

# The Golden Guardians: Discovering the Lemon Shark

## Lesson Overview

In this lesson, Keatyn will dive into the world of the Lemon Shark (*Negaprion brevirostris*). We will explore why they are yellow, where they grow up, and why they are known as the "social butterflies" of the shark world. By the end of this lesson, Keatyn will be a Lemon Shark expert!

## Materials Needed

- Yellow construction paper or yellow playdough
- A clear glass or plastic bin filled with water
- Sand or light brown gravel
- Blue construction paper
- Markers and scissors
- "Shark Journal" (any notebook or paper)
- Small twigs or sticks (to represent mangrove roots)

## Learning Objectives

By the end of this lesson, Keatyn will be able to:

- Identify the unique physical characteristics of a Lemon Shark (specifically color and fins).
- Explain how camouflage helps the Lemon Shark survive in its habitat.
- Describe the "mangrove nursery" where baby Lemon Sharks grow up.
- Summarize why Lemon Sharks are considered social animals.

## 1. Introduction: The Superhero of the Sand (The Hook)

**Talk to Keatyn:** "Imagine you are a superhero swimming through the warm, shallow waters of the Bahamas. You have a special superpower: your skin is a bright, golden-yellow color! Does that make you stand out? Actually, it makes you nearly invisible! Today, we are meeting the Lemon Shark. Why do you think a shark would want to be yellow instead of blue or grey?"

*(Allow for discussion. Goal: Lead into the idea of camouflage against the sandy ocean floor.)*

## 2. Content & Practice: The "I Do, We Do, You Do" Model

### Part A: I Do - The Anatomy of a Lemon (Teacher/Parent Led)

Lemon sharks aren't just cool because of their color. Here are three "Pro-Shark Facts":

1. **Double Dorsals:** Most sharks have one big fin on top and one small one. Lemon sharks have two

dorsal fins that are almost the exact same size!

2. **The Glow-Up:** Their yellowish-brown skin helps them blend in with the sandy seafloor where they love to hunt.
3. **The Social Butterfly:** Unlike some sharks that like to be alone, Lemon sharks love to hang out in groups. They even have "best friends" they prefer to swim with!

## Part B: We Do - The Camouflage Challenge (Interactive Experiment)

Let's test how the Lemon Shark's "superpower" works.

1. **Set the Scene:** Place the blue construction paper on a table. Next to it, place the bin of water with sand at the bottom.
2. **Create the Shark:** Cut out two small shark shapes from yellow paper (or mold them from yellow playdough).
3. **The Test:** Place one yellow shark on the blue paper. Place the other yellow shark inside the water bin on top of the sand.
4. **Observation:** Ask Keatyn: "Which shark is easier for a hungry predator (like a bigger shark) to see? Which one is safe?"

## Part C: You Do - Building the Mangrove Nursery (Independent Activity)

Baby Lemon Sharks (called pups) stay in "nurseries" near mangrove trees to stay safe. Now, Keatyn will build one!

- **The Task:** Using a tray, sand, and twigs, create a "Mangrove Nursery."
- **The Goal:** Place the "twigs" (mangrove roots) in the water. Explain that big, scary sharks can't fit through the tangled roots, but the little Lemon Shark pups can hide there perfectly.
- **The Creative Touch:** Keatyn can draw or mold 3-4 baby sharks to place in the roots. Remind her: Lemon sharks like friends, so make sure they aren't alone!

## 3. Success Criteria & Assessment

To "pass" this shark mission, Keatyn should complete the "**Shark Expert Interview**":

- **Question 1:** Why is being yellow an advantage for this shark? (Success: Mentions blending in with sand/camouflage).
- **Question 2:** What is special about their top fins? (Success: Mentions they have two fins of equal size).
- **Question 3:** Where do the babies go to stay safe? (Success: Mentions mangroves or shallow water).

## 4. Differentiation: Adjusting the Challenge

- **If it's too easy (Extension):** Research "Shark Tagging." Ask Keatyn to look up how scientists track Lemon Sharks to see where they go when they grow up.
- **If it's too hard (Scaffolding):** Focus on just the color. Use a "Find the Hidden Shark" picture or book to practice spotting camouflaged animals before doing the experiment.

## 5. Conclusion: Wrap-Up & Recap

**Review:** "Today we learned that Lemon Sharks aren't sour—they're social! They use their yellow color to hide, they have twin fins on their backs, and they grow up in the safety of the mangroves."

**Reflection:** Ask Keatyn: "If you were a Lemon Shark, what would your 'best friend' shark look like, and what would you name them?"

**Final Takeaway:** Lemon sharks show us that being different (like being yellow!) is often exactly what we need to survive and thrive in our environment.