

Task 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 as endangered or extinct. Explain that in this task they will be learning how to protect an animal from becoming endangered by learning about its survival needs and helping to take action to protect the environment in which the animal meets these needs.

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

Student Resource Book

Student Answer Book

Pictures of animals - dinosaur, eagle, deer, panda

Planning Ahead

1. Review data on the graph on page 1 in Student Resource Book

Teacher Directed Activities

1. Explain that they will learn what endangered and extinct mean.
2. 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.
3. 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 animal.

4. Follow up Activity: 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. The bald eagle at one time was endangered but now has come back due to the help of people.
5. Explain that they will now look at data on one specific animal, the Kemp's Ridley Sea Turtle. Have the students look at the line graph in their Student Resource Book on page 1. (Review how to read a line graph or teach this skill to the students if they are not familiar with it. Review term and definition of trend.)
6. Explain what a time line is. Have the students read the Kemp's Ridley Sea Turtle time line.
7. Then, have the students complete questions 1A -1E using information from the line graph and the time line.
8. 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

Materials

- Student Resource Book
- Student Answer Book

Planning Ahead

Pre-read article **Endangered Sea Turtles** on pages 2 and 3 in the Student Resource Book

Teacher Directed Activities

1. Discuss with the students that there are many reasons why animals are becoming endangered. You may want to make a list of the reasons the student's identified.
2. Read the introduction aloud. Identify before and during reading strategies with your students.
3. Establish a period of time for students to read the selection entitled "Endangered Sea Turtles" on page 2 and 3 in the Student Resource Book. Note: You may want to pair your students to do this activity.
4. After they have had time to read, have the students complete question 2A and question 2B related to the sea turtle.
5. Review and discuss responses with the class.

Activity 3

Viewing and Reading for Information

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

Student Answer Book

Student Resource Book

Video "Diamonds in the Rough"

Planning Ahead

Preview Video "Diamonds in the Rough"

Pre-read the article "Big Help for Little Turtles" on pages 5-8 in the Student Resource Book.

Pre-read selection "Crab Pot By-catch Reduction Device on page 9 in the Student Resource Book.

Teacher Guided Activities

1. Read the introduction in the Student Answer Book.
2. Students should study the chart Characteristics of Terrapins and Sea Turtles on page 4 in their Student Resource Books.
3. Show the video to your students.
4. Instruct students to read question 3A and 3B.
5. Then, rerun the video and have the students answer questions 3A and 3B.
6. Instruct students to read, "Big Help for Little Turtles" in the Student Resource Book on pages 5 through 8 and complete 3C through 3E.
7. Students should read the selection "Crab Pot By-Catch Reduction Device" on page 9 in the Student Resource Book.
8. Students should complete questions 3F and 3G.

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

- Student Answer Book
- Student Resource Book

Planning Ahead

Pre-read Parks in Maryland on page 10 in the Student Resource Book

Teacher Directed Activities

1. Read the introduction aloud.
2. Instruct students to use what they have learned about the needs of terrapins to add information to the notepad on page 13 in their Student Answer Books.

3. Establish a period of time for students to read the map and the information about the 4 parks on page 10 in their Student Resource Books.
4. Students should complete question 4B.
5. Review with the students
 - What do the terrapins need to survive?
 - What place is the most likely to be a home to terrapins?
 - Why is this best place?
 - What does Flag Ponds need to have in order to have terrapins there?

Flag Ponds Trip

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 larger groups prior to arriving.

This will be your CHESPAX trip. Your students will think like scientists and collect data about the habitat conditions for terrapins at the Flag Pond's beach. Because we are trying to figure out whether this is a good place for terrapins or not, remind the students that they probably will not see terrapins there.

They will take part in the following activity stations

- Beach profile
- Food availability

- Evidence of predators,
- Crab pots - signs and crab pot excluder devise
- Seine Net
- Salinity
- Nesting Space

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 Data Collected page from Flag Ponds
- Student Answer Book

Teacher Directed Activities

1. Review procedures for writing a letter to inform and instruct students to read the Writing to Inform prompt (5A) on page 15 in their Student Answer Books.
2. Review data collected at Flag Ponds.
3. Have Students use their Terrapin Data Collected page to complete Terrapin Graphic Organizer on page 16 in their Student Answer Book.
4. Discuss with students that they will be writing to the Department of Natural Resources to inform them as to whether or not Flag Ponds is a suitable choice for a Terrapin Sanctuary.
5. Students should complete a rough draft of their letter on a separate piece of paper.
6. Final drafts of the letter should be completed on page 17 of their Student Answer Books.

Activity 6

BRD Flyer (optional activity)

This activity has been included as an option for teachers who would like to extend their work toward protecting terrapins. CHESPAX will have BRDs available for members of your school community that are fishing crab pots from shore or from piers.

Indicator

Concept of Science: Interdependence of Organisms

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

Skills and Processes

Writing to Inform

Materials

Student Resource Book

Student Answer Book

Samples of flyers and brochures (any topic, teacher provides)

Teacher Directed Activities

1. Read and review the information below to the class.

There are many reasons that can cause animals to become endangered. You have looked closely at an animal that scientists believe might become endangered in the future, the diamondback terrapin. Some of the factors that are causing it to become endangered are habitat loss, being caught in crab pots, and predators. There are solutions to some of these problems.

People are raising terrapins and putting devices on crab pots to keep terrapins out. People are also protecting the habitat where the terrapins live. You will create a flyer to inform people about the use of BRDs on crab pots.

Instruct students to turn back to page 9 in their Student Resource Books. Write the following on the board. Have students work together to fill in the blanks. Discuss the purpose of a BRD.

B _____

R _____

D _____

1. Before completing the rest of the activity, you may want to show students samples of flyers or brochures to give them ideas as they create their own.
2. Allow adequate time for students to complete activity A, including re-reading the articles "Caught in Crab Traps" and "Crab Pot By-Catch Reduction Device" on pages 7-9 in the Student Resource Book.
3. Prior to Activity B, you may want to generate a class list of topic ideas on the board. It may be appropriate to think of and list topic sentences or slogans. Students should use this information to create their flyers.