

# LEARNING WORKSHEETS FOURTH 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.*

# Environment

# & Behavior

Behaviors of animals are affected by their environment. Observe the different parts of the reef and examine three very different animals. Use complete sentences to answer the questions below.

## SHALLOW REEF: Convict Tang (*manini*)



### Discussion:

Why is each fish's color best for its environment?  
How does the feeding behavior differ based on the environment in which it lives? Where would each fish sleep and why?

Why would Convict Tangs have stripes? \_\_\_\_\_

\_\_\_\_\_

What do you think Convict Tangs eat? \_\_\_\_\_

\_\_\_\_\_

when and where do you think Convict Tangs sleep? \_\_\_\_\_

\_\_\_\_\_



# Environment

# & Behavior



DEEP REEF:  
Squirrelfish & Soldierfish

Why do you think these fish are red? \_\_\_\_\_

What do you think these fish eat? \_\_\_\_\_

When and where do you think these fish sleep? \_\_\_\_\_

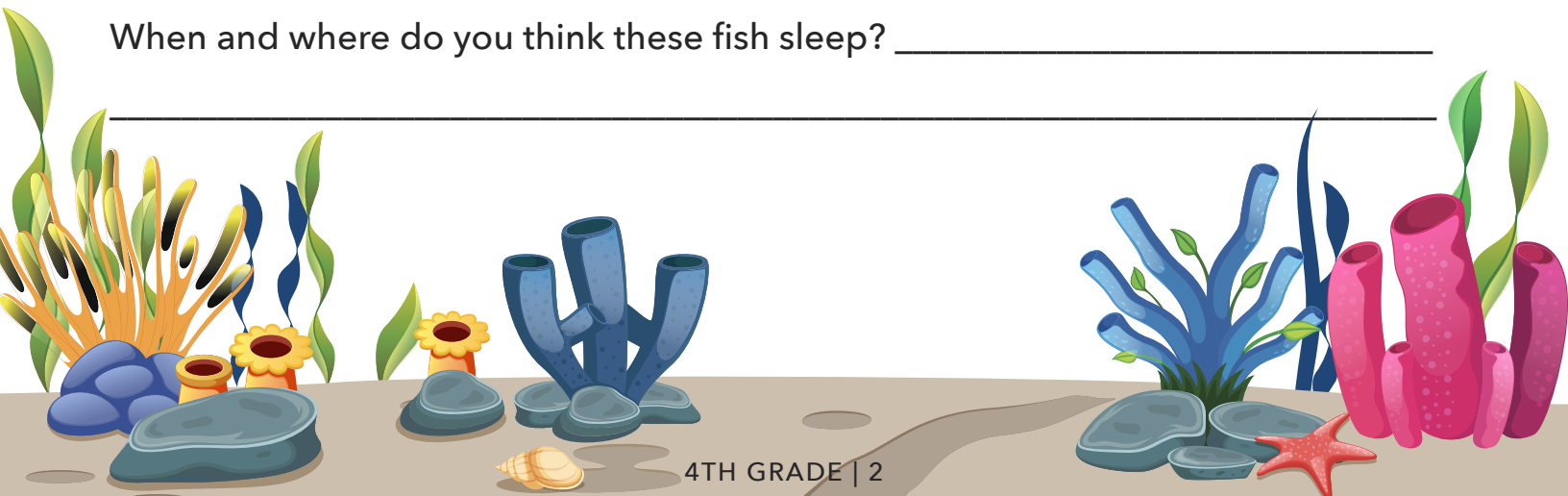
## OPEN OCEAN: Shark (*manō*)



Why do you think sharks are dark on the top but light colored underneath?

What do you think sharks eat? \_\_\_\_\_

When and where do you think these fish sleep? \_\_\_\_\_





# 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.

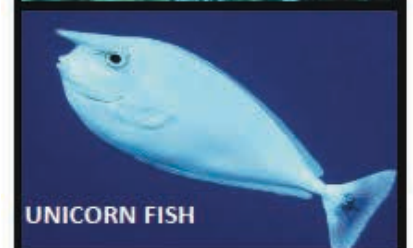
**Example:** Eels, Sea Horses, Trumpetfish

**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



BARRACUDA



UNICORN FISH



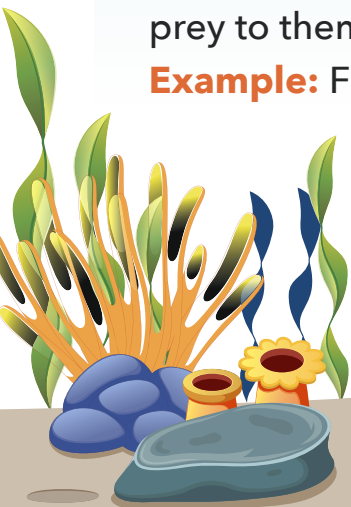
STINGRAY



MORAY EEL



FROG FISH



# Fish Shapes

Choose two fish with very different body shapes in The Living Reef exhibit. Draw each fish and answer the questions below.

## FISH 1



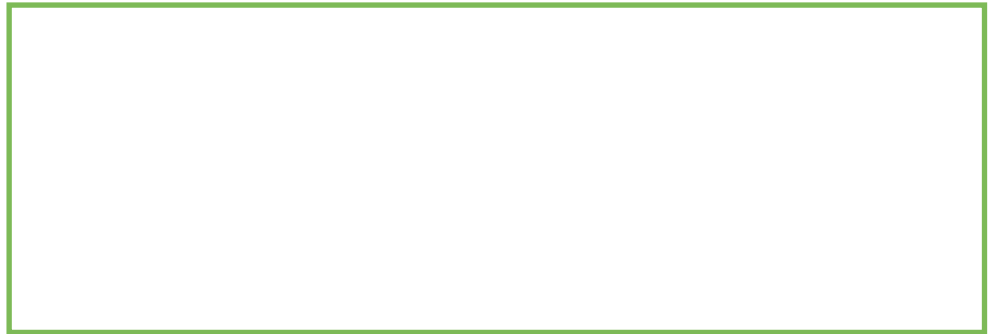
Describe the shape of this fish. \_\_\_\_\_

\_\_\_\_\_

What are the advantages of this shape? \_\_\_\_\_

\_\_\_\_\_

## FISH 2

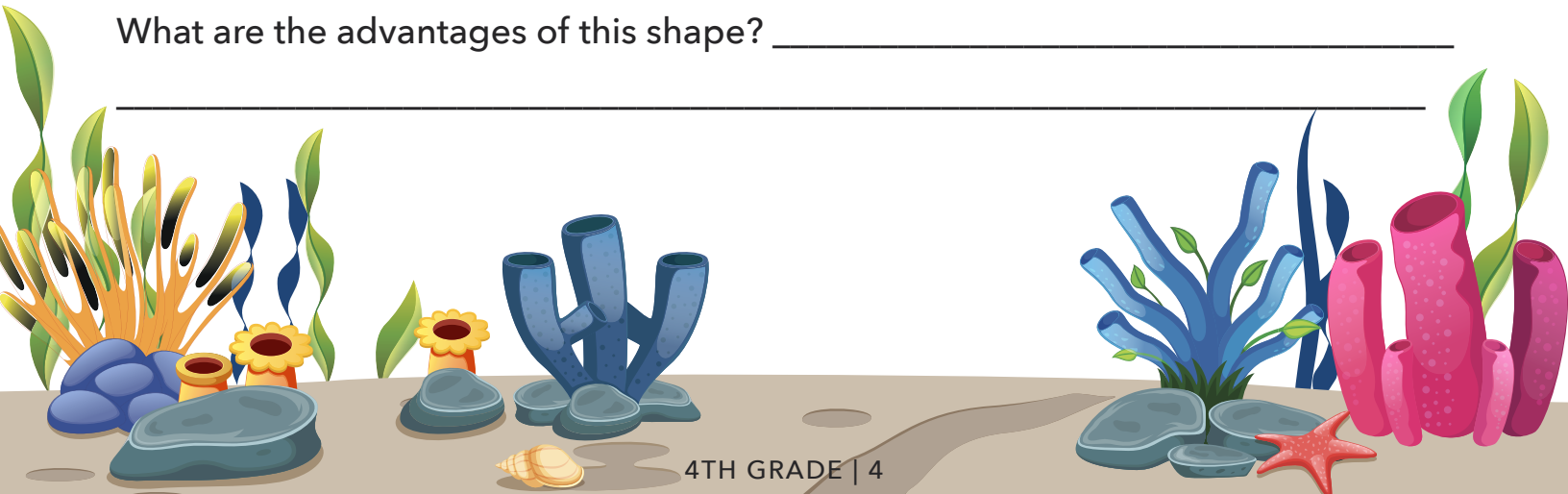


Describe the shape of this fish. \_\_\_\_\_

\_\_\_\_\_


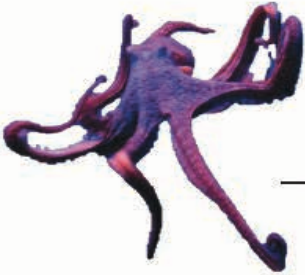


What are the advantages of this shape? \_\_\_\_\_

\_\_\_\_\_



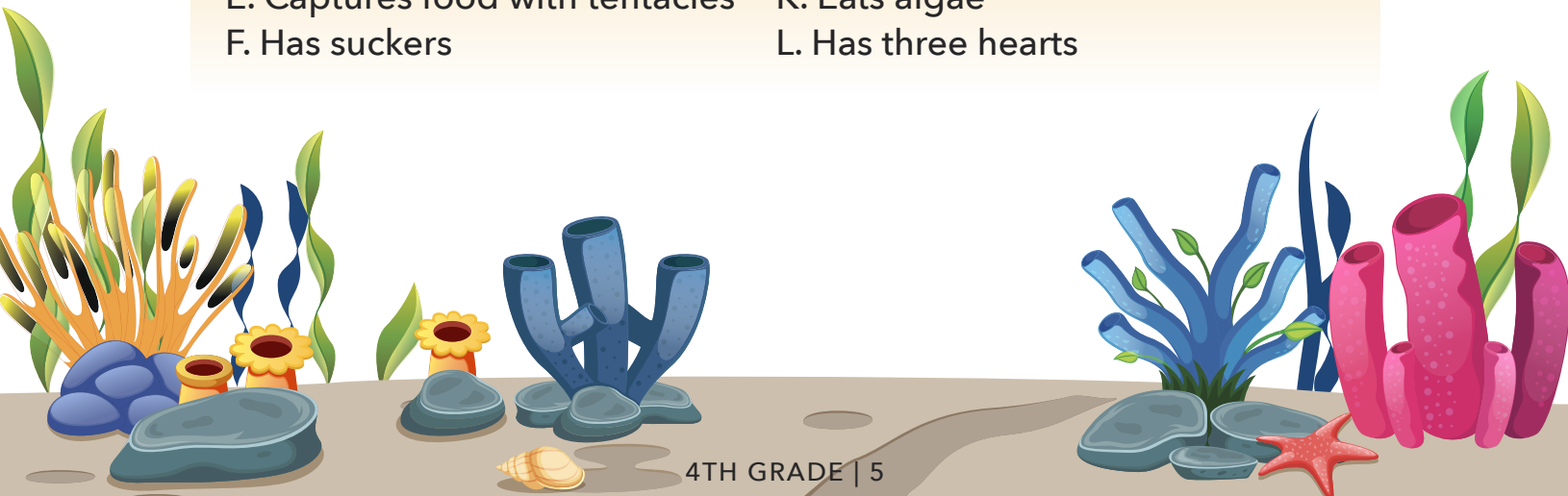
# Matching

Match the animals with the descriptions below. Write the letter or letters that best describe characteristics of each animal.

 _____	 _____
 _____	 _____

## Animal Descriptions

- |                                 |                                      |
|---------------------------------|--------------------------------------|
| A. Lays eggs on land            | G. Sucks up food                     |
| B. External body armor          | H. Has Fins                          |
| C. Has flippers                 | I. Has a blade on tail for defense   |
| D. Has scales on body           | J. Male gives birth, not the females |
| E. Captures food with tentacles | K. Eats algae                        |
| F. Has suckers                  | L. Has three hearts                  |



# Create A Food Chain



Create different marine food chains. Be sure to begin each food chain with a Producer (plant) and end each food chain with a Decomposer (such as shrimp, crabs, or marine bacteria). Each food chain should have at least 4 steps.

Label the Producers (P), Consumers (C) and Decomposers (D) in each of your food chains.

Why do all food chains or food webs begin with a plant?

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What is the role of Consumers in a food chain or food web?

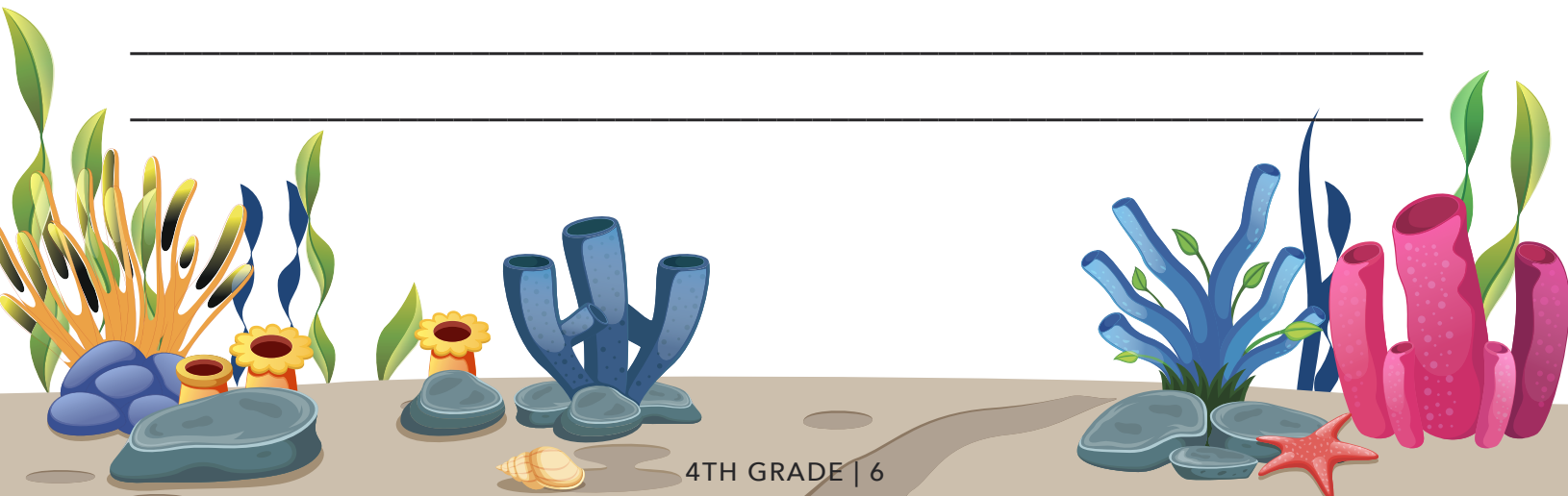
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Why are Decomposers so important in a food chain or food web?

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# Word Hunt

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

## **Word Bank**

Stingray  
Shark  
Crab  
Coral  
Sea Turtle



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

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

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

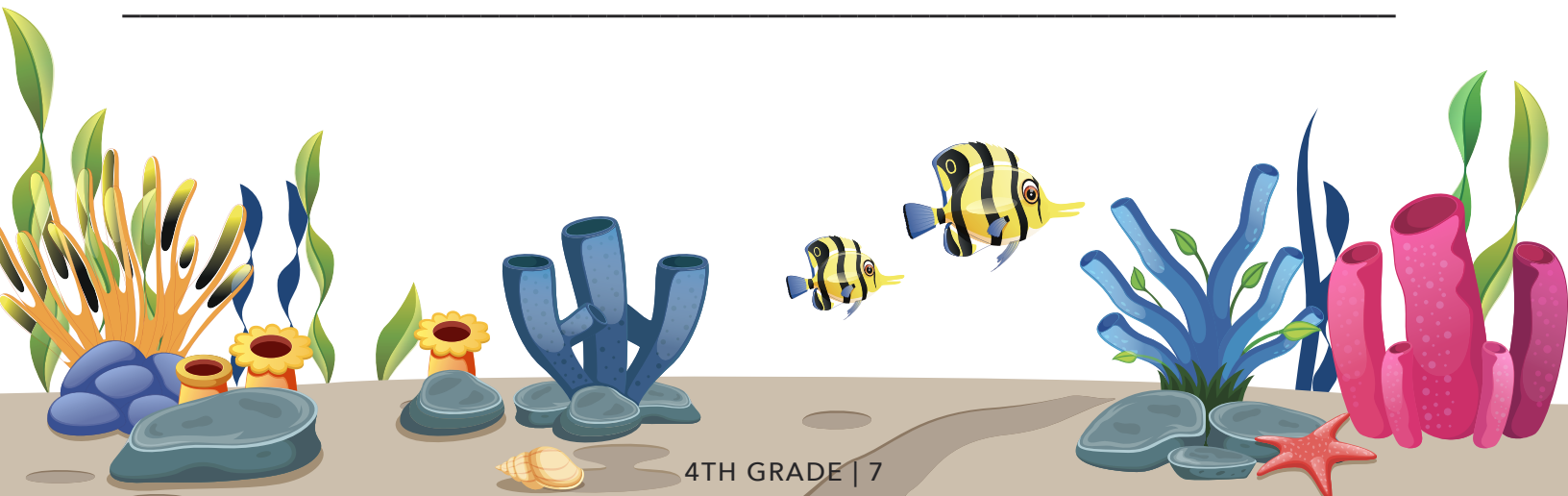
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I am very small and have a ring of tentacles that makes me look like an underwater flower. I often live in a colony with many others that look just like me. We are often mistaken for colorful rock. What am I?

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

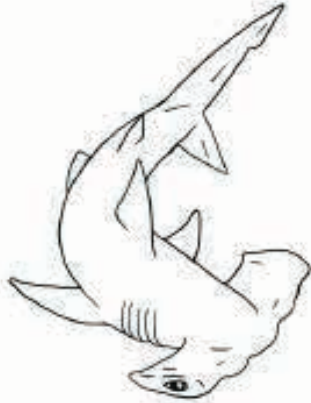
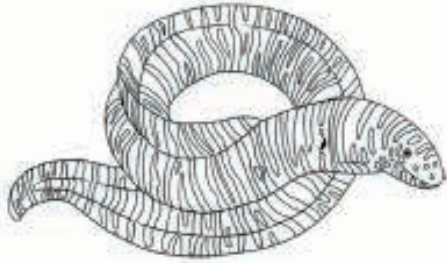
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# Shape & Speed

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?

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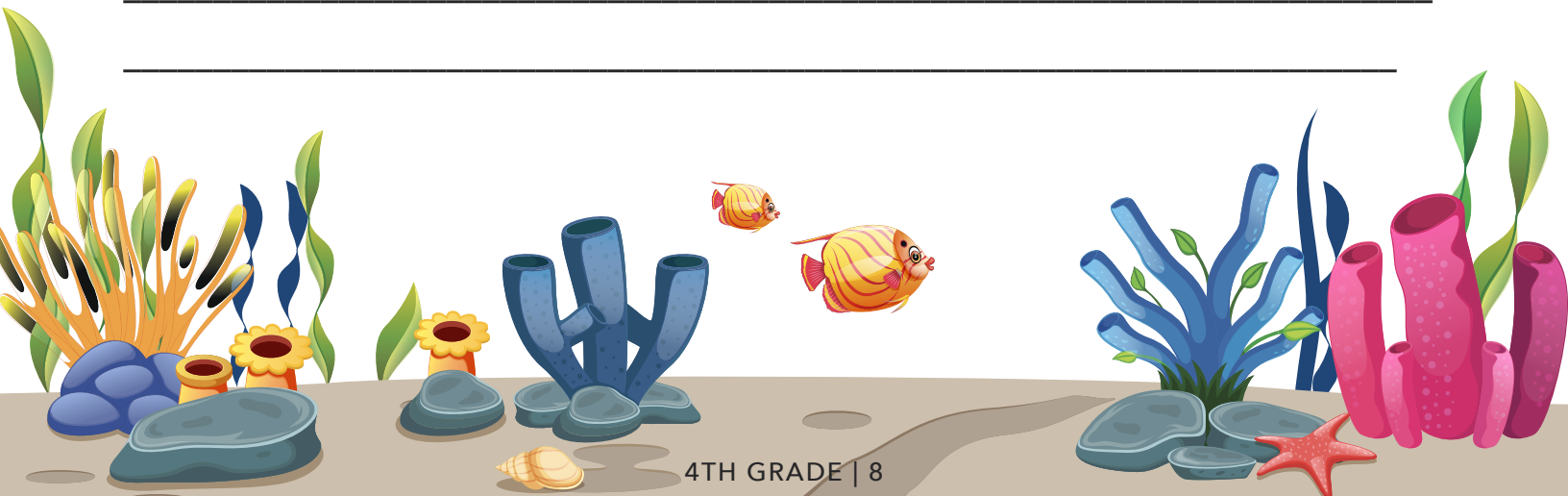
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2. Are open ocean fish very colorful? Why or why not?

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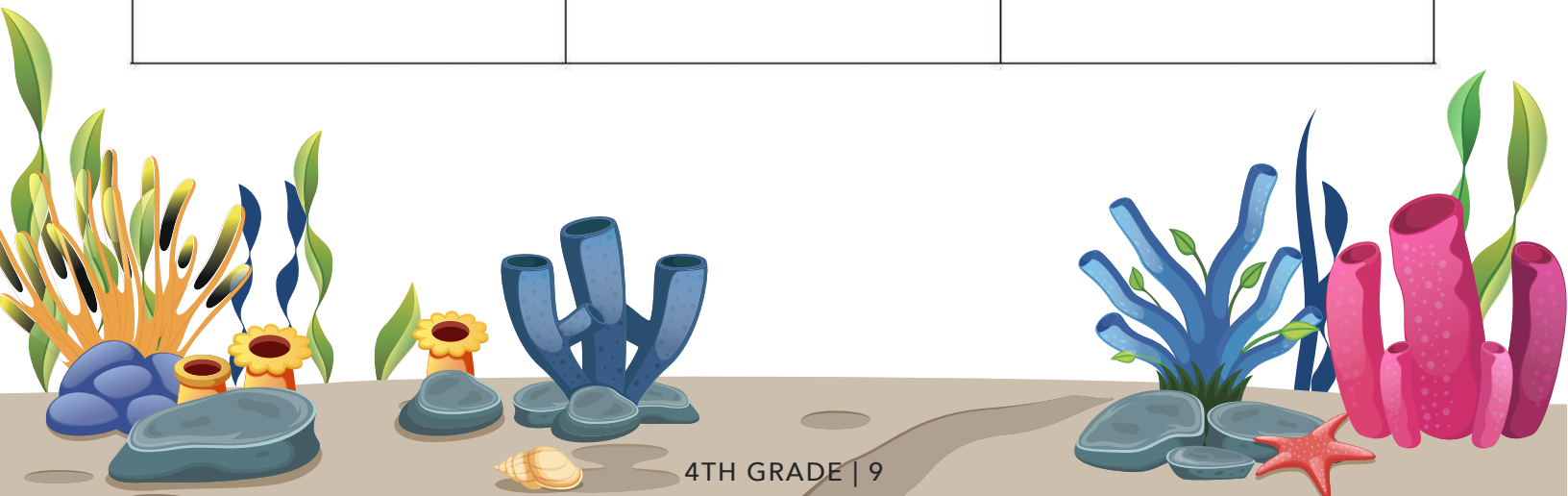


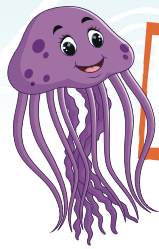


# Open Ocean Animals

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 explain what you think they eat due to the types of teeth they have.

Animal	What types of teeth? (Sharp, plates, etc.)	What do you think they eat?
Shark		
Giant Trevally (Ulua)		
Stingray		
Blue Striped Snapper		





# 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 eas 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.

<b>Rough</b>	<b>Smooth</b>	<b>Shiny</b>
<b>Soft</b>	<b>Pointed</b>	<b>Small</b>
<b>Hard</b>	<b>Thin</b>	<b>Large</b>
<b>Striped</b>	<b>Pokey</b>	<b>Spotted</b>

