

## **LESSON 8**

### **HOW CAN YOU HELP ME SURVIVE?**

**GRADE LEVEL:** 6

**SCIENCE CONCEPT:**

The lesson highlights the dangers faced by the sea turtles and the various conservative measures taken to protect them.

**RELATIONSHIP TO CALIFORNIA SCIENCE CONTENT STANDARDS:**

5.b) Students know matter is transferred over time from one organism to others in the food web and between organisms and the physical environment.

**LEARNING OBJECTIVES:**

Students will illustrate the various conservative measures taken to protect the sea turtles.

**EVALUATION IDEAS:**

Formative:

- A. Pair-share activity under the “Explore” section
- B. “Brainstorm” poster under the “Elaborate” section.

Summative:

Students will work in pairs on one of the following projects to explain the adventures of a sea-turtle as it navigated through the dangers that exist in its ecosystem:

- A. Create a drawing/poster.
- B. Write a story.
- C. Create a travel log.

**CONCEPTUAL BACKGROUND:**

The turtles and tortoises are a fascinating species of study. They have lived on the face of the earth for 220 million years which is dated back to the time of the dinosaurs. They survived the harsh environment which ended the dinosaur reign only because of their aquatic ecosystem. However, today, the very same ecosystem is slowly becoming a threat to their existence owing to the human invasion. The adult turtles are victims of pollution mainly due to plastic bags. Some species of turtles eat jellies for food and sometimes mistake plastic bags for them, eventually leading to their death. Some adult turtles get entangled in fishing nets and are unable to rise to the surface to breathe. The baby turtles on the other hand are preyed upon by animals, humans, crabs and birds even before they can make it into the water. When they do so, they are not spared by the hungry fish. Only a few make it into adulthood.

Habitat loss has become the major reason for the declining numbers in the sea turtle population. Land lost due to construction of beach resorts, homes and restaurants, erosion and animal hunting has limited the nesting areas of the turtles.

The turtles main source of energy is the sea grass and sea weeds in the corals which are the most active nesting grounds for the marine ecosystem. The extinction of the turtles will increase the growth of the sea grass and weeds and destroy the marine ecosystem. This necessitates the conservation of the turtle species and preventive measures need to be taken against illegal hunters.

#### LESSON IMPLEMENTATION PLAN:

Students will work in groups to conduct an inquiry in order to confirm the information.

ENGAGE - Ask students the following questions:

"What do you know about turtles?"

"What classification of animals do they fall under?"

"Do you know how long they live?"

"What do you think puts an end to their life?"

#### EXPLORE :

Read the book, "Endangered Sea Turtles" by Bobbie Kalman.(Some alternate books would be Sea Turtles by Frank Staub, Giant Turtle by Rebecca Stetoff, Turtles by Trudi Strain Trueit). Show students pages of the book on an overhead projector as you read it. At the end of every page ask students if they are ready for more. As the book is read, students will complete the worksheet, "Help Me". Have students pair share their observations from the book. Ask them the following questions:

"Do all the eggs hatch?"

"Do all the baby turtles reach the water?"

"Who is the most responsible for all the damages towards the turtle?"

"Can we track turtles?"

#### EXPLAIN:

Conduct the following activity:

Divide students into eight groups. Let one group have six students for each of the cause. Let the other seven groups have three students each, to represent the seven groups of turtles.

Begin the activity by calling out a number from 1 to 6. Student with the corresponding cause placard will read the contents. Groups will return to their seats as their species gets affected. The circle will get smaller as habitat loss occurs.

Ask students the following questions:

"How did you feel to not be able to be a part until the end of the game?"

"For those inside the circle, how did you feel as the circle got smaller?"

"How do you think Governor and his family would feel if the same thing happened to them?"

#### ELABORATE:

Have students compare the information from the placards and the "Help Me" worksheet. Have them note down their observations in the "Analyse" worksheet. Ask students the following questions:

"Name some dangers that adult sea turtles face?"

“Who helps the eggs of the turtles and how?”

“What help is provided for turtles caught in fishing nets?”

“How is the turtle’s marine ecosystem polluted?”

Students will write create a “brainstorm” poster about the dangers faced and the conservative measures.

### EVALUATE:

Formative:

- A. Pair-share activity under “Explore” section will provide students’ understanding of the information from the book.
- B. Discussions after the activity in the “Elaborate” section will provide students’ understanding of dangers faced.
- C. Brainstorm poster under “Elaborate” section demonstrates understanding of key vocabulary.

Summative:

Students will work in pairs on one of the following projects to explain the adventures of a sea-turtle as it navigated through the dangers that exist in its ecosystem:

- D. Create a drawing/poster.
- E. Write a story.
- F. Create a travel log.

### Rubric:

The project will be a total of 20 points and each corresponding criteria is 2 points. Students will have to meet all the criteria in order to obtain a full credit.

- A. Create a drawing/poster.
  - » Appropriately creates the ecosystem with appropriate food and organisms with respect to the stage of the turtle.
  - » Includes the danger faced, with its cause and effect.
  - » Illustrates the protective measure accurately.
  - » Labels where required.
  - » Appropriately uses academic vocabulary for labeling.
  
- B. Write a story.
  - » Appropriately describes the ecosystem with the food and presence of other organisms.
  - » Describes in detail the danger faced, highlighting the cause and effect.
  - » Illustrates the protective measure accurately.
  - » Uses appropriate academic language and grammatical format.
  - » Appropriately describe the stage of the turtle with respect to its surroundings.
  
- C. Create a travel log.
  - » Appropriately describes the ecosystem.
  - » Provides accurate chronological order of events with respect to the stages of the turtle.
  - » Uses appropriate academic language.

- » Illustrates the danger in detail highlighting the cause and effect.
- » Explains the protective measure.

#### DIFFERENTIATION PLANS:

**Behavioral:** Student will be placed in a group with one of his/her friends to facilitate peer modeling. During the circle activity, the student will be allowed to stay in the circle until the very end. During the book-reading session, showing the book on the overhead projector will keep the student engaged in the lesson. Student has an opportunity to choose from the different options for the project.

**Cognitive (lower level):** Student will be placed in a group with peers of the same and higher level to facilitate peer assistance. The circle activity will help the student with experiential learning. During the book-reading session, showing the book on the overhead projector will keep the student engaged in the lesson and also serve as a visual to relate the keywords to, while completing the “Help, Save My Home” worksheet. The “Brainstorm” poster will help the student practice his/her understanding of the conservation processes. Pair-share activity in the “Explore” section will help student recollect concepts from the book. Student can choose to work on a project that has less cognitive demand like creating a poster.

**Cognitive (higher level):** Student will be placed in a group with peers on the same and a lower level cognitive ability to facilitate information sharing and peer assistance. The circle activity will provide an experiential learning. Pair-share activity provides the student a chance to recollect the readings from the book. The brainstorm poster allows student to practice key vocabulary. The student can choose an option demanding more cognitive ability like the travel log.

**Affective:** The circle activity will help students experience the sufferings of the turtle. Having Governor in the class will help them connect emotionally to the lesson. During the book reading session, displaying the pages of the book as it is read, helps to keep the student focused in the lesson. The various options to choose for the project motivate the student to apply their learning.

**Language Demands:** The placards during the circle activity have simple language and visuals to pique student’s interests. Displaying the pages of the book provides visuals and better understanding of the keywords while completing the “Help, Save My Home” worksheet. This worksheet also serves as a scaffolded outline to help the student during the project. The “brainstorm” worksheet serves as a practice for the keywords used in the lesson. The student will also be placed in a group where one of the peers is familiar with his/her L1 to facilitate peer assistance. Pair-share activity provides student a chance to understand the key vocabulary.

#### LIST OF MATERIALS:

Long rope  
Placards  
“Help Me” Worksheet  
“Analyse” Worksheet

## **1. PREDATORS**



Coyotes, raccoons and wild dogs take turtle eggs from their nest.

## **2. FISHING NET**



When a turtle is stuck in a net, it cannot rise to the surface and breathe.

A family of Hawksbill turtles passing by is caught in the fishing net.

### **3. HUNTER**



Poachers kill turtles for their shells, fat and meat.  
The Ridleys are the most affected by them.

### **4. PLASTIC BAGS**



The leatherback turtles eat jellies and sometimes mistake plastic bags for jellies and die due to their ingestion.

## **5. LAND DEVELOPER**



Building of beach resorts, homes and restaurants takes away from turtles' dry land to build their nests as turtles are frightened away by people.

## **6. CONSTRUCTION OF A BRIDGE**



Construction of bridge destroys the habitat of the turtles.

***TURTLE EGGS***



***HAWKSBILL***



***RIDLEYS***



***LEATHERBACK***



***LOGGERHEAD***



***GREEN SEA TURTLES***



***BLACK SEA TURTLES***

