Lesson 10: Helping Sick or Injured Sea Turtles

Description: Students will learn some of the different reasons that sea turtles might need to be rescued and rehabilitated. They will also learn about the process that veterinarians go through when deciding how to treat a sick or injured turtle.

Objectives:

By the conclusion of the activities, students will

- Understand that sea turtles can become sick and injured and there are ways people can help them.
- Be able to think through a problem to derive a conclusion (diagnosis).

You will need:

- Copies of chapter 10, *Helping Sick or Injured Sea Turtles,* for each student.
- Word wall words (pages 10-9 to 10-12)—printed, cut out and laminated (if desired)
- Copies of activity sheets (pages 10-4 to 10-5 and 10-7)
- Pencils

Standards:

Florida Sunshine State Standards –
English Language Arts

- **LAFS.5.RI.1.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text
- **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.5.RI.3.7** Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
- **LAFS.5.SL.2.4** Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
- **LAFS.5.SL.2.5** Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

Mathematics

- **MAFS.K12.MP.2.1** Reason abstractly and quantitatively.
- **MAFS.K12.MP.4.1** Model with mathematics.
- **MAFS.5.NBT.2** Perform operations with multi-digit whole numbers and with decimals to hundredths.

Common Core Standards -
ELA/Literacy

- **RI.5.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text
- **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.
- **RI.5.7** Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
- **SL.5.4** Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.
- **SL.5.5** Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

Mathematics

- **MP.2** Reason abstractly and quantitatively.
- **MP.4** Model with mathematics.

Vocabulary:

Barnacle: A type of ocean animal that grows on hard surfaces. Most barnacles have a volcano-shaped shell. They use feather-like arms to catch food.
Basking: To lie or relax in a warm place.
Buoy: (American: *Boo-eey*; British: *Boy*) A floating object used to mark a location.
Diagnosis: The act of identifying a disease from its signs and symptoms.
Fibropapillomatosis: [*FIYE-bruh-PAH-pill-LOH-muh-TOE-siss*] A disease that causes tumors to grow on sea turtles.
Physical examination: A doctor's examination of a patient's body
Stranding: A word used to describe what happens when a sea turtle washes up on shore. Dolphins and whales can also strand.
Treatment: The action a doctor takes to make a patient well.
Veterinarian: A doctor who treats animals.

Procedure:

1. Add words for this lesson (page 10-9 to 10-12) to your sea turtle word wall. Review these words with students (see Vocabulary above for definitions).
2. Have students read "Helping Sick or Injured Sea Turtles" (Chapter 10 in *One in a Thousand: Those Amazing Sea Turtles.)*
3. The key to working through the Activities will be having the chapter available as a reference and helping explain the X-ray. This radiograph shows an adult green sea turtle that has swallowed a lead line (hence why you see it so clearly on the x–ray) with two gang hooks. The hooks are caught in the esophagus and have not entered the crop of the stomach yet.
4. Distribute the activities to the students and allow them to complete the answers.

Activities:

Activity 1: **Turtle Treatment** (page 10-4 to 10-5). Students will read a short story and will then answer questions (requiring math and critical thinking skills).

Activity 2: **Be A Veterinarian** (page 10-7). Students will read a short story and will then answer questions based on the story and their knowledge about sea turtles.

Name: _____

Turtle Treatment

A loggerhead turtle in Florida was hit by a boat in June. The injured turtle was taken to a sea turtle hospital. When she arrived she weighed 100 pounds and was 38 inches long. The turtle was bright but could not move her back flippers very well. On closer examination, the veterinarians found a crack in her shell. The crack was all the way through the shell. It also ran across the entire shell, from the front to the back.

The turtle was treated with medicine to stop the pain. The veterinarian used an injectable drug that is similar to aspirin. The turtle needed to receive 2 milligrams of this drug per kilogram of turtle weight, or 2 mg/kg. She was also treated with medicine to prevent infection. This drug needed to be given at 22 milligrams per kilogram of turtle weight, or 22mg/kg.

By October, she was feeling much better. She was ready to be released! The turtle was taken to the same beach where she had been found. When she was turned loose, she happily swam back out to sea.

Turtle Treatment activity

1. The veterinarian has to give the turtle some medicine. To do this, she needs to calculate a proper dose. The first step is to know how many kg the turtle weighs.

A. How many pounds does the turtle weigh? _____

B. If 1 kilogram equals 2.2 pounds, how much did the turtle weigh in kilograms?

_____

C. The veterinarian needs to give her 2 mg/kg of the aspirin-like drug. How many total mg would this be?

_____

D. The veterinarian needs to give her 22 mg/kg of the drug that prevents infection. How many mg of this drug should be given?

_____

2. The biologist who admitted the turtle must fill out forms. These must be filled out using measurements in the metric system.

A. How many kg did this turtle weigh? _____

B. This turtle was 28 inches long. If 1 inch equals 2.54 cm, how long was the turtle in centimeters?

_____

3. In what month was this turtle rescued? _____

What season is this? _____

4. In what month was this turtle released? _____

What season was this? _____

How many months was the turtle in the hospital? _____

Turtle Treatment activity answers

1. The veterinarian has to give the turtle some medicine. To do this, she needs to calculate a proper dose. The first step is to know how many kg the turtle weighs.

A. How many pounds does the turtle weigh? ___**100 pounds**_____

B. If 1 kilogram equals 2.2 pounds, how much did the turtle weigh in kilograms?

_____**45.5 kg**_____

C. The veterinarian needs to give her 2 mg/kg of the aspirin-like drug. How many total mg would this be?

_____**91 mg**_____

D. The veterinarian needs to give her 22 mg/kg of the drug that prevents infection. How many mg of this drug should be given?

____**1001 mg**_____

2. The biologist who admitted the turtle must fill out forms. These must be filled out using measurements in the metric system.

A. How many kg did this turtle weigh? ___**45.5 kg**_____

B. This turtle was 28 inches long. If 1 inch equals 2.54 cm, how long was the turtle in centimeters?

_____**71.12 cm**_____

3. In what month was this turtle rescued? ____**June**_____

What season is this? _____**Summer**_____

4. In what month was this turtle released? ____**October**_____

What season was this? _____**Fall**_____

How many months was the turtle in the hospital? __**four**_____

Name: _____

Be a Veterinarian

Photo credit: Mark Flint

You are a veterinarian in a busy wildlife hospital on the west coast of Florida. Recently there has been an annual sport fishing tournament and some speed boat races. You have been pretty busy treating turtles and manatees. Late one Saturday afternoon, you are getting ready to leave for the night. Your rescue team brings you an adult Kemp's ridley sea turtle. She looks healthy, but you notice a small clear line coming out of her mouth. You take x-rays. Her x-ray is in the picture.

What is a diagnosis?

_____

_____

What is your diagnosis of the sea turtle in the picture above?_____

_____

Look at chapter 10. What are some common reasons turtles are taken to animal hospitals?

Fishing _____ Injury Crab Trap _____ _____ Strike

Cold _____ Dry _____ Red _____

What are four things we can do to help turtles?

1. _____
2. _____
3. _____
4. _____

Be a Veterinarian activity answers

What is a diagnosis? __**Finding the cause of the illness**_____.

What is your diagnosis of the sea turtle in the picture above?_**Fish hook injury**_____.

Looking at the chapter, what are some common reasons turtles are taken to rehabilitation centers?

Fishing _ **Hook** __ Injury
Cold _ **Stunning** ____

Crab Trap _ **Entanglement**__
Dry ____ **Drowning**_____

__ **Boat** __ Strike
Red _ **Tide** ____

Looking at the chapter, what are four things we can do to help turtles?

1. **Collect up fishing line and hooks**.
2. _**Don't pollute**_____.
3. _**Use less energy**_____.
4. _**Protect beaches & waters with turtles**.

Barnacle

Basking

Buoy

Diagnosis

Fibropapillomatosis

Physical examination

Stranding

Treatment

Veterinarian