



Lesson 5: Growing Up as a Sea Turtle

Description: Students will learn about the range of natural threats to sea turtles through their entire life history (egg to adult). Students will apply their new knowledge by writing an “autobiography” from the point of view of a sea turtle.

Objectives:

By the conclusion of the activities, students will

- Be able to discuss various natural threats (from predators to environmental factors) that can threaten sea turtle survival.
- Understand that only one in 1,000 (or fewer) sea turtle hatchlings will survive to become an adult.

You will need:

- Copies of chapter 5, *Growing Up as a Sea Turtle*, for each student.
- Word wall words (pages 5-24 to 5-26)—printed, cut out and laminated (if desired)
- 100 ping pong balls (numbered 1-100) for “Survivor” activity. You can substitute numbered circles of paper if ping pong balls are not available
- (Optional) Egg carton bottoms, cut in half
- (Optional) “Survivor” PowerPoint presentation and means to project it

Standards:

Florida Sunshine State Standards-

English Language Arts

- **LAFS.5.RI.2.4** Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
- **LAFS.K12.W.1.3** Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Common Core Standards -

ELA/Literacy

- **RI.5.4** Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
- **W.5.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Vocabulary:

Disoriented: Feeling lost or confused.

Emerge: To come out or appear.



Incubate: To keep eggs warm before hatching.

Juvenile: Young. In sea turtles, juvenile usually refers to animals that are 1-5 years old.

Kelp: Brown, plant-like algae that grows in cool sea water. Kelp has gas bubbles that help keep it floating in the water.

Post-hatchling: Sea turtles that are between 24 hours and one year old.

Red tide: Red tides form in the ocean. They are caused when some kinds of tiny algae grow really fast.

Red tide algae make toxins. Red tides can kill fish and other animals.

Procedure:

1. Add words for this lesson (pages 5-24 to 5-26) to your sea turtle word wall. Review these words with students (definitions are given in Vocabulary, above).
2. Have students read “Growing Up as a Sea Turtle” (Chapter 5 in *One in a Thousand: Those Amazing Sea Turtles*).

Activities:

Activity 1. **Play the Sea Turtle Survival Game:** <http://web.vims.edu/bridge/survivor.pdf> (Note: this says it is for middle and high school, but I have used the “Survivor” activity with all ages from kindergarten to adult and most commonly use it with elementary students.) The game calls for 100 ping pong balls—these can be purchased fairly inexpensively in bulk from various online sources (you don’t need high quality ping pong balls; practice balls are fine!) It’s good to have more than 100, as some of the balls will need to be replaced with time (kids may end up “denting” the balls with their fingers).

Number the balls from 1 to 100. It is helpful to put a line under numbers that might be confused (6 and 9, 18 and 81, 16 and 91, 15 and 51, etc.) A large plastic container like those sold full of pretzels or other treats at wholesale clubs makes a good “nest” to keep the “eggs” in. Divide the ping pong balls equally between the students (refer to the table below). All balls must be used, so you may need to keep the “remainder” balls yourself, or give to a teaching assistant. To keep the ping pong balls from rolling all over the place, I’ve found that it works really well to give each student half of the bottom of an egg carton in which to place their ping pong balls. They can rotate the balls in order to see the number, but are cautioned to leave the “eggs” in the egg carton.

The premise of the game is to learn how many of the 100 eggs laid in a single sea turtle nest will survive to become adults (and what happens to the other eggs/turtles along the way). Kids like to see what the different predators look like, so you can either print out the images (pages 5-4 to 5-23) later in this lesson plan or can download a PowerPoint presentation that contains photos of the various predators. The PowerPoint can be downloaded from <http://stjohns.ifas.ufl.edu/sea/seaturtlecurriculum.html>.



Use this table to figure out how many "eggs" to give to each student.					
# of students	# eggs per student	# "leftover" eggs	# of students	# eggs per student	# "leftover" eggs
10	10	0	21	4	16
11	9	1	22	4	12
12	8	4	23	4	8
13	7	9	24	4	4
14	7	2	25	4	0
15	6	10	26	3	22
16	6	4	27	3	19
17	5	15	28	3	16
18	5	10	29	3	13
19	5	5	30	3	10
20	5	0			

Utilize pages 6-10 from the Survivor activity to learn the fate of all 100 "eggs." Explain that when you call a number, something has happened to that egg/turtle and that whoever has the egg will have to return it. Collect the ping pong balls as the numbers are called (the easiest thing is to put them back into the container that was used as the "nest."). Use the images contained in this lesson, or in the PowerPoint presentation to show the students the fate of each egg/turtle.

At the conclusion of the activity, you will have two surviving turtles. Explain to the class that while they had two out of 100 turtles that survived to adulthood, in real life there are only one or two in one thousand hatchlings that survive to become adults, and maybe as few as one in ten thousand eggs that survives to be an adult sea turtle. Ask the class why they think that is.

If the students do not realize it, point out that none of the threats that the turtles faced in the activity were human-related. For example, none of the turtles was hit by a boat, became entangled in fishing line, ate a plastic bag or balloon, was captured and made into turtle soup or was run over by a car on the beach. When we add in human factors, the survival rate of sea turtles drops dramatically. Ask the students if they can think of ways that they could help protect sea turtles. Picking up trash, especially plastic bags, is a great way to help. Not releasing balloons is another helpful action. Lesson 6 will discuss the human threats to sea turtles in much more detail.

Activity 2. Writing assignment. Have students write a "biography" from the point of view of an adult sea turtle. The turtle should describe events that occurred during different times of its life (e.g. Where did the turtle hatch out? What happened to the turtle's brothers and sisters? What sorts of animals did the turtle see? Where did the turtle live?)





Photo credit: NOAA

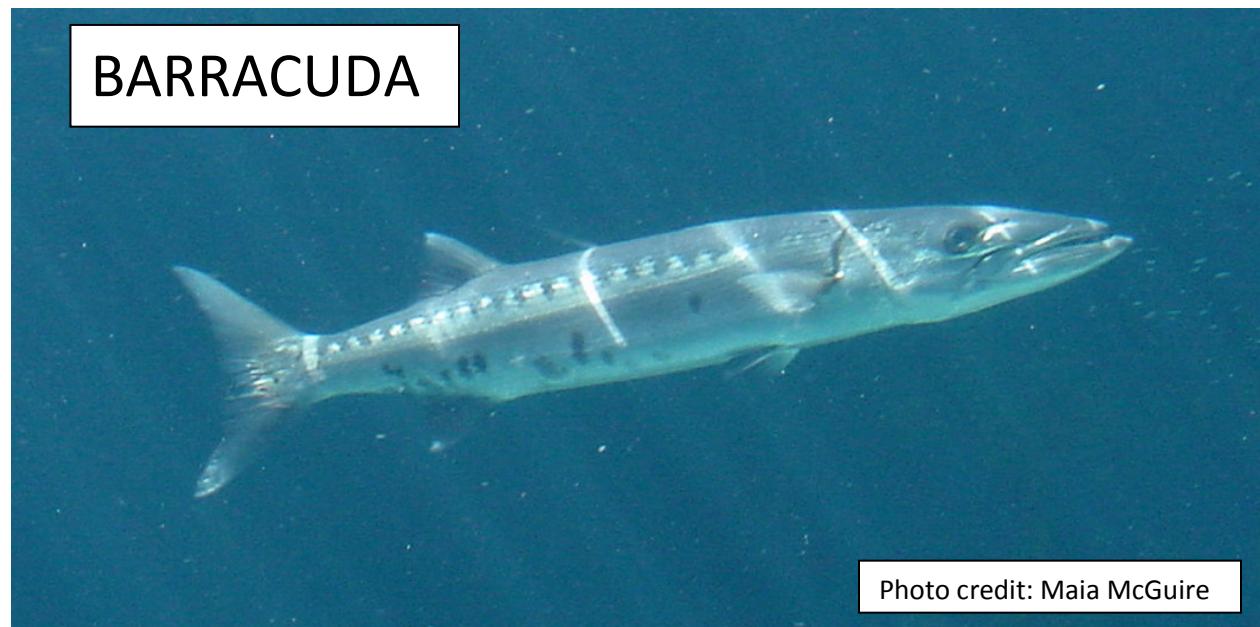


Photo credit: Maia McGuire



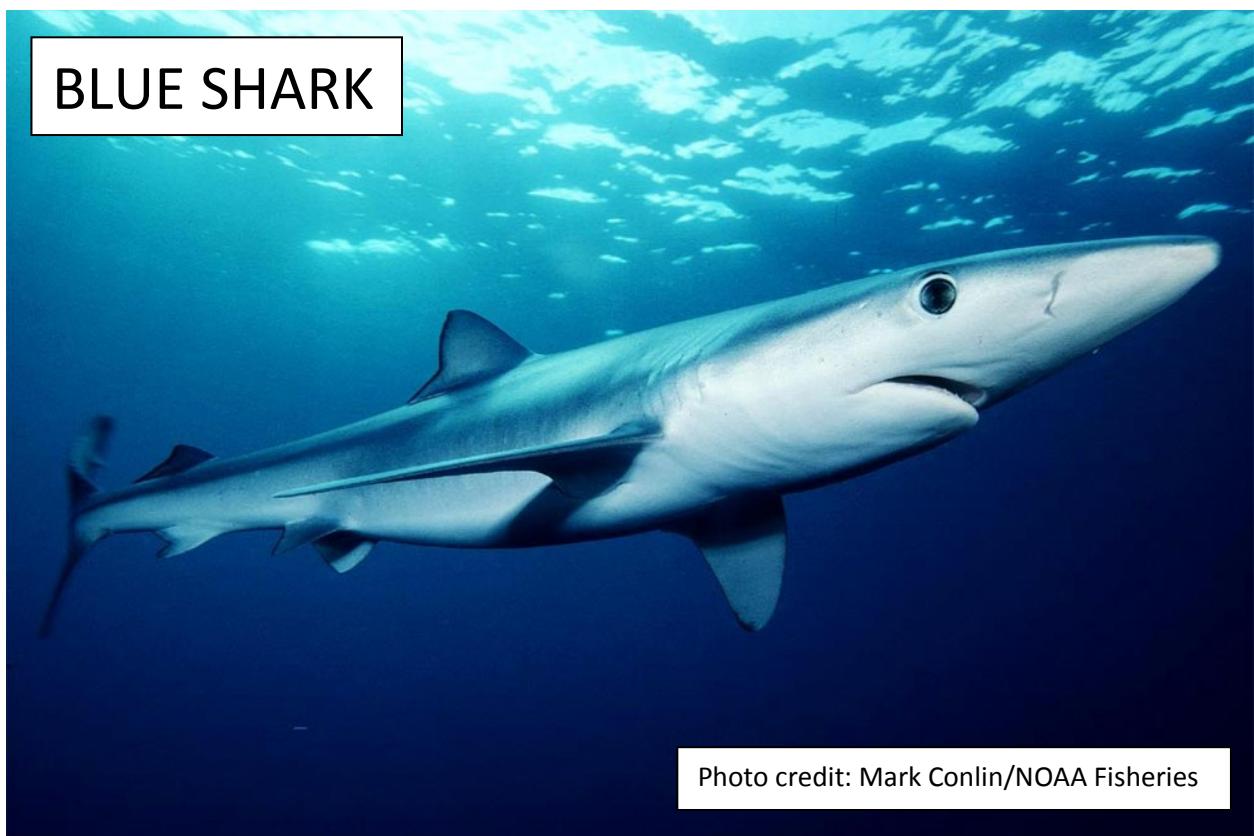
Photo credit: Albert Kok/Wikipedia

BLACKTIP SHARK

BLUEFIN TUNA



Photo credit: NOAA



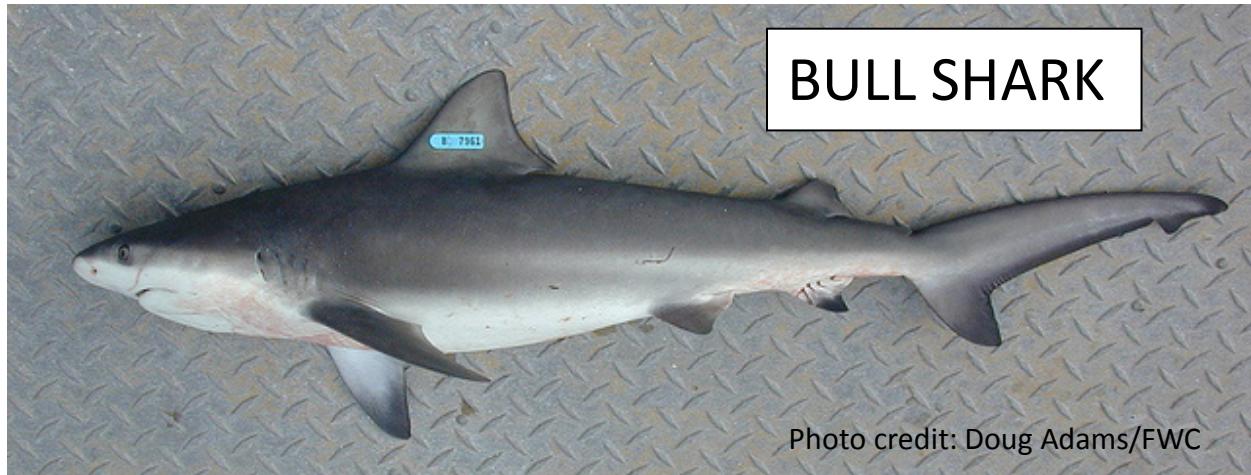
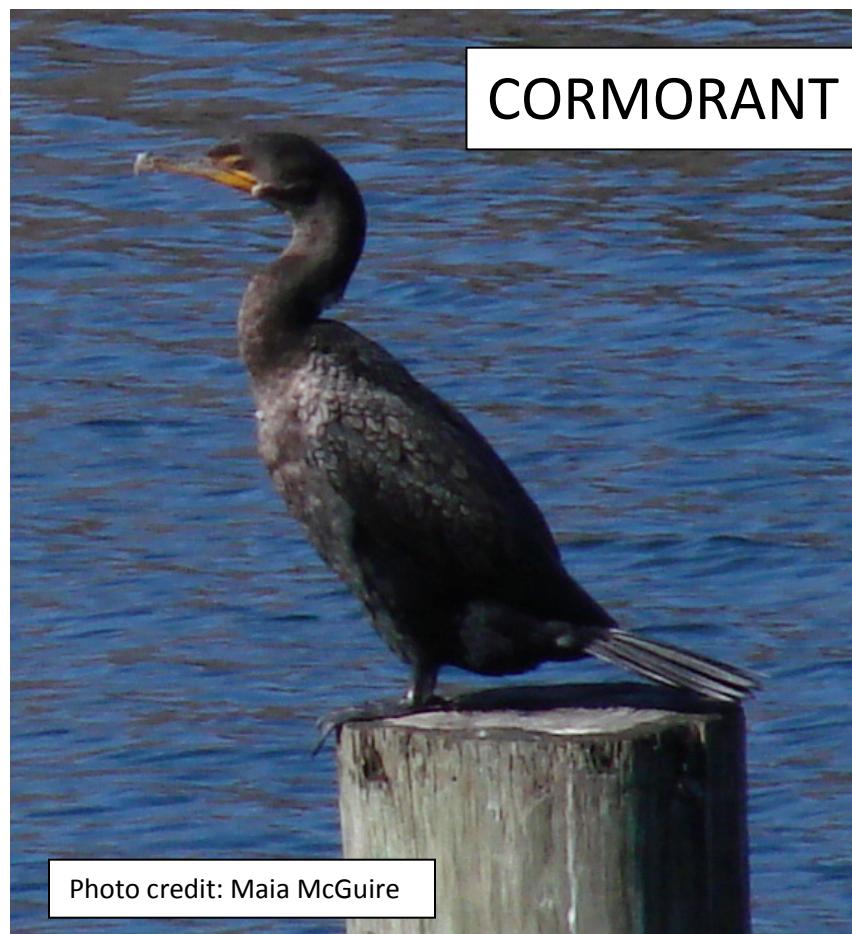


Photo credit: Doug Adams/FWC





DOLPHIN FISH

Photo credit: NOAA



FIRE ANT

Photo credit: USDA



FRIGATE BIRD

Photo credit: Scott Ableman/Flickr

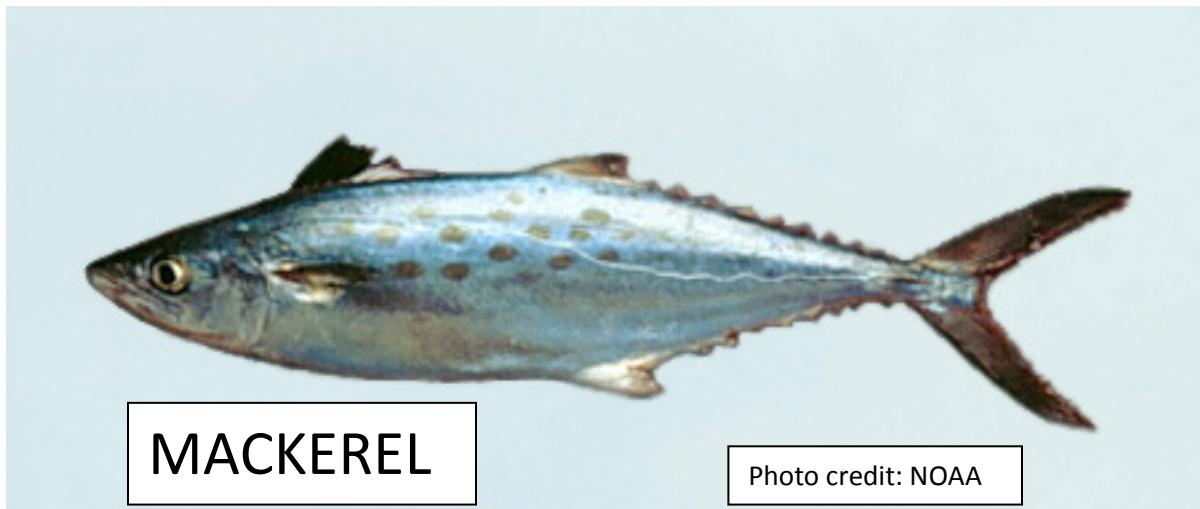


GHOST CRAB

Photo credit: Maia McGuire







MACKEREL

Photo credit: NOAA



MAKO SHARK

Photo credit: NOAA



NIGHT HERON

Photo credit: Maia McGuire

PELICAN



Photo credit: Maia McGuire



Photo credit: Maia McGuire



Photo credit: Jim Mullaupt/Flickr



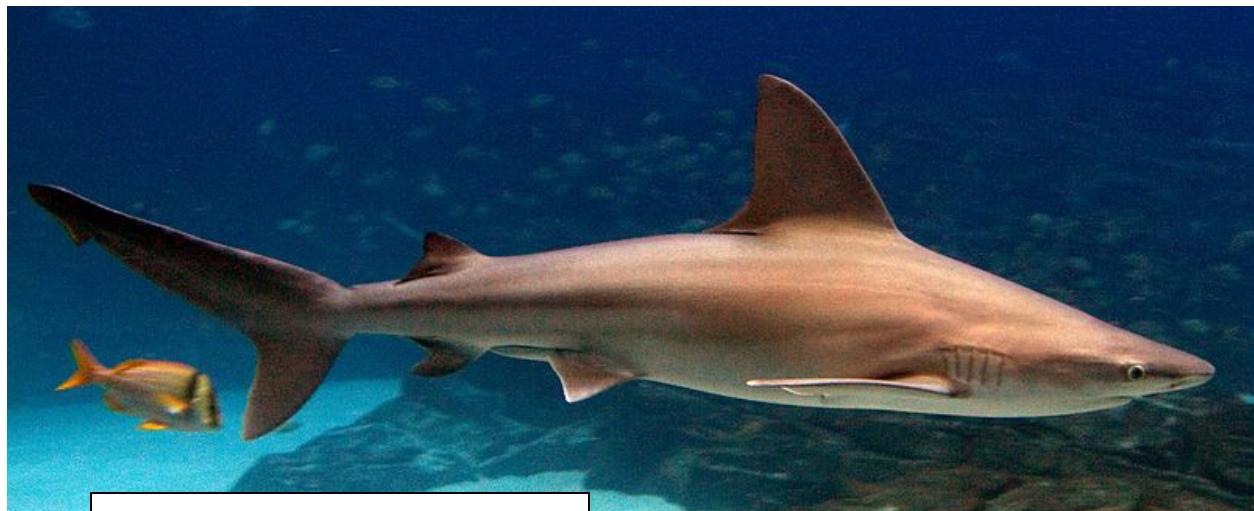
RED FOX

Photo credit: USFWS



SAILFISH

Photo credit: Robin Hughes/Flickr



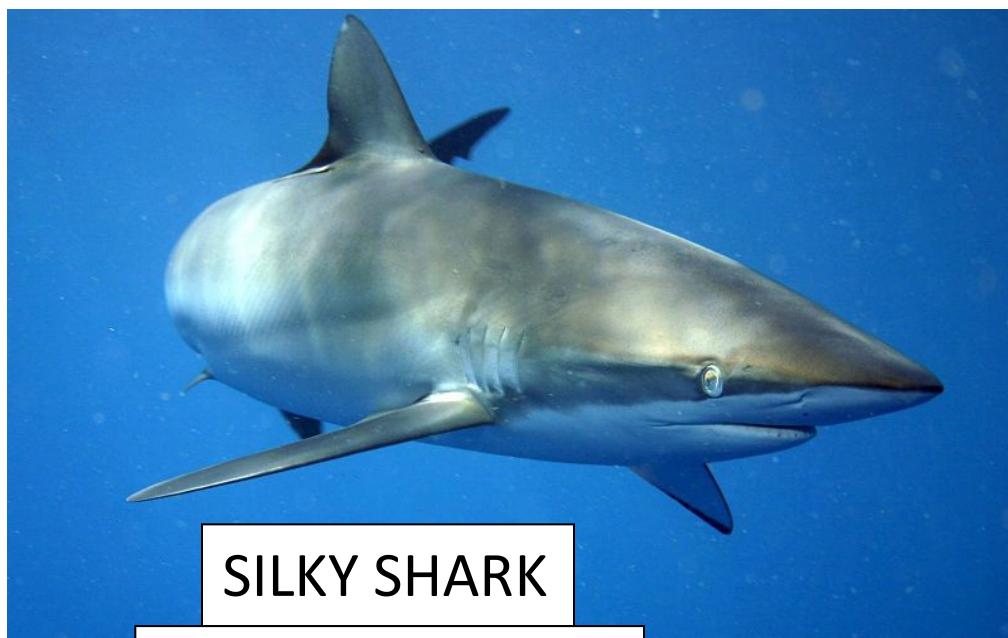
SANDBAR SHARK

Photo credit: Brian Gratwicke/Wikipedia



SHARPOUSE SHARK

NOAA/NMFS





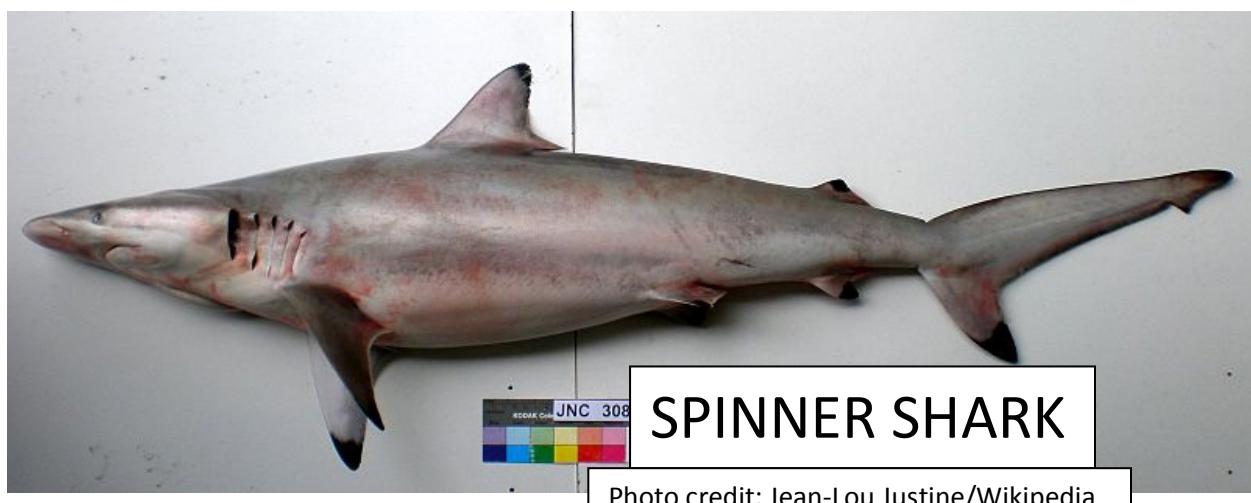
SKIPJACK TUNA

Photo credit: krw130lm/Wikimedia commons



SNAPPER

Photo credit: Florida Sea Grant





SPECKLED TROUT

Image credit: Raver Duane, U.S. Fish and Wildlife Service



TARPON

Photo credit: pjah73/Flickr



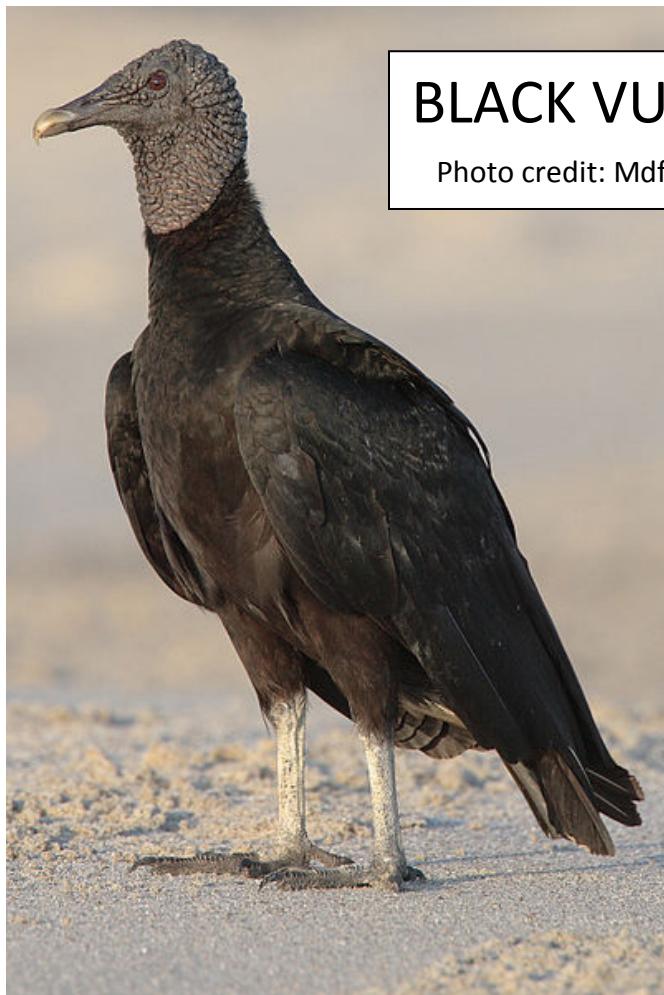
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Photo credit:
Maia McGuire



TIGER SHARK

Photo credit: Albert Kok



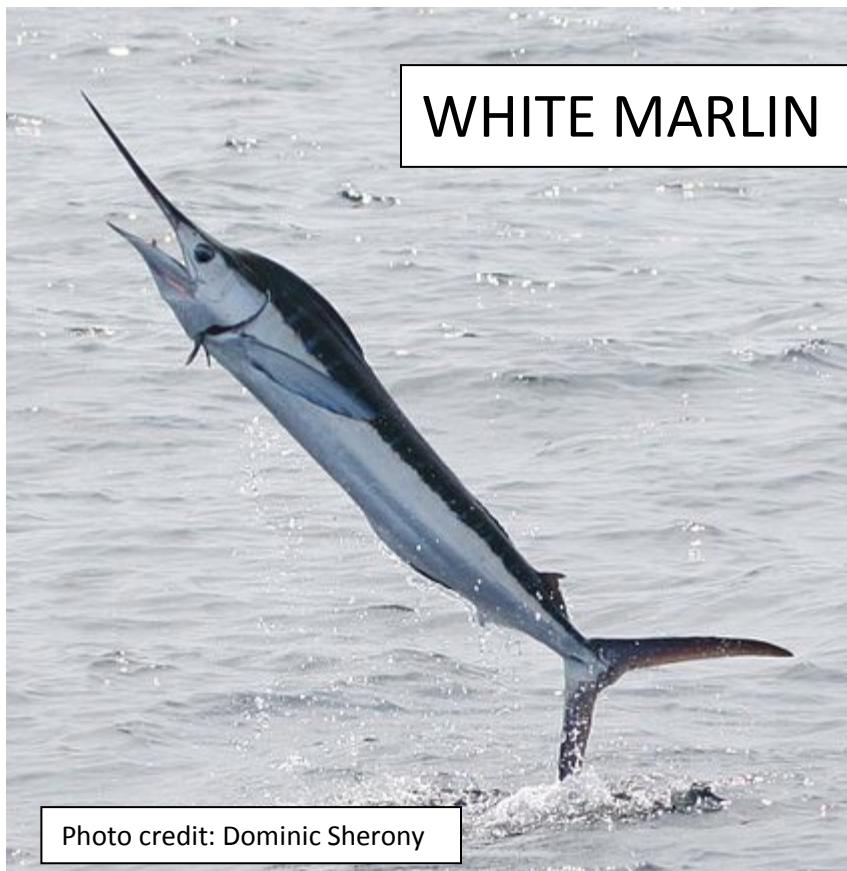
BLACK VULTURE

Photo credit: Mdf/Wikipedia



WAHOO

Photo credit: leetas/Flickr





WILD HOG

Photo credit: Maia McGuire



YELLOWFIN TUNA

Photo credit: Sandra McPherson/Flickr

Incubate

Emerge

Disoriented

Post-hatchling

Juvenile

Kelp

Red tide