

Endangered Lesson Plan

Grade Level

Grade 4

Science Concept

Endangered Species

Relationship to California Science Content Standards

3. Living organisms depend on one another and on their environment for survival. As a basis for understanding this concept:

- b. Students know that in any particular environment, some kinds of plants and animals survive well, some survive less well, and some cannot survive at all.

Objective

Students will list threats to the desert tortoises' habitat and write about what could and should be done in order to protect this species.

Conceptual Background

By the start of fourth grade, students know that organisms are affected by changes in their environment. They also know that some changes are so great that organisms will either leave their habitats or die. Some species have disappeared completely.

Students will take what they know and apply it to the desert tortoise. Students are encouraged to come up with reasonable threats to the tortoise's habitat. A Caltrans brochure is provided so that the students may read about one specific reason humans have encroached upon the tortoise.

Materials

1. Pencils
2. Copies of the Vocabulary Worksheet, the Threatened, Endangered, Extinct worksheet, and Caltrans brochure for each student.

Engage:

Bring a desert tortoise into class. Let the children look at it while you ask questions. "Does anyone know what this is?" "Where do you think he normally lives?" "What does he like to eat?" Use the accompanying fact sheet for answers to these questions. Any student inquiries that cannot be

covered by the information on the sheet can be submitted to SERC upon return of the tortoise. After the class has had sufficient viewing time, mention that this tortoise is an endangered species.

Explore:

Complete the endangered species vocabulary sheet to make sure everyone has the terms necessary for discussion. Depending on the current reading level of the class this can be done individually or as a teacher lead class activity. Ask the question, “What is threatening the desert tortoise’s habitat?” Have students write down their responses. Have a few students share their ideas and have the class discuss whether or not they are realistic threats.

Explain:

Hand out the Caltrans brochure. Ask the class if they know what Caltrans is. If not, explain that it is the California Department of Transportation and that it is responsible for building and maintaining highways, bridges, and railways. Have the students read the brochure and use it to determine one way the desert tortoise’s habitat is being threatened and identify one way that the tortoise is being protected. Answers should be that roads or railways are being built over the habitat. Protection measures could include laws that protect the tortoise, any of the instructions listed in the brochure, the fact that the brochure was even created, or any reasonable response from the text.

Elaborate:

Students will present their responses. Ask them if they think these actions are necessary and/or sufficient. Stress that this is an opinion. Encourage them to make an argument. Have students complete the Threatened, Endangered, Extinct worksheet.

Evaluate:

- (a) Summative - All written work, including both worksheets, should be turned in. Even though this lesson does not have to focus on writing skills, tell the students to write neatly and in complete sentences.
- (b) Formative - Observe the level of critical thinking present in the class discussions.

Differentiation Plans

Behavioral for Student A – An easily distracted student will have trouble sitting through the class discussions unless directly engaged. Call on volunteers but make sure to involve restless students. If the student does not have an immediate response, say “That’s okay, you just think about it and I will come back to you in a moment.” Take one or two more volunteer responses and then return to the student.

Cognitive for Student B – This lesson is reading intensive. For a student with a learning disability centered on reading have an audio recording of the brochure and Threatened, Endangered, Extinct worksheet available.

Cognitive for Student C – Student should be presented with enlarged text or text presented in an online, interactive format. Extra time should be allotted for student to complete task.

Affective for Student D – Inform students a day in advance that there will be a live animal in the class for them to observe. For a shy child observe interaction closely to make sure the student can get close to the animal if desired. If hesitant, try to encourage. If extremely hesitant, allow the child to sit away from the group.

Language Demands for Student E – Post all important content vocabulary (and any process vocabulary that may be new or difficult) on a class word wall. Even if the vocabulary worksheet was done individually, go over answers. When having individuals share their answers, encourage student’s participation, and allow student to point to the right word rather than say it.

Language Demands for Student F – Present visual representations for common factors that lead to organisms becoming threatened. Put pictures representing pollution, hunting, deforestation, and urban expansion up during class discussions as these topics are brought up by students.

Language Demands for Student G – Students could be allowed to respond to either of the two worksheets orally instead of writing out the answers if they so choose.

Suggested Reading:

Lonesome George, the Giant Tortoise by Jacobs, F. and Cassels, J.

Directions or Special Instructions; Safety Concerns, etc.:

- The students should be able to view the tortoise sufficiently but may not handle it or get too close. An extensive review of what is and is not allowed during the Engage stage should be covered.