



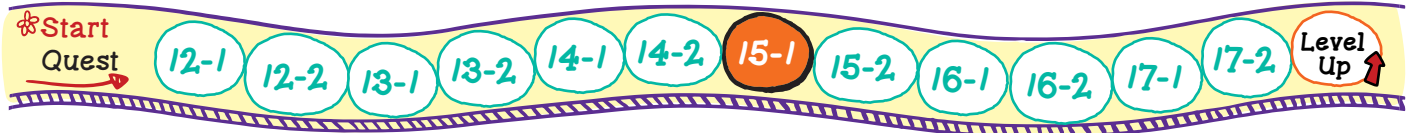
food heroes

Challenge 15: Fishy Business

Quest 3 of 3: Save Our World



Fishy Business



Introduction

Let kids become protectors of the ocean's waves of various aquatic animals with the "Fishy Business" challenge!

Children will learn about common pollutants in aquatic environments and conceptualize "overfishing".

Lesson Objectives

- ★ Students will identify different types of Marine litter.
- ★ Students will identify 3 different types of endangered fish.

You Will Need...

- | | | |
|--------------------------------|---------------------|--|
| ★ Food Journal* | 1 sheet per student | ★ Unhealthy Fish Habitat Posters |
| ★ Worksheet* | 1 per group | ★ Water-Polluting Trash Poster Posters |
| ★ Homework Sheet* | 1 sheet per student | |
| ★ Healthy Fish Habitat Posters | | |

*Additional preparation needed

Lesson Plan

Class Warm Up

Discussion Question:

What would happen to the oceans if we eat too many of the fish?

Vocabulary Preview

1. **Overfishing** - Catching fish faster than nature can replace them

Class Story

Today, the Food Heroes are going to the aquarium with Sage!

"When people want to save the world, we need to remember that means to save the land and the oceans! I'm so happy we are all at the aquarium so we can see what's inside the water!" she says.

The Food Heroes have never been to the aquarium before, and they are amazed!

"Wow! Look at all the fish! They are every size and color!" says Ava.

"Not only fish!" cries Jade. "There are jellyfish and eels too!"

"Look over here!" yells Clay. "A shark and a manta ray!"

All the Food Heroes race around the aquarium with wide eyes.

"Underwater animals are amazing! I want to learn about them all!" says Kai.

"Wow. The ocean is beautiful, and all these animals need water to survive. The Food Heroes need to reduce, reuse, and recycle to keep these fish alive." Says Terra.

"Well, I remember that Sage also told us to ask, 'Why?' more, so I'm also wondering...so many people in the world eat fish. Will the fish all

Helpful Hints

Get the class warmed up for this lesson by asking a discussion question.

I wish I might.
I wish I might,
change the world
with every bite.



die one day, if we eat so many of them?" Wonders Kai.

Sage overhears them and offers an answer. "That's a big question!" she says. "I think you're asking about the big problem of overfishing. Overfishing is when fishermen take out too much fish from the ocean. Because of this, sea creatures are disappearing, never to be seen again!"

"Oh!" says Kai. "Overfishing is scary! Scarier than that shark! Or that octopus!"

"Don't be scared!" says Sage quickly. "I'm teaching this to you so you can spread this message to everyone! Not so that you're afraid!"

"I'm ready to spread this message now!" says Terra. "We will make sure to practice this ourselves, too."

"I guess that's why fish are Warning foods!" Ava chimes in. "We need to think before we eat fish!"

Clay was the most energetic of all as they left the aquarium together. He jumped around as he said, "This is what we built our powers for! This is what we assembled the team for!"

Everyone laughs- Clay's energy is contagious. Everyone gets excited about making the oceans clean and helping the fish!

"Thank you for teaching us so we can teach others, Sage! We will spread the message!"

Don't forget, you need to spread the message, too!



Mini-Lesson

Ocean Clean Up:

Ask students what their favorite fish are to eat and where they believe they come from.

Show kids the different fish habitats with the Healthy Fish Habitat and Unhealthy Fish Habitat posters. Discuss with the class what they believe the differences are. If each student were a fish, where would they prefer to live? Lead a 10 minute brainstorm using the pictures as a prompt. You may like to write student responses on the board.

Overview with the class the different types of trash that end up in the water as a review of the previous class. Show each poster and ask students to identify the item.

Types of Trash:

plastic bag, plastic straw, plastic water bottle, 6-pack rings, pesticides, styrofoam, fertilizers

You may also bring in real life examples of the different types of trash.

Repeat until the students are comfortable with naming the items without help.

Introduce to the class another way in which fish can be harmed: through overfishing. Humans also cause a lot of trouble for sea creatures simply by taking too much of them from the ocean. Fishing more than you should is called “overfishing”. This is a big problem around the world and sadly, many types of sea creatures are disappearing from the ocean because of this.

Worksheet

On the “Trash” worksheet, circle everything that needs to be cleaned up to make a clean home for the sea creatures.

Class Activity

Fisherman Tag:

Let’s play Fisherman Tag!

Like tag, one student will be “the fisherman” and will have to tag all other students. Students who are tagged will be out.

After each consecutive round, add an extra fisherman. Ex: round 2 will have 2 fishermen, round 3 will have 3...

As more people are tagged, it will be harder for students to avoid “the fishermen” and they will all be snatched up quickly like the fishing in the oceans.

At the end, discuss with students the problems of overfishing and what we can do to save habitats and animal diversity.

At-Home Mission

On the “Names of Disappearing Fish” homework sheet, trace the names of fish that are disappearing because they are being overfished. It’s important that we help these fish by not eating them.

Complete a Food Journal.





Healthy Fish Habitat



Unhealthy Fish Habitat



Water-polluting Trash



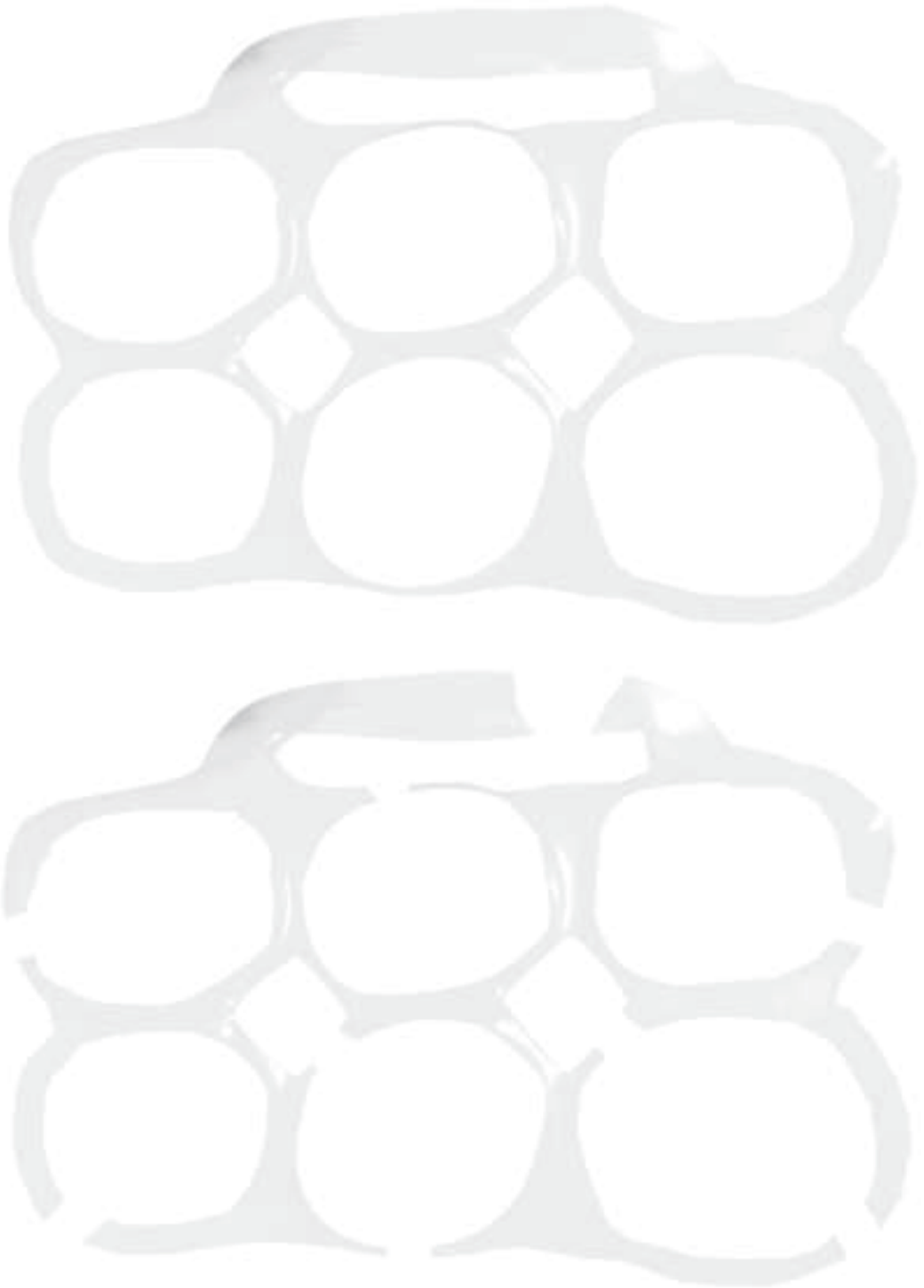
Water-polluting Trash



Water-polluting Trash



Water-polluting Trash



Water-polluting Trash



Water-polluting Trash



Water-polluting Trash

Activity

Circle everything that needs to be cleaned up to make a clean home for sea creatures.



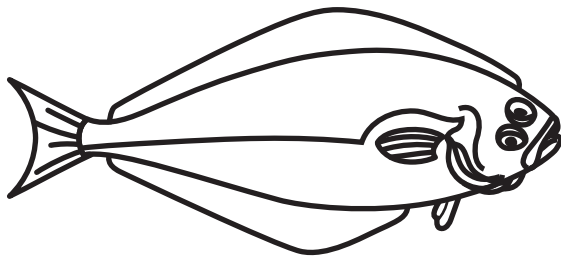
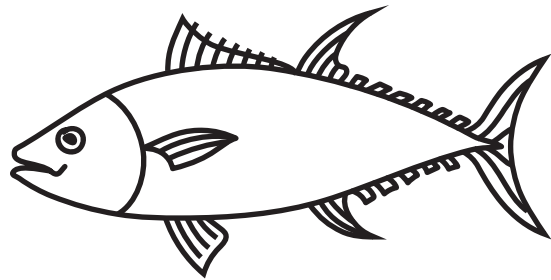


At-Home Mission

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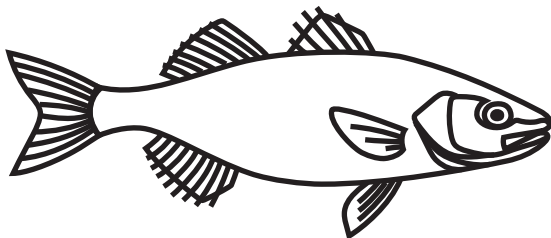
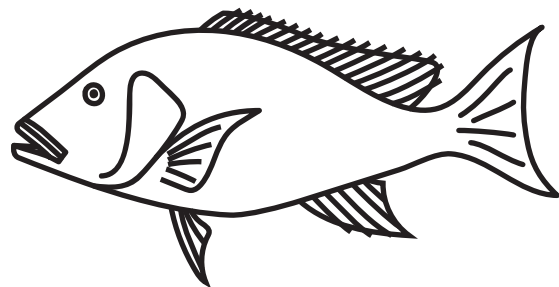
Trace the names of fish that are disappearing because they are being overfished. Help these fish live on by not eating them!

BLUEFIN TUNA



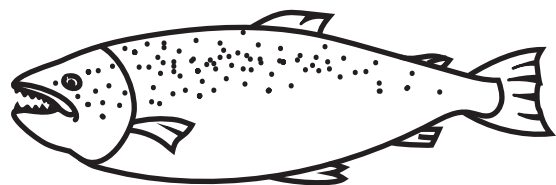
ATLANTIC HALIBUT

RED SNAPPER



SEA BASS

SALMON



Parent's Signature: _____

Fishy Business

Start
Quest

12-1

12-2

13-1

13-2

14-1

14-2

15-1

15-2

16-1

16-2

17-1

17-2

Level
Up

Introduction

Let kids become protectors of the ocean's waves of various aquatic animals with the "Fishy Business" challenge!

Children will learn the effect of pollution in marine environments through a role-play activity.

Lesson Objectives

- ★ Students will be able to generate cause and effect relationships involving pollution and the health of marine life and humans.

You Will Need...

- | | | | |
|-------------------|---------------------|--|---------------|
| ★ Food Journal* | 1 sheet per student | ★ Headbands*: | 1 per student |
| ★ Homework Sheet* | 1 sheet per student | ★ Fish, Sick fish, Sea turtle, Whale, Coral, Plastic straw, Plastic bag, Farmer, Fisherman 1, Fisherman 2) | |

*Additional preparation needed

Lesson Plan

Class Warm Up

Review:

Review with the class the consequences of taking too many sea creatures from the ocean and what this term is called.

Discussion Question:

What would happen to the oceans if we eat too many of the fish?

Vocabulary Preview

1. **Coral** - a sea creature that covers rocks in the ocean and acts as a home for many other sea creatures

Class Story

Welcome back to our adventures with the Food Heroes! Today, the Food Heroes are traveling out on a submarine with Sage!

"Last time, we went to the aquarium to talk about overfishing. Today, we get to see the fish and other sea animals in their natural homes: out in the ocean! Welcome aboard!" says Sage excitedly.

The Food Heroes hop in. The submarine dips into the water, and they are on their way! They all stand close to the window and happily look out into the blue water.

Clay is amazed and says, "Look at this long seaweed! I love to eat seaweed!" All the Food Heroes giggle with him.

Then, they pass a beautiful giant sea turtle moving slowly through the water. They see a jellyfish and a plastic bag around the turtle and...oh! The sea turtle accidentally eats the plastic bag!

Helpful Hints

Get the class warmed up for this lesson by asking a discussion question.



“Oh no!” cries Terra. “The sea turtle thought the plastic bag was a jellyfish! What will happen to the sea turtle? How is it possible that we are so far from land, but we still see trash in the ocean?”

“It’s because trash in the ocean follows the waves or currents of the ocean. That’s how the trash islands are created; the current brings them together,” answers Sage. “Let’s keep going.”

Next, the heroes come across a school of fish. “Wow, look at all the beautiful fish swimming together! They are shining like diamonds!” exclaims Jade. “But wait,” she suddenly says, “some of those shiny things are plastic straws. What happens when the fisherman catches the fish with plastic in their tummies?”

Now, the Food Heroes are getting worried. But after a while, they pass a coral reef. Kai points out of the window and gasps. “Look at this coral! So cool! But wait... why is it all white? And small like it’s crumbling? Are the coral all dying?”

“These are hard questions to answer,” replies Sage, “Before I do, I want you to see one more thing.”

The submarine swims a little longer until the Food Heroes are face to face with an enormous whale! The whale is so huge that the Food Heroes are scared. But then, they realize the whale is very peaceful and gentle, so they relax. They even wave to the whale through the window.

“I’ve never seen a whale before now, but whales are my new favorite animals!”, says Ava. “I love whales!”

Sage laughs. “I hope you all love whales and the amazing sea creatures you saw today. But like this whale, the sea animals are in danger due to pollution and plastic. If people realized the harm of their actions, the ocean would be a cleaner place for the animals to live in.”

“You’re right,” agrees Ava. “We choose what to put in our bodies as Food Heroes, but fish and sea turtles don’t get to choose like we do. It’s up to us! The ocean’s health is our health!”

Ava scratches her head. “But Sage,” she finally asks. “How exactly could a whale this big be in danger? This whale doesn’t eat tiny plastic right?”

“You have all had great questions this entire ride. It’s time I answered them. Let’s play a game to explain it all while we swim back. What do you say?” says Sage.



Mini-Lesson

Sea Creatures and Pollution:

Discuss with the class the different relationships and problems in the oceans and waterways.

Fish and Plastic straw:

Fish can mistake plastic straws for food. If they swallow the plastic, it's really harmful for them because the plastic will never break down in their bodies. The fish can't live for long with a plastic straw stuck inside its body. Ask students how we can limit our use of plastic straws.

Solution: A good way to avoid plastic straws is to use a metal or glass straw. Metal and glass straws are reusable which means you can use them, clean them, and then use them again for a very long time.

Sick fish and Fisherman:

Some fish are sick from eating plastic and pesticides. However, the fishermen can't tell that these fish are sick, so they catch and sell them anyway. Ask students what happens when we eat these fish.

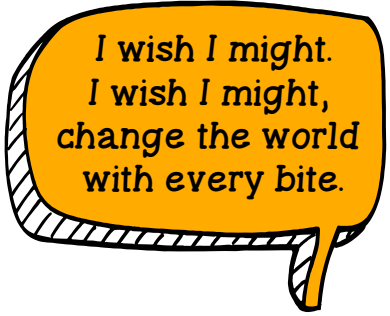
When we eat the sick fish, we also eat the plastic and poisons that the fish couldn't break down, which makes our bodies sick. Plastics and poisons can also build up even more in some types of big fish.

Solution: To make sure that we stay healthy, we should avoid buying and eating these types of fish. A few examples of these big fish are tuna, mackerel, and swordfish.

Turtle and Plastic bag:

Ask students what would happen if a sea turtle saw a plastic bag in the ocean.

Because plastic bags look like jellyfish, that sea turtles love to eat, turtles try to eat the plastic bags. However, plastic bags stay in the turtle's stomach forever, making the sea creature really sick. To help sea turtles be healthy, we should try our hardest not to use plastic bags. When going shopping, bring your own reusable bag and say "no thanks" to the plastic bags from the store.



*I wish I might.
I wish I might,
change the world
with every bite.*



Coral and Fisherman:

Coral is a sea animal that grows on rocks in the ocean. Even though coral don't swim around the ocean, they are still animals! Coral is really important because a lot of sea creatures use the coral as their homes. Can anyone tell me what would happens when the fisherman fishes on top of the coral and touches or steps on it?

Coral get especially sick when something that doesn't belong in the ocean touches it or when humans who visit the ocean for fun are not careful around the coral. People often touch, step on, or even break off pieces of coral. They think it is harmless, but what they do can make the coral disappear. It's horrible when coral disappear because many sea creatures will lose their homes.

To help, when you go to the beach, watch out where you are stepping and swimming.

Whale and Farmer:

Sometimes pesticides that farmers use accidentally wash into the water. Can anyone tell me what would happen if a whale ate the pesticides?

Pesticides are bad for us and can also hurt sea creatures, like whales, if they eat it. A way to help stop pesticides from washing into the ocean is to buy foods that are grown without pesticides.



Class Activity

Ocean Role-Play:

Let's turn the classroom into an ocean!

Distribute a headband with an image on it to each student. Each image of either a sea creature, a human, or an object, represents the role they will be playing.

Students will go around the classroom's ocean acting out their role, either swimming, floating, or other motions. When you say "stop!", everyone must go find a partner right away.

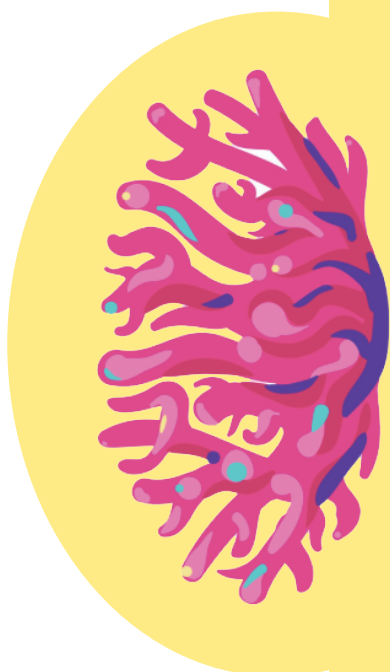
The last person to find a partner is out!

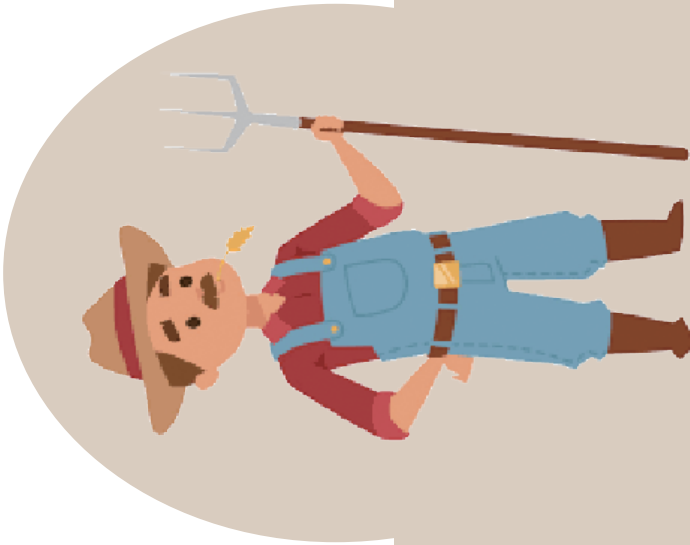
With their partners, everyone will discuss together how their roles interact with each other in the ocean. Play multiple rounds.

At Home Activity

On the "Cut and Paste Fish" homework sheet, cut and paste fish that we should avoid eating because they hold on to a lot of poisons inside their bodies.

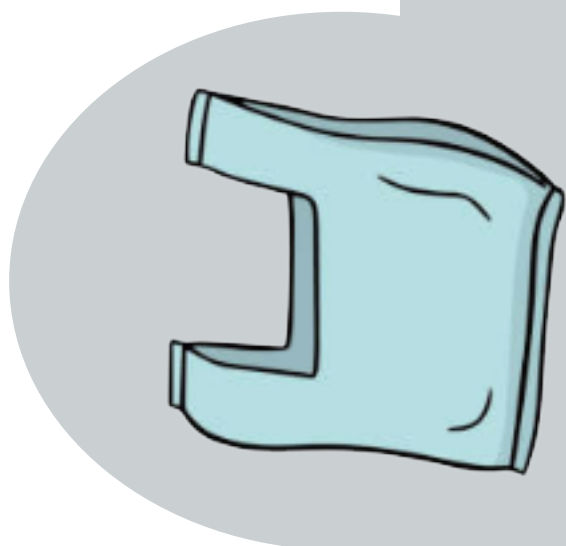
Complete a Food Journal.

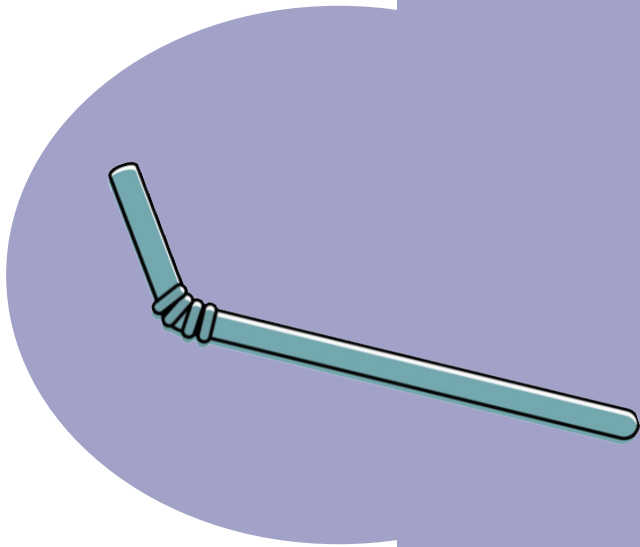






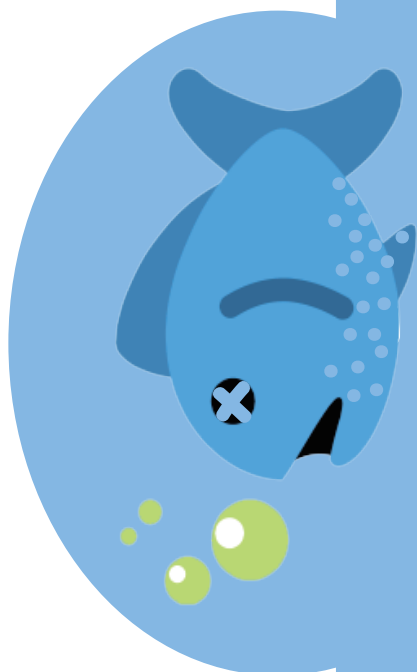


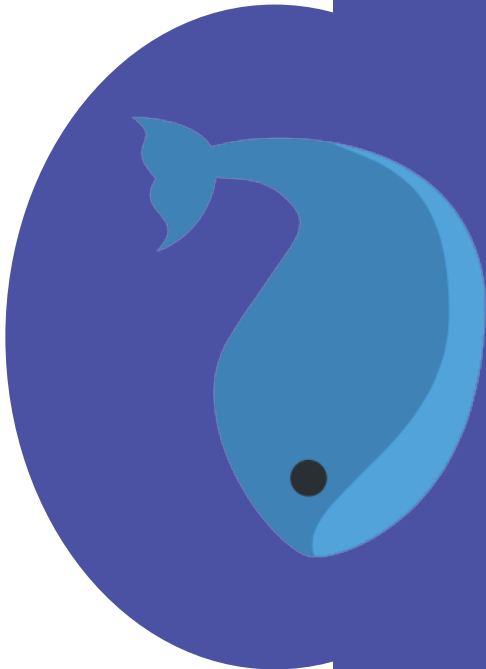












At-Home Mission

Name: _____

Cut out the fish cards and glue them onto the correct empty boxes.



Less poisonous

Eat only occasionally



Extremely poisonous

Avoid eating

Less poisonous										Extremely poisonous									



Swordfish



Pollock



King Mackerel



Shrimp

Parent's Signature: _____