Lesson Plan: Tiger Shark

Summary

In this episode, Blade drew a toy tiger shark while discussing its appearance, history, and cultural reputation. He noted the toy looked more like a striped great white than an actual tiger shark, but used it as a springboard to share facts about their ancient lineage, global distribution, genetics, and their pop culture legacy as the "garbage can of the sea." He also tied in Jaws references and childhood memories of the board game The Game of Jaws.

https://www.youtube.com/live/f5Ou92VxXsM?si=o8CUqyIoq9mP4rYH

Objective

Students will learn about tiger shark biology, evolutionary history, global range, genetics, cultural portrayals, and conservation status, and demonstrate understanding through discussion and worksheet activities.

Standards

- NGSS MS-LS4-4: Construct an explanation based on evidence that describes how genetic variations increase some individuals' probability of surviving and reproducing.
- CCSS.ELA-LITERACY.RI.6.7: Integrate information presented in different media or formats to develop a coherent understanding of a topic.
- C3 Framework D2.Geo.5.6-8: Analyze how the physical and human characteristics of places and regions are connected to human identities and cultures.

Materials

9 Fun Facts: Tiger SharkWorksheet: Tiger Shark

• Optional: world map, projector or smartboard, drawing supplies

Activity

- 1. Read aloud the 9 Fun Facts on tiger sharks.
- 2. Show students a world map and have them identify tropical and subtropical waters where tiger sharks live.
- 3. Discuss the "garbage can of the sea" reputation, showing how diet connects to both biology and culture.
- 4. Review their pop culture presence in Jaws and the board game.
- 5. Have students complete the worksheet individually or in pairs.

Introduction

Begin by asking students what comes to mind when they think of sharks. Record answers on the board. Transition into today's focus on tiger sharks, noting their ancient history, distinctive stripes, and surprising place in movies and games.

Assessment

- Participation in discussion and mapping activity.
- Completion of the worksheet questions.
- Quality of student responses in Review, Discussion, Data Analysis, and Reflection sections.

Rubric

Criteria	Excellent (4)	Good (3)	Fair (2)	Poor (1)
Content Understanding	Demonstrates strong grasp of all 9 Fun Facts	Understands most Fun Facts	Understands some Fun Facts	Limited understanding
Discussion Participation	Actively contributes thoughtful responses	Contributes occasionally	Rarely contributes	Does not contribute
Worksheet Completion	All questions complete with accuracy	Most questions complete	Some questions complete	Few or no questions complete
Technology Connections	Provides insightful reflections and analysis	Provides adequate reflections	Provides minimal reflections	Provides no reflections

9 Fun Facts

1. Tiger sharks (Galeocerdo cuvier) have prowled the oceans for at least 23 to 30 million years, according to the fossil record. New studies of fossil teeth suggest their lineage may be even older than expected, extending their origins further back in shark evolution. This makes them one of the longest lasting shark lineages still swimming today, survivors of countless changes in climate and ocean life.

https://medienportal.univie.ac.at/media/aktuelle-pressemeldungen/detailansicht/artikel/older-than-expected-teeth-reveal-the-origin-of-the-tiger-shark/

- **2.** Tiger sharks are named for the dark, vertical stripes along their sides, most visible in young sharks and fading with age. They are large, blunt-nosed hunters that can grow over 16 feet long and weigh more than 1,000 pounds. These sharks favor warm waters, cruising tropical and subtropical seas across the globe, from the Gulf of Mexico and Caribbean to the Indian Ocean and Pacific Islands. https://www.floridamuseum.ufl.edu/discover-fish/species-profiles/tiger-shark/
- **3.** Genetic studies show that tiger shark populations in different regions, like the Gulf of Mexico and the Pacific Islands, can be somewhat distinct. Still, they are not completely cut off. Satellite tagging has revealed that individuals travel long distances, even across ocean basins, which allows them to occasionally exchange genetic material. This mix of separation and connection helps explain how tiger sharks remain both widespread and resilient.

https://www.dfo-mpo.gc.ca/species-especes/profiles-profils/tigershark-requintigre-eng.html

4. While many shark genera include multiple living species, tiger sharks stand alone. They are the only surviving member of the genus Galeocerdo. Fossil evidence reveals that the genus once contained several species, but those relatives are now extinct. With no close cousins left to interbreed with, the modern tiger shark represents a unique evolutionary branch on the shark family tree.

https://www.fossilguy.com/gallery/vert/fish-

 $\frac{shark/galeocerdo/galeocerdo.htm\#:\sim:text=Tiger\%20Shark\%20Facts\%20and\%20Information\%20\%2D\%20The\%20Details,the\%20only\%20extant\%20Tiger\%20Species.$

5. Although great whites usually dominate the spotlight, tiger sharks have had their share of appearances in popular culture. In Steven Spielberg's Jaws (1975), a tiger shark nicknamed "Oscar" was caught and mistaken for the killer before the true great white showed up. They have also appeared in nature documentaries like Blue Planet, as well as in shark-themed video games and survival stories. These portrayals cement their reputation as formidable and fascinating predators. https://thedailyiaws.com/blog/a-shark-not-the-shark-the-tale-of-oscar-the-tiger-shark-in-jaws

6. Tiger sharks are infamous for their broad diet, earning the nickname "garbage can of the sea." They eat sea turtles, fish, rays, squid, and even other sharks. They have also been found with surprising oddities in their stomachs, such as license plates, tires, and cans. Their powerful stomach acids allow them to digest a remarkable variety of prey and debris, though the junk does not always do them much good.

https://oneoceandiving.com/blogs/f/why-are-tiger-sharks-called-the-garbage-cans-of-the-sea

7. The 1970s toy The Game of Jaws featured a big plastic shark filled with random items like tires, bones, and boots. Players had to remove the pieces carefully before the jaws snapped shut. Though marketed as a great white, this setup mirrored tiger shark lore, especially the dissection scene in Jaws where Hooper pulls a license plate from a tiger shark's stomach. Pop culture borrowed tiger shark traits to build its shark mythology.

https://toytales.ca/the-game-of-jaws-from-ideal-1975/

8. Tiger sharks are currently listed as Near Threatened by the International Union for Conservation of Nature (IUCN). While they remain relatively widespread, their numbers are falling in many regions. Overfishing, shark finning, and bycatch in commercial fisheries are the major pressures. Because tiger sharks grow slowly and reproduce infrequently, they are especially vulnerable to population declines.

https://one ocean diving.com/blogs/f/tiger-shark-conservation-protecting-the-ocean %E2%80%99s-iconic-predator

9. In response, several regions have introduced protections. Hawaii banned shark fishing entirely, while Australia and parts of the Pacific enforce shark finning bans. Tiger sharks are also listed under CITES Appendix II, meaning international trade is monitored to prevent overexploitation. Marine protected areas, where fishing is limited or banned, provide additional safe havens. These efforts aim to balance human activity with the survival of one of the ocean's most iconic predators. https://awionline.org/content/international-shark-protection-measures?utm source=chatgpt.com

Worksheet

Name:1	Date:
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Review

- 1. How long have tiger sharks been around according to the fossil record?
- 2. What feature gives tiger sharks their name, and how does it change with age?
- 3. Why are tiger sharks sometimes called the "garbage can of the sea"?
- 4. What makes tiger sharks unique within their genus?
- 5. In the movie Jaws, what object was famously pulled from a tiger shark's stomach, and why is that significant?

Discussion

6. How does the global distribution of tiger sharks help them remain one species despite being spread across oceans?

7. What lesson can we learn from tiger sharks about resilience and conservation?