

The Garbage Can of the Sea: A Deep Dive into Tiger Sharks

Lesson Overview

In this lesson, Keatyn will explore the fascinating world of the Tiger Shark (*Galeocerdo cuvier*). We will investigate their unique physical adaptations, their diverse diet, and their role as "ecosystem engineers" in the ocean.

Learning Objectives

- **Identify:** Keatyn will list at least three unique physical characteristics of a Tiger Shark.
- **Explain:** Keatyn will describe why Tiger Sharks are known as the "garbage cans of the sea" and identify at least four things they eat.
- **Analyze:** Keatyn will explain how a Tiger Shark's teeth are specially designed for their specific diet.

Materials Needed

- Printed world map or globe
- Construction paper, markers, and colored pencils
- Modeling clay or playdough
- A serrated plastic knife and a smooth plastic knife (for a teeth demonstration)
- A piece of cardboard and a piece of soft fruit (like a banana)
- Access to a tablet or computer for a short video clip

1. Introduction (The Hook)

The Mystery Object: Start by showing Keatyn a picture of a car license plate or a tire (on a screen). Ask: "What do these things have to do with a shark?"

The Big Reveal: Explain that Tiger Sharks are famous for eating almost anything—even things that aren't food! Today, we are going to discover why these "Tigers of the Ocean" are one of the most successful predators on the planet.

2. Body: Content and Practice

Part A: I Do (Instruction) - Physical Traits

Explain the "Tiger" part of the name. Young Tiger Sharks have dark stripes or spots that look like a tiger's coat. As they get older, these stripes fade (just like a favorite pair of jeans might fade in the wash).

Talking Points:

- **Size:** They can grow up to 14–18 feet long—that’s about as long as a large SUV!
- **Nictitating Membrane:** They have a "third eyelid" that covers their eye like a pair of goggles when they hunt to protect them from thrashing prey.
- **Countershading:** Their bellies are white and their tops are dark. This makes them "invisible" from both above and below.

Part B: We Do (Guided Practice) - The Ultimate Cutting Tool

Tiger Sharks have very special teeth. They aren't just pointy; they are serrated like steak knives and curved to the side.

The Teeth Test Activity:

1. Give Keatyn a smooth plastic knife and a serrated plastic knife.
2. Ask her to try and "saw" through a piece of thick cardboard with the smooth knife, then the serrated one.
3. **Discuss:** Which one worked better? Explain that Tiger Sharks use these "saws" to cut through tough things like sea turtle shells.
4. **Clay Modeling:** Together, use the clay to model a Tiger Shark tooth. Make sure to pinch the edges to make them look "zipper-like" (serrated).

Part C: You Do (Independent Practice) - The "Tiger Shark Café" Menu

Now it’s Keatyn’s turn to show what she knows about their diet. Since they are the "garbage cans of the sea," their menu is huge!

Activity: Create a "Menu" for a restaurant called *The Striped Diner*.

- **Requirements:** The menu must include at least 2 "Normal" items (like fish, seals, or turtles) and 2 "Strange" items actually found in Tiger Shark stomachs (like license plates, tires, or even armor!).
- **Creative Element:** Keatyn should draw the items and write a "Review" from a shark customer explaining why they liked the crunch of the turtle shell.

3. Conclusion (Closure & Recap)

Review: Ask Keatyn to name the three things that make a Tiger Shark different from a Great White Shark (Stripes, serrated/curved teeth, and a more diverse diet).

Reflect: Ask: "If you were a sea turtle, where would you hide from a Tiger Shark?" (This checks understanding of habitat and hunting style).

Summary: Tiger Sharks are essential because they keep the ocean clean and the populations of other animals healthy. They are nature’s ultimate recyclers!

Assessment

Formative: Observation during the "Teeth Test" and clay modeling to ensure understanding of physical adaptations.

Summative: The "Tiger Shark Café" Menu.

Success Criteria:

- Menu includes correct prey (turtles, fish).
- Menu includes "garbage" items.
- Explanation of how teeth help eat these items is included or verbally explained.

Differentiation & Adaptations

- **For Advanced Exploration:** Research "Shark Finning" or conservation efforts and write a letter to a "Save the Sharks" organization explaining why Tiger Sharks are important.
- **For More Support:** Use a pre-printed coloring sheet of a Tiger Shark and help Keatyn draw the stripes only on the top half to demonstrate countershading.
- **Kinesthetic Option:** Set up a "scavenger hunt" around the room with hidden "prey" (toys) and "garbage" (recyclables). Keatyn must "hunt" like a Tiger Shark and sort them into what she finds.