



Hatching Turtles

Created by the NC Aquarium at Fort Fisher Education Section

Essential Question:

What are the threats to sea turtles throughout their life?

Lesson Overview:

Students will learn about sea turtle life cycles and the threats turtles face from predators and hazards through an active game simulating the sea turtle's life. Students will also write and illustrate a story about sea turtle hatchlings.

Learning Objectives:

Students will be able to:

- Describe the life cycle of sea turtles.
- Identify specific causes of sea turtle mortality.
- Make inferences about the effects of human-created hazards on sea turtle populations.
- Make recommendations for ways to minimize these limiting factors.

North Carolina Standards:

Third Grade:

English / Language Arts:

- **W.3.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
 - **W.3.3.a** Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
 - **W.3.3.b** Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
 - **W.3.3.c** Use temporal words and phrases to signal event order.
 - **W.3.3.d** Provide a sense of closure.

Art:

- **3.V.2** Apply creative and critical thinking skills to artistic expression.
 - **3.V.2.1** Create art through a process that includes generating ideas, planning solutions, and producing original art.
 - **3.V.2.2** Use personal point of view and experiences as sources for creating art.
 - **3.V.2.3** Create art from realistic sources of inspiration.
- **3.V.3** Create art using a variety of tools, media, and processes, safely and appropriately.
 - **3.V.3.2** Use a variety of media with refined skills.
 - **3.V.3.3** Create art using the processes of drawing, painting, weaving, printing, stitchery, collage, mixed media, sculpture, ceramics, and current technology.



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Fourth Grade:

English / Language Arts

- **W.4.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
 - **W.4.3.a** Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
 - **W.4.3.b** Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.
 - **W.4.3.c** Use a variety of transitional words, phrases, and clauses to manage the sequence of events.
 - **W.4.3.d** Use concrete words and phrases and sensory details to convey experiences and events precisely.
 - **W.4.3.e** Provide a conclusion that follows from the narrated experiences or events.

Art

- **4.V.2** Apply creative and critical thinking skills to artistic expression.
 - **4.V.2.2** Use ideas and imagery from North Carolina as sources for creating art.
- **4.V.3** Create art using a variety of tools, media, and processes, safely and appropriately.
 - **4.V.3.3** Create art using the processes of drawing, painting, weaving, printing, stitchery, collage, mixed media, sculpture, ceramics, and current technology.
- **4.CX.2** Understand the interdisciplinary connections and life applications of the visual arts.
 - **4.CX.2.2** Apply skills and concepts learned in other disciplines, such as math, science, language arts, social studies, and other arts, in the visual arts.

Fifth Grade:

English / Language Arts

- **W.5.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
 - **W.5.3.a** Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.
 - **W.5.3.b** Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.
 - **W.5.3.c** Use a variety of transitional words, phrases, and clauses to manage the sequence of events.
 - **W.5.3.d** Use concrete words and phrases and sensory details to convey experiences and events precisely.
 - **W.5.3.e** Provide a conclusion that follows from the narrated experiences or events.



Time Frame:

Preparation: 10 minutes

Activity 1: 15 minutes

Activity 2: 30 minutes

Materials:

- See Turtle Hurdles (Project WILD Aquatic) activity for specifics - attached
- Writing paper and writing utensil
- Art Supplies

Supplemental Background Information for Teachers:

Sea turtles begin their life in a nest laid on a beach. The adult female crawls up the beach past the high tide line and digs her nest with her rear flippers. The light bulb-shaped hole is about 25 inches deep. Once the hole is finished, she lays an average of 100 ping-pong ball-shaped eggs. The eggs resist cracking because of their soft, leathery shell. The turtle covers the hole with sand and crawls back into the ocean. The hatchlings emerge about 60 days later. The hatchlings “boil” out of the nest and begin their dangerous journey to the sea. Ghost crabs, raccoons, stray dogs, and shore birds are just some of the predators that hatchlings must face before they hit the water.

Once the hatchlings make it to the ocean, there is speculation on where they actually go. Many scientists believe they ride the ocean currents and hide along the Sargassum seaweed rafts. In the ocean, there are many predators that rely on hatchlings for a meal. If the sea turtle survives its early years, it continues to mature. With its large mouth and strong jaws, sea turtles can eat crabs, sea urchins and other shelled animals. Most sea turtles are fully mature around age twenty. When fully mature, they mate while at sea. The female sea turtle keeps the fertilized eggs until she is ready to make her nest. She is the only parent that lands on the beach and is responsible for starting the life cycle all over again.

Unfortunately, sea turtles are threatened by people and their activities in coastal areas. What were once long stretches of open beach where turtles could nest are now developed areas. Bright lights discourage females from coming ashore at night, and confuse young turtles after they leave the nest. Debris and other ocean pollution also create life-threatening problems for these ancient reptiles. Although sea turtles have always fascinated people, we still know little about their migrations, nesting habits, and life spans.

If you see a sea turtle nesting or hatching:

- Enjoy this event from a distance. Many turtles scare easily and may stop the nesting process and return to the sea, which will stop the development of the eggs.
- Take note of the location and report it to the local police department. They will contact the area's sea turtle coordinator.
- Please do not take flash photos of her! Scientists use infrared cameras to get photos so they do not disrupt her night vision.



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- Do not put your hands on or near the turtle. Any distractions may frighten and disorient her, causing her to return to the ocean before completely covering and camouflaging her nest.
- Also please refrain from giving out the location of a nesting turtle to anyone other than the authorities.
- If you see a nest hatching, leave them alone. You can report it to the local police department. They will contact the area's sea turtle coordinator to assist in the hatching.

Preparation:

Gather materials for Turtle Hurdles and set up the activity.

Procedure:

Activity 1:

1. Explain the rules for Turtle Hurdles (attached sheets) and have students perform their activities.
2. Discuss what happened to the sea turtles during the different phases of the activity.
3. As a class, discuss in what parts of the journey people could help the baby sea turtles. (Examples: cleaning up pollution from the beach, watching for turtles when driving their boats, volunteer with turtle organizations, etc.)

Activity 2:

1. Show a video of sea turtles hatching from their nest.
2. Hand out writing paper and have students write a story from one of two points of view (POV): from the POV of a baby sea turtle hatching on the beach or from their own POV watching a sea turtle nest hatch. Stories should include a clear sequence of events and descriptions of actions, thoughts, and feelings throughout as well as a conclusion.
3. Give students art supplies and have them illustrate their stories. Provide pictures of real sea turtle hatchlings for students to examine as they create their illustrations.

Extensions:

1. Have students formally write and illustrate their story and create a bound book using cardboard and contact paper.
2. Have the students complete "Sea Turtle Timeline" to assist in their stories.