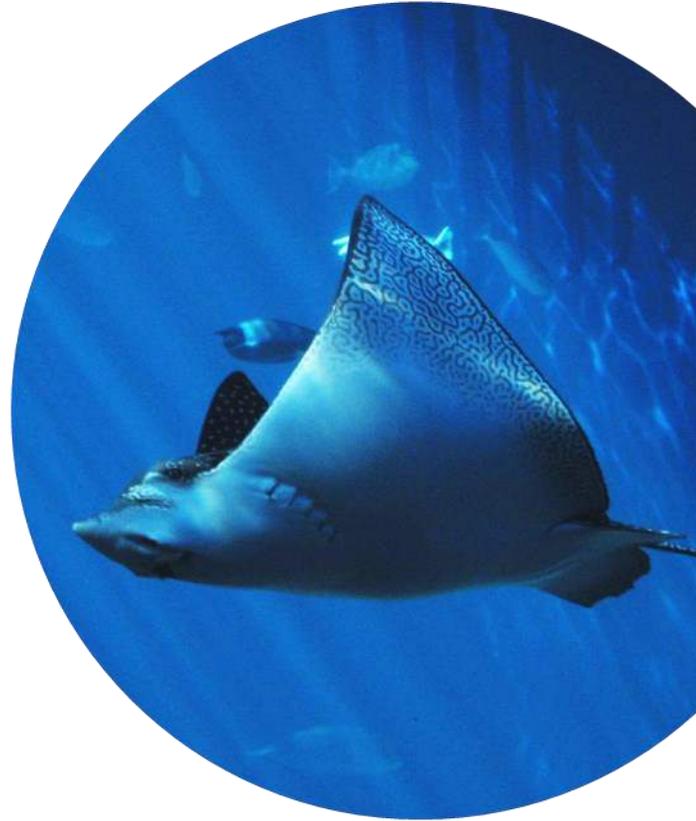


Name: _____



MAUI OCEAN CENTER

THE HAWAIIAN AQUARIUM



Maui Ocean Center Learning Worksheets

Fourth Grade



Our mission is to foster understanding,
wonder and respect for Hawai'i's marine life.

ENVIRONMENT & BEHAVIOR

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

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?

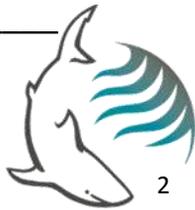


SHALLOW REEF – Convict Tang (*manini*)

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? _____
_____.



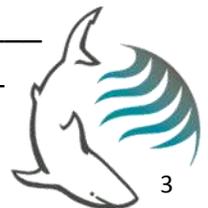
OPEN OCEAN Shark (*manō*)

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), butterfly fish, damselfish

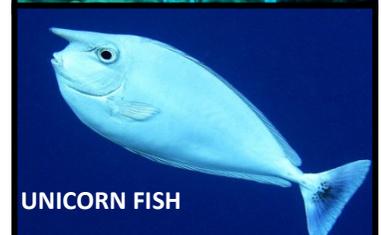
Depressed (flat): these fish are well suited to living on or near the bottom or even in the sand. **Example:** stingrays, flounders

Elongated: these fish have long bodies and are slow swimmers that stay close to the reef. **Example:** eels, sea horses, trumpet fish

Globular (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, porcupine fish



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. _____

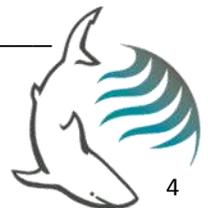
What are the advantages of this shape? _____

FISH 2



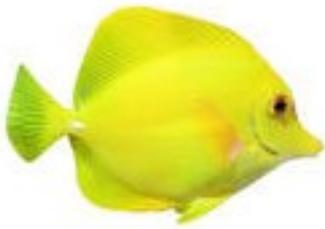
Describe the shape of this fish. _____

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

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

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



WORD HUNT

What are the following animals? Fill in the blanks by using the clues listed in the word bank 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?

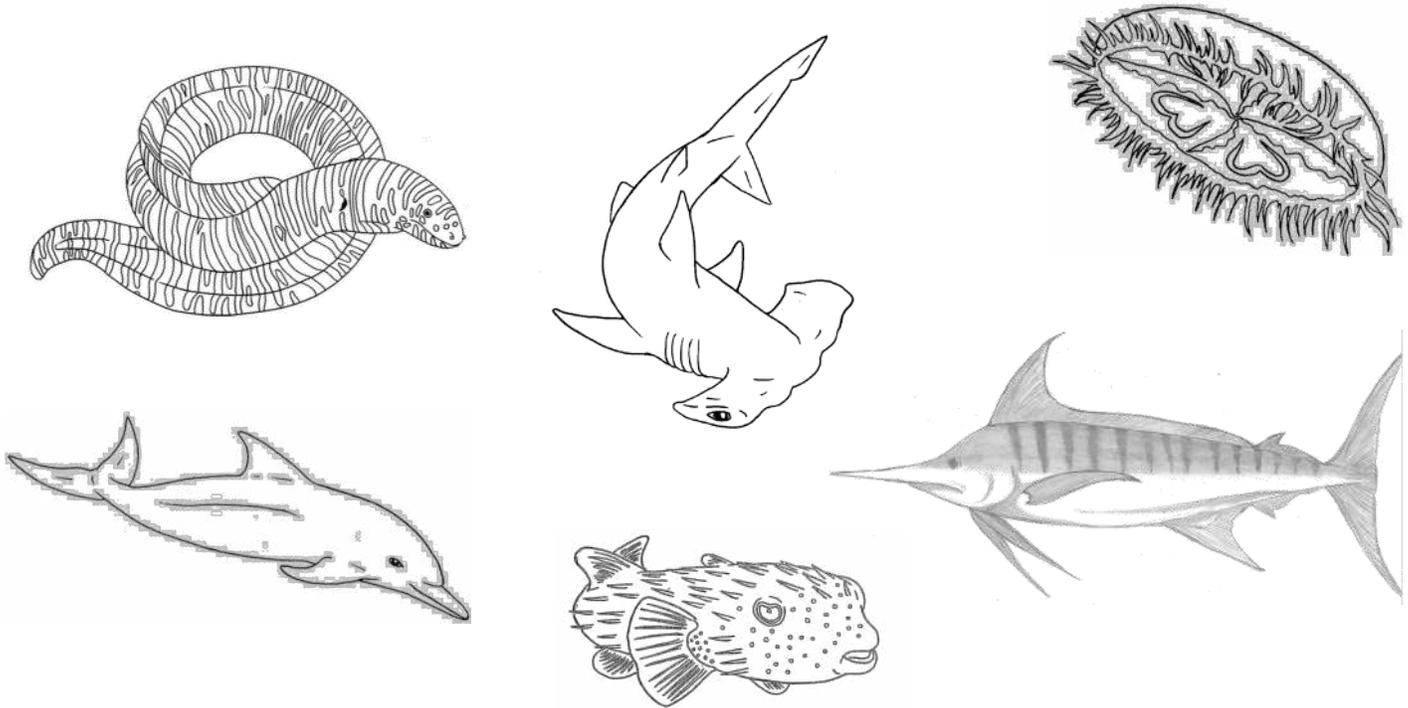
I am very small and have a ring of tentacles that makes me look like an underwater flower. I often live in a colony with many others that look just like me. We are sometimes mistaken for colorful rock. What am I?

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



SHAPE & SPEED

Some animals in the ocean move slow and some move fast!
Can you circle the animals that move fast below?



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

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

| Animal | What types of teeth? | What do you think they eat? |
|--------------------------|----------------------|-----------------------------|
| Shark | | |
| Giant Trevally (Ulua) | | |
| Stingray | | |
| Blue Striped Snapper | | |



MATCHING!

Unscramble the letters below to find the common names for some of these animals. Use the Hawaiian names to help you. The first one is done for you.

ʻŌpihi

mitpel

limpet

Honu

renege as ruffel

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 |

