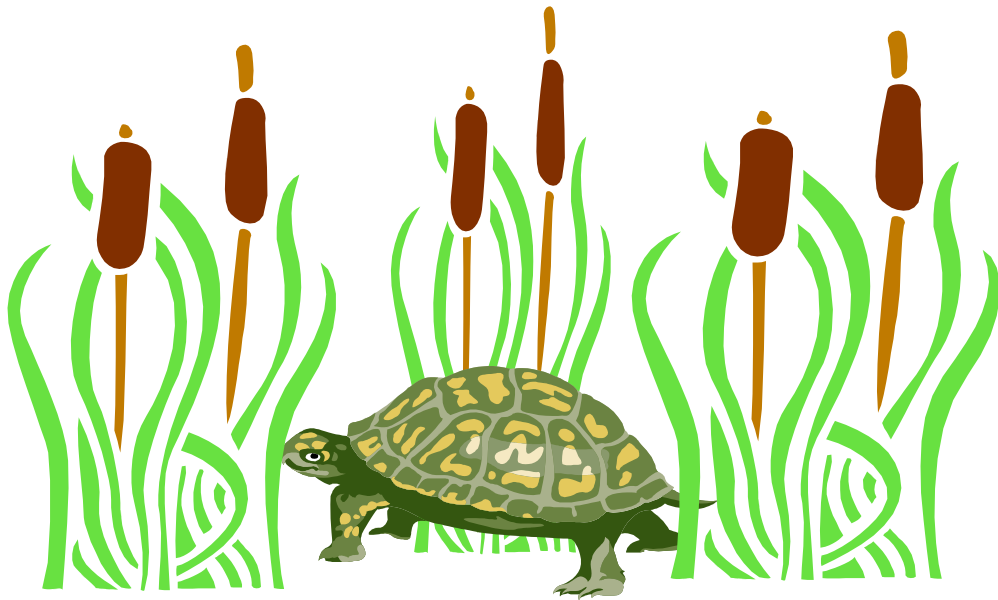


TERRAPINS

Teacher Guide



Unit Introduction

Ask students if they have ever heard the words endangered or extinct. What do they think of when they think of these words? Write some of their ideas on the board. Discuss some of the animals or plants they might know of that are endangered or extinct. Explain that in this task, the students will be learning how to protect an animal from becoming endangered by learning about its survival needs. Explain that they will also learn possible actions to help protect an animal and its environment.

****READ** to the class the "Unit Overview" on page 1 of the Student Answer Book.

Activity 1

Animal Populations

Indicators

Concepts of Science: Environmental Issues

Explain that using the environment to meet one's wants and needs has consequences

Skills and Processes

- Compare data
- Identify possible trends
- Access and process information
- Use information when forming predictions

Materials

Pictures of animals - dinosaur, eagle, deer, panda
Overhead of line graph

Planning Ahead

- | |
|--|
| <ol style="list-style-type: none">1. Review the data on the graph on page 1 in Student Resource Book2. Make an overhead of the line graph on page 1 in Student Resource Book. |
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Teacher Directed Activities

ENGAGEMENT:

1. Write the definition of population on the board.
Population: the numbers of one kind of plant or animal.
Discuss the definition.
2. Explain that they will learn what endangered and extinct mean.
3. Read PART I of the article "Animal Populations" on page 2 in the Student Answer Book.
4. Draw a line on the chalkboard and write the word extinct on one end of the line. Write the word healthy on the other end of the line.
5. Show the students the four animal pictures of the panda, deer, eagle, and dinosaur. Discuss where on the line the students think that each animal should be placed. As a class, place the animals on the line closest to the word that the students feel best describes the present state of that population of the animal.

GUIDED DISCUSSION:

The dinosaur is an extinct animal. The entire population of these animals has disappeared. The panda is an animal that is endangered. The population of pandas is getting so low that it may disappear in the future if people do not do something to protect them. The bald eagle at one time was endangered but now the population has increased due to the help of people.

The deer population is healthy. There are plenty of deer around. In some places there are too many deer and lawmakers have stepped in to ensure the safety of the deer and the people that live around them.

6. As a class, read PART II of the article titled "Animal Populations" on page 2 in the Student Answer Book.
7. Explain that they will now look at data on one specific animal, the Kemp's Ridley Sea Turtle. Have students read the line graph in their Student Resource Book on page 1. Use overhead of line graph throughout discussion.

*Review how to read a line graph or use this line graph to teach the purpose and reason for line graphs to the students if they are not familiar with it.

*Write the word trend and its definition on the board.

Trend-a direction in a set of data. A trend can increase, decrease, or stay the same.

*When discussing the line graph, ask students to explain the trend including dates when the data decreased and increased.

8. Write the definition of timeline on the board. Explain that a **timeline describes important events during a period of time**. Have students read the Kemp's Ridley Sea Turtle timeline on the bottom of page 1 in their Student Resource Book.

9. Discuss the changes in the sea turtle's population that occurred.

Sample discussion questions:

What did the people want in 1957 that changed the population of the sea turtles?

How did people's actions effect the population of the sea turtles?

10. Have students turn to page 3 in the Student Answer Book and complete questions 1A -1E using information from the line graph and the timeline on page 1 of their Student Resource Book.

TRANSITION: Ask the question "What might be some other reasons that animals are becoming endangered?" Explain that this question will be answered in the next activity.

Activity 2

Turtles in Trouble

Indicators

Concept of Science: Environmental Issues

Explain that using the environment to meet one's wants and needs has consequences

Skills and Processes of Science

Access and Process information

Planning Ahead

Pre-read article **Endangered Sea Turtles** on pages 1 and 3 in the Student Resource Book

Teacher Directed Activities

ENGAGEMENT:

In the timeline we identified that the Kemp's Ridley Sea Turtle's population declined because people were catching them in nests and selling them as food and jewelry. Can you think of any other reasons that would cause the turtle's population to decrease?

1. Read with the class "Turtles in Trouble" on page 6 in the Student Answer Book.
2. Have students read the selection entitled "Endangered Sea Turtles" on pages 2 and 3 in the Student Resource Book.
⌚ Note: You may want to pair your students to do this activity.
3. After they read, have students complete questions 2A and 2B on pages 7 and 8 in the Student Answer Book. Remind them to use evidence from the articles, "Turtles in Trouble," "Endangered Sea Turtles," and the timeline and line graph.
4. Review and discuss students' responses with the class. Be sure to have students refer back to the selections "Turtles in Trouble," "Endangered Sea Turtles," and the line graph and timeline when sharing their responses.

Activity 3 **Information**

Viewing and Reading for

Indicators

Concept of Science: Interdependence of Organisms

Organisms can survive only in environments in which their needs can be met

Skills and Processes

Access and process information

Materials Needed

Video "The Shell Game"

Planning Ahead

Preview Video "The Shell Game"

Pre-read the article "Big Help for Little Turtles" on pages 4-6 in the Student Resource Book.

Pre-read selection "Crab Pot By-catch Reduction Device", on page 7 in the Student Resource Book.

Teacher Guided Activities

PART I

1. Read the introduction, "A Maryland Turtle in Trouble?" on page 8 in the Student Answer Book.
2. Ask students, "What do you already know about Diamondback Terrapins?"
Write student responses on board.
Sample responses may be: live in water, eat fish, have shells.
3. Tell students that they will now watch a video about Diamondback Terrapins. Show the video to your students.
4. Have students brainstorm additional information about Diamondback Terrapins that they might have learned from the video. Add their responses to the list on the board.
5. Explain to the students that they will watch the video again. This time they will be looking for specific information. Have the students create a graphic organizer to help them look for specific information in the video. Take a sheet of paper and have the students fold it in half horizontally and vertically, so that you can see four specific squares.
 - ⌚ In the first square, have the students write the word THREATS. Explain to the students that they will use this square to write down some of the threats that are affecting the diamondback terrapin.
 - ⌚ In the second square, have the students write the word HABITAT. Explain to the student that they will write down words or phrases that describe the terrapin's habitat.
 - ⌚ In the third square, have the students write the words, NESTING HABITS. Explain to the students that they will write down information explaining where the terrapins nest.
 - ⌚ In the final square, have the students write the word PHYSICAL FEATURES. Explain to the students that they will write down information about how the turtle looks and moves in this square.
6. Replay the video and have students complete the graphic organizer. You may want to stop the video at different points to help focus the students.
7. Discuss the student's responses as a class.
8. Students should read the chart, "Characteristics of Terrapins and Sea Turtles" on page 3 in the Student Resource Book.
9. Have the student's use their graphic organizer and the chart, "Characteristics of Terrapins and Sea Turtles" on page 3 in the Student Resource Book to answer questions 3A and 3B on page 9 in the Student Answer Book.
10. Review and discuss students' responses with the class.

PART II

1. Instruct students to read, "Big Help for Little Turtles" on pages 4

through 7 in the Student Resource Book. Be sure to instruct students to use appropriate before, during and after reading strategies. Then, students should complete questions 3C, 3D, and 3E on pages 10 and 11 in the Student Answer Book.

Note: Children may need to be paired according to reading ability.

****** If you are keeping Terrapins in your classroom, be sure to make**

the connection between the Head-Starting program in the reading

and what we are doing in the classroom.

2. Students should read the selection "Crab Pot By-Catch Reduction Device"

on page 8 in the Student Resource Book. Be sure to instruct students to use appropriate before, during and after reading strategies. Students should complete question 3F on page 13 of the Student Answer Book.

Activity 4

Home, Sweet, Home

Indicators

Concept of Science: Interdependence of Organisms

Organisms can survive only in environments in which their needs can be met

Skills and Processes

Access and process information

Materials Needed for PART II

Terrapin Data Collected from field trip to Flags Pond

*Terrapin Food Survey Chart

*Terrapin Beach Habitat Chart

(Teachers should have collected one from each group. See charts attached)

Planning Ahead

Pre-read "Parks in Maryland" on page 8 in the Student Resource Book

Teacher Directed Activities

ENGAGEMENT:

1. Have students turn to page 14 in the Student Answer Book and read the introduction, "Home, Sweet, Home" with the class.
2. After reading the article, share the "Terrapin Nesting Sanctuary" sign with the class. Have students share comments about the sign. Tell students to look out for any signs that may be posted at Flag Ponds Nature Park.

PART I

1. In small groups or pairs instruct students to use what they have learned about the needs of terrapins to complete 4A on page 14 in their Student Answer Book. Students should ONLY complete the notepad and then stop and wait for further directions.
2. Have students share their ideas. Record responses on the board.

3. Read the bottom of page 14 in the Student Answer Book to the class.
4. Have students turn to page 8 in the Student Resource Book and read the map and information about the 4 parks. Be sure to instruct students to use appropriate before, during and after reading strategies.
5. Students should turn to page 15 in the Student Answer Book to complete question 4B independently. Review the class responses to this question.

*******Trip to Flag Ponds Nature Park*******

Indicators

Concept of Science: Interdependence of Organisms

Organisms can survive only in environments in which their needs can be met

Explain that using the environment to meet one's wants and needs has consequences

Skills and Processes

Collect and record data

Planning Ahead

Please find enclosed in your teacher packet a summary sheet with directions for parent chaperones. Reviewing these directions prior to the trip with your chaperones will be very helpful. Please have name tags for your students and divide them into 2 groups prior to arriving.

This will be your CHESPAX trip. Tell your students that they will think like scientists and collect data about the habitat conditions for terrapins on the beach at Flag Ponds Nature Park. Please remind students that they will try to figure out whether Flag Ponds is a good place for terrapins or not. They will not see terrapins at Flag Ponds Nature Park.

Your students will take part in the following activity stations:

- ⌚ Beach profile
- ⌚ Food availability
- ⌚ Evidence of predators,
- ⌚ Crab pots - signs and crab pot excluder devise (BRD)
- ⌚ Seine Net
- ⌚ Salinity
- ⌚ Nesting Space

PRIOR TO THE FLAG PONDS TRIP:

Review with the students what they have learned. Use the guided questions below.

- ⌚ What do Diamondback Terrapins need to survive?
- ⌚ What are the characteristics of a habitat that would be a home to terrapins?
- ⌚ What are some things people can do to help the population of the Diamondback Terrapin increase?

**Activity 4 continued
TRIP**

FOLLOW UP TO THE FLAG PONDS

PART II

1. Pass back the "Terrapin Data Sheets" that the students completed while at Flag Ponds Nature Park.
2. Students should complete question 4C on page 17 of the Student Answer Book. They should refer back to their Terrapin Data Sheets when filling in the chart.

Activity 5

Writing to Inform

Indicators

Concept of Science: Interdependence of Organisms

Organisms can survive only in environments in which their needs can be met

Explain that using the environment to meet one's wants and needs has consequences

Skills and Processes

Writing to Inform

Materials

- 🕒 Terrapin Beach Habitat data collected at Flag Ponds Nature Park
- 🕒 Terrapin Food Survey data collected at Flag Ponds Nature Park

Teacher Directed Activities

1. Read with students activity 5 "Telling Others" on page 17 of the Student Answer Book.
2. Have students go back to page 16 of the Student Answer Book and re-read their recommendation form.
3. Brainstorm with the class the different articles they can use to complete the information on the sign. On the board, list the articles they have read throughout this task.
4. Have students complete the sign on page 18 of the Student Answer Book individually, in pairs, or in small groups. Students should use the information from the entire task, as well as, their resource booklets to complete the information on the sign.