers that stay close to the reef.

Example: Eels, Sea Horses, Trumpetfish

Sphere: These fish have stocky bodies and are slow swimmers. Some even use lures and light to attract prey to them rather than swimming after the food.

Example: Frogfish, Pufferfish, Porcupinefish



Vocabulary

Words




These words and terms are all important when learning about marine life. Learn what you can about each one and how it relates to sea creatures.

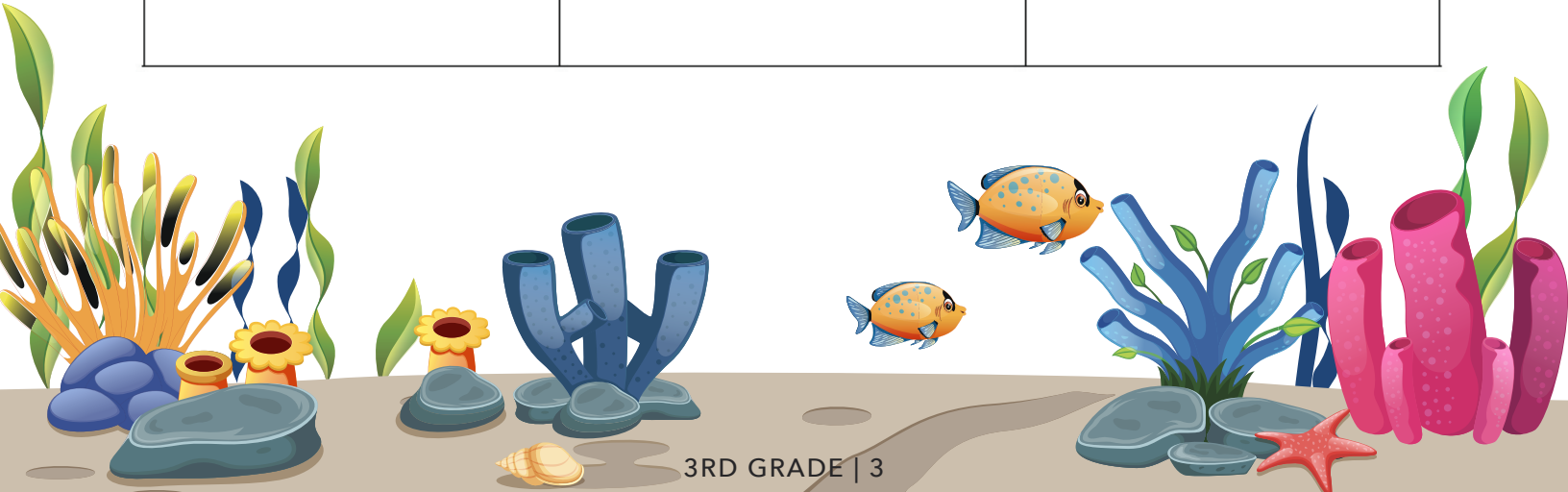
1. Frictional resistance
2. Streamlined
3. Lateral
4. Compressed
5. Elongated
6. Narrow
7. Stocky
8. Lures
9. Caudal
10. Maneuverability
11. Drag
12. Ambush Predator



Investigating Animal Shapes

Observe the fish in the Living Reef Building. Choose four animals that have different body shapes. Draw your fish in the boxes below and explain what type of body form they have and where these animals are most likely to be found.

| Animal | Body Shape | Where does this live? |
|--|--------------------|-----------------------|
| Example: Frogfish  | Rounded body shape | Lives in mid-reef |
| | | |
| | | |
| | | |
| | | |



Tales of Fish Tails

You can tell a lot about where fish live and how they swim by looking at their tail. The different shaped tail fins, (caudal fins), are an important characteristic that help us understand how these fish move.

The Caudal Fin - this fin provides the main thrust used in swimming for many fishes

Lunate caudal fin (moon-shaped): Fast swimmers, propulsive efficiency for continuous long-distance swimming, but less maneuverability.

Example: Tuna (ahi), Marlin, Barracuda and some sharks



Forked caudal fin: Moderately fast, continuous swimmers, produces less drag.

Example: Trevally ('ulua, Bonefish ('oio), Flying fish, and Dolphinfish (mahimahi)



Squared/Truncated caudal fin (triangular shape):

Very maneuverable, capable of bursts of speed for short distances.

Example: Yellow tangs, Butterflyfish and other reef fish

Rounded/Paddle caudal fin: Slow swimming, has effective acceleration and maneuvering, but is inefficient for prolonged continuous swimming. These animals are capable of bursts of speed for short distances and tend to be ambush predators.

Example: Flounders, Frogfish and Pufferfish




Tapered: Slowest swimmers, use body to swim.

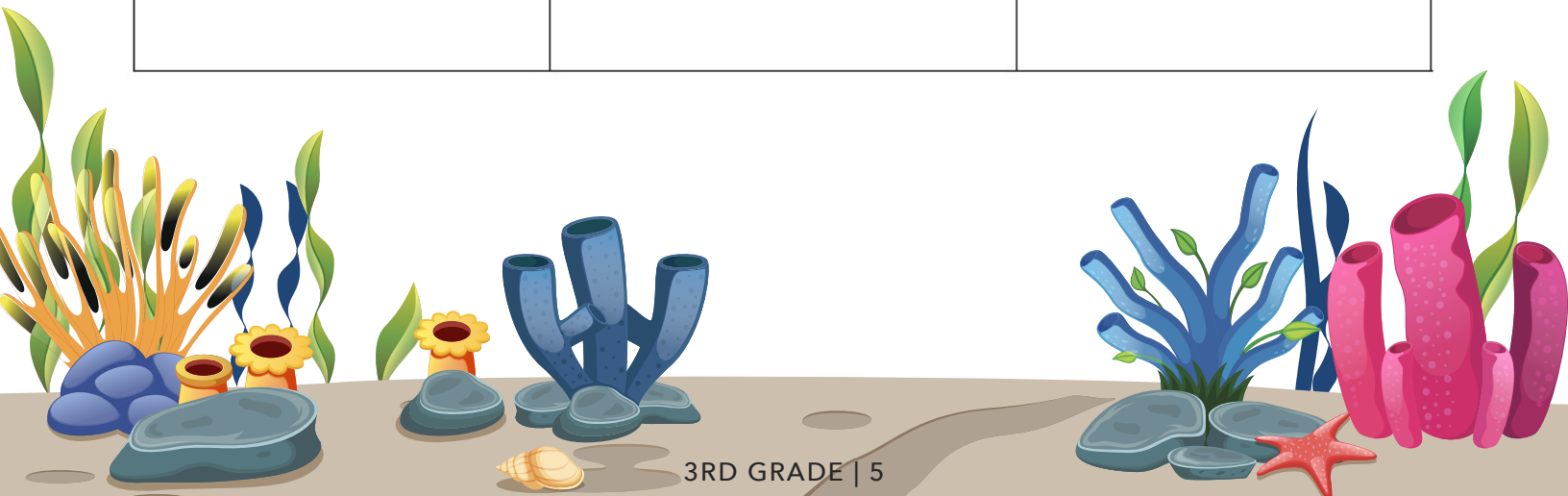
Example: Eels



Tales of Fish Tails

Observe four different fish with four tail shapes. Write the name of the fish in the first column, the type of tail it has, and why this tail shape is helpful for this fish.

| Animal | Tail Shape | Helpful Characteristics |
|--|----------------------------|-------------------------|
| Frogfish  | Rounded/ Paddle caudal fin | Good for maneuvering |
| | | |
| | | |
| | | |
| | | |



Detective Snooper

What are the following animals?
Fill in the blanks using the word bank clues below.

Word Bank

Stingray
Shark
Crab
Coral
Sea Turtle



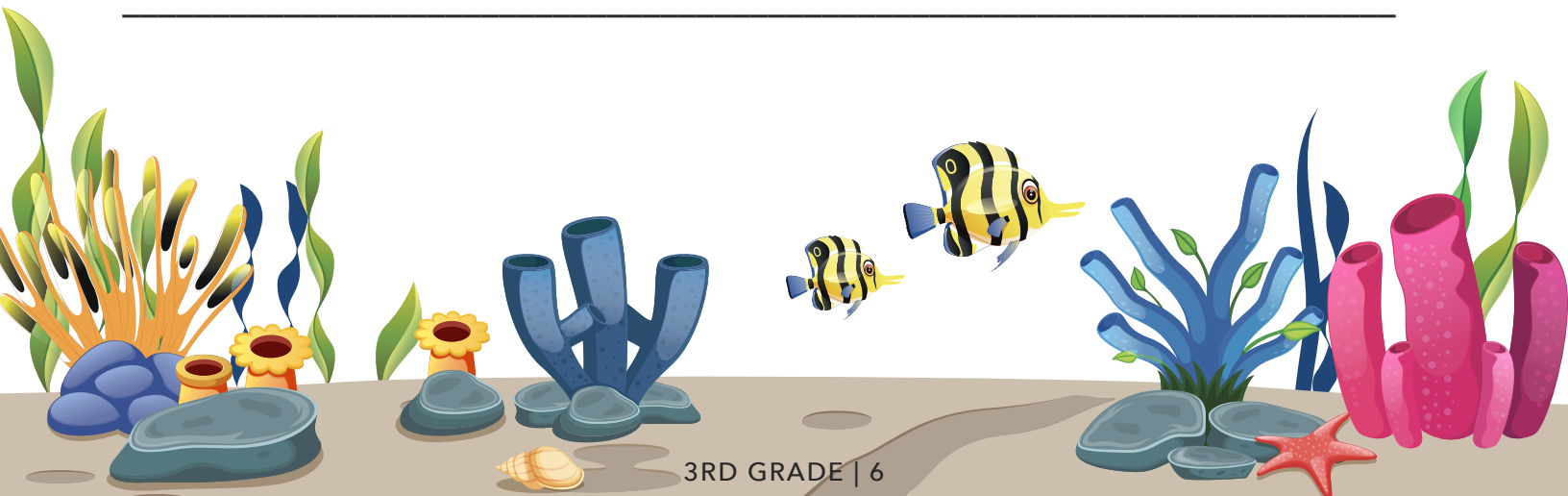
I have a hard shell, eight legs and two claws. What am I?

I have a hard shell, four flippers and a short tail. What am I?

I am flat and have a long, skinny tail with a stinging barb on it. What am I?

I am very small and have a ring of tentacles that makes me look like an underwater flower. I often live in a colony with many others that look just like me. We are often mistaken for colorful rock. What am I?

I am not very colorful. I have very sharp teeth and can swim very fast. What am I?



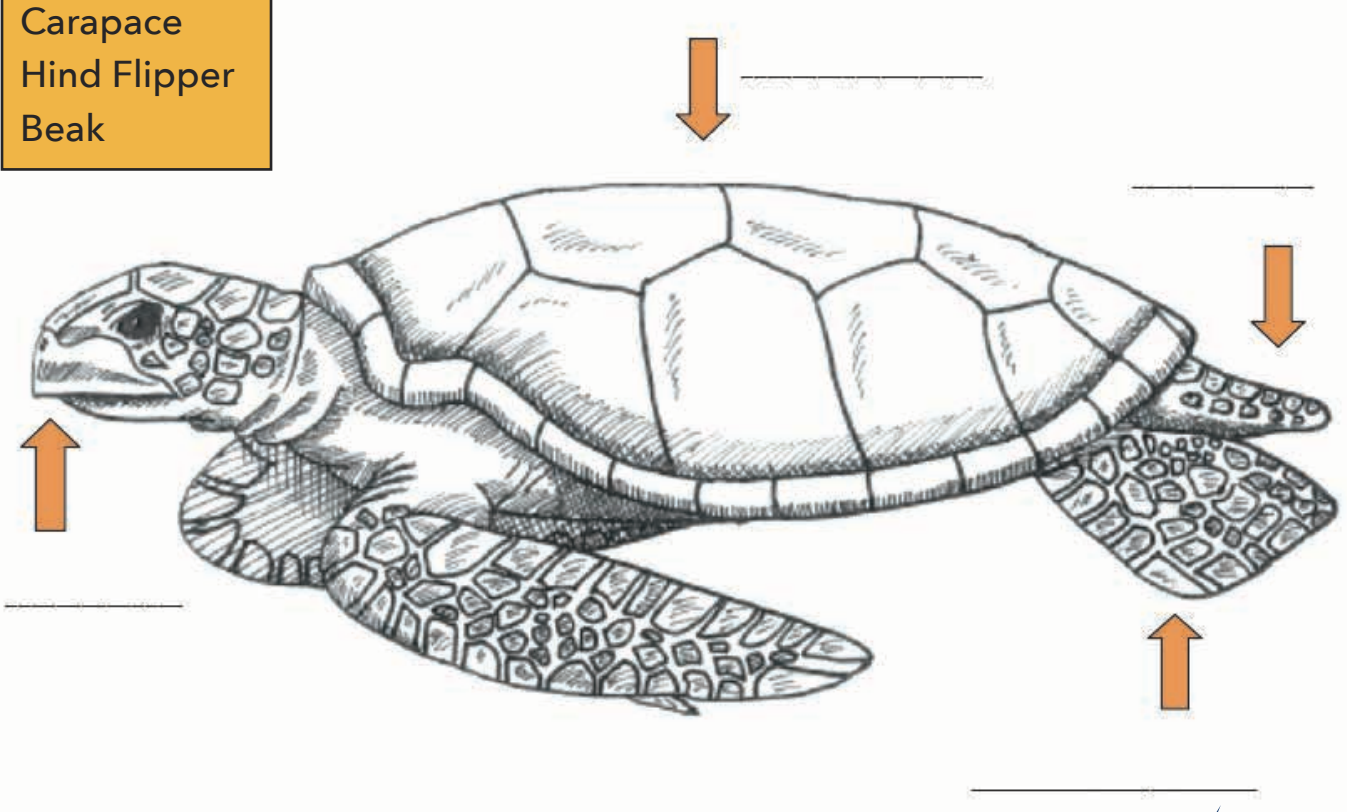
Turtle Lagoon

Directions: Look at the green sea turtles in Turtle Lagoon.
Answer question #1 in a complete sentence.

1. How many turtles can you count at the Turtle Lagoon? _____

2. Fill in the diagram of the anatomy of a Green sea turtle using the word bank.


Word Bank
Tail
Carapace
Hind Flipper
Beak

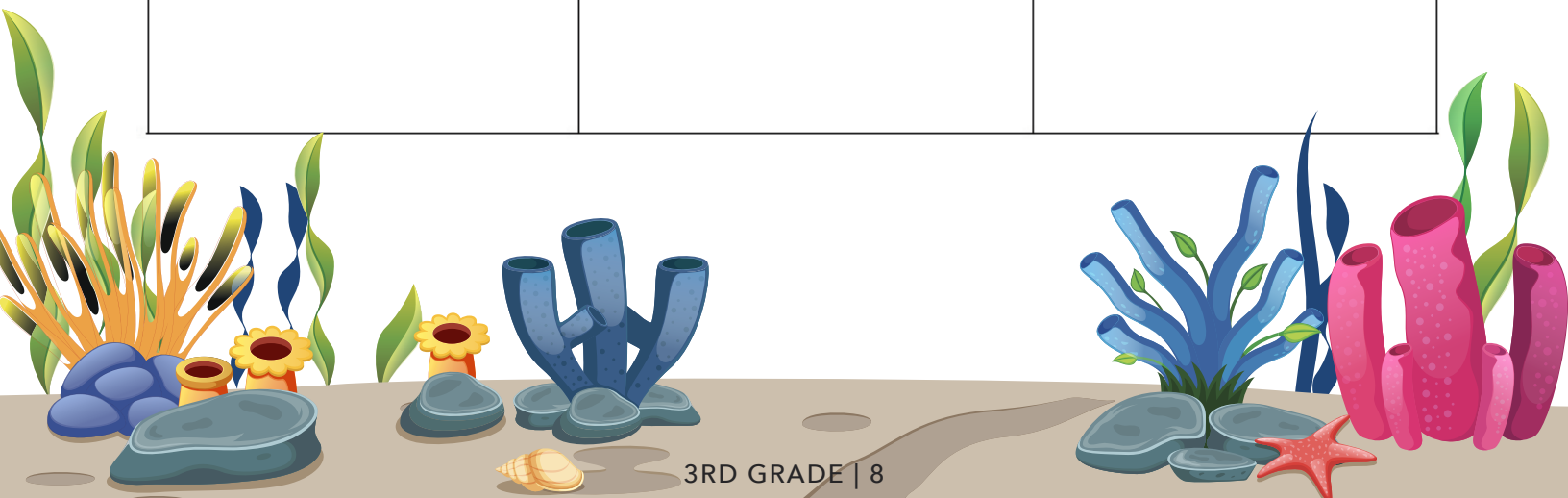


Survival



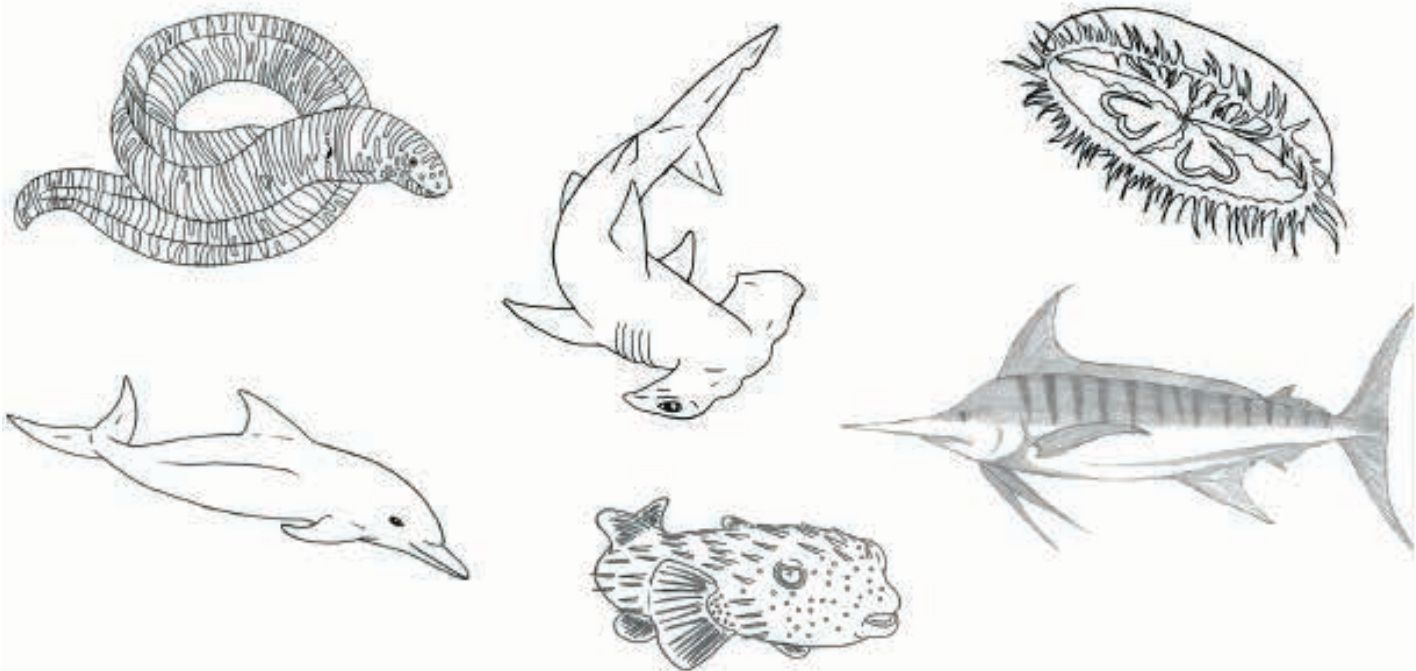
As you walk through the Maui Ocean Center, look closely at the animals and make observations about their habitat and the characteristics that help these animals to survive.

| Animal | Observation 1 | Observation 2 |
|---|--|---|
| Yellow Tang  | Compressed body better suited for reef environment | Small mouth better for eating small invertebrates |
| | | |
| | | |
| | | |
| | | |



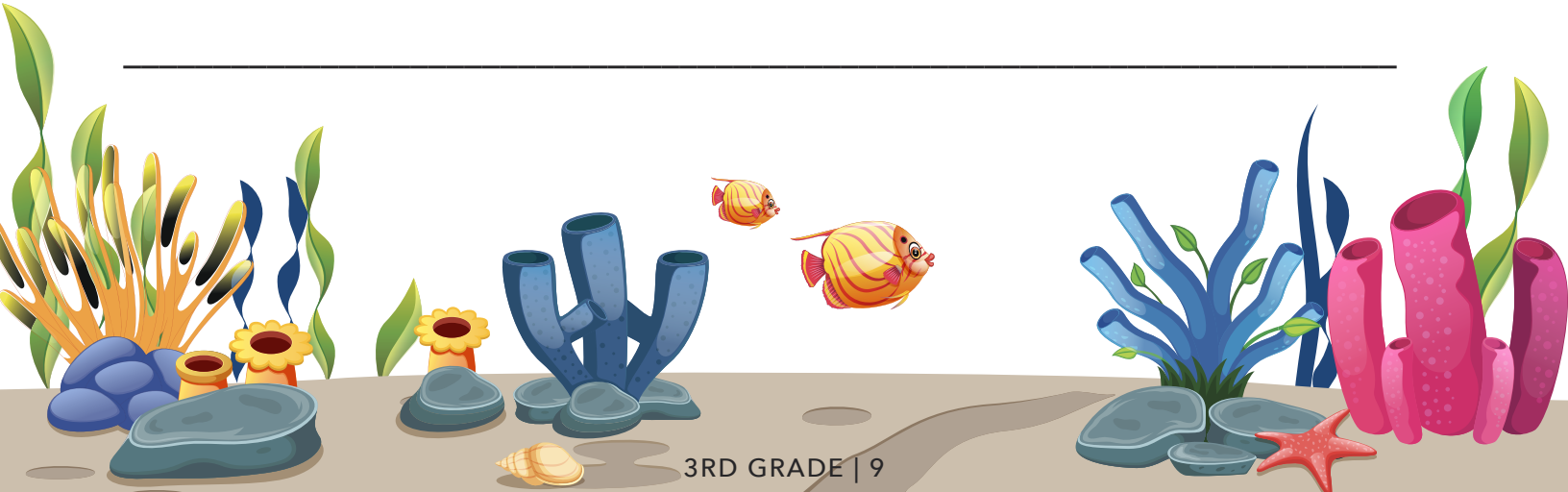
Shape & Speed

Some animals in the ocean move slow and some move fast!
Circle the animals that move fast below.






1. Why is this shape the best for moving fast?

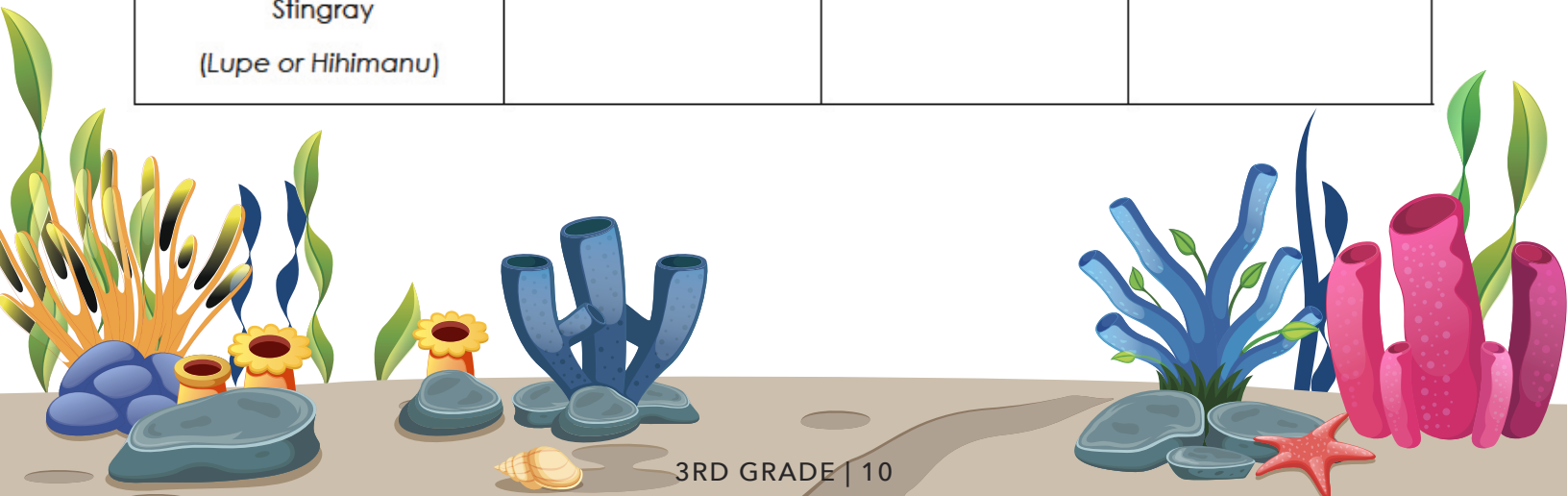
2. Are open ocean fish very colorful? Why or why not?

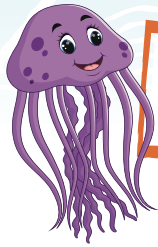


Open Ocean Animals

Observe these animals in Open Ocean Exhibit and answer the questions below based on your observations. Compare the different types of teeth that these animals have and what you think they eat.

| Animal | How many did you see? | Were they moving fast or slow? | Was this animal swimming alone or in a school? |
|---|-----------------------|--------------------------------|--|
|  Shark (Manō) | | | |
|  Giant Trevally (`Ulua aukea) | | | |
|  Stingray (Lupe or Hihimanu) | | | |





Matching!

Unscramble the letters to find the common names for the animals listed below. Use the Hawaiian names as a hint.

The first one is done for you.

'Opihi

mitpel

limpet

Honu

reneg aes ruttel

Loli

esa bremucuc

He'e

sooptuc

Manini

vocntci antg

Kualakai

esa reah

Ulua aukea

iantg vlaytrle

Māno

karhs

Nunu

petmirthfus

Kikakapu

coronca flutterfrybish



Treasure Hunt



Find marine animals that you think match the words in the boxes below. Write the name and draw a picture of the animal in the box.

| | | |
|----------------|----------------|----------------|
| Rough | Smooth | Shiny |
| Soft | Pointed | Small |
| Hard | Thin | Large |
| Striped | Pokey | Spotted |

