

Where have all the endangered gone?

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Approximate Timeline: Four Weeks

Area(s) of Core Content: Arts and Humanities, Science, Mathematics, Writing, Reading

Organizers:

Plants and animals are becoming endangered every day. So what? Should we care?

Primary Targeted Standards:

Academic Expectation 1--Apply Communication and Math Skills:

-1.1 Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools such as interviews and surveys to find the information they need to meet specific demands, explore interests, or solve specific problems.

Demonstrators for Academic Expectation 1.1

- Use research tools to access and synthesize information.
- Identify and use print and non-print (e.g., video, CD-ROM) resources to obtain information.
- Question individuals to obtain information.
- Observe to obtain information.
- Manipulate objects to obtain information.

Academic Expectation 2--Science:

-2.2 Students identify, analyze, and use patterns such as cycles and trends to understand past and present events and predict possible future events.

Demonstrators for Academic Expectation 2.2

- Use senses to observe items; communicate similarities and/or differences.
- Identify and communicate common attributes of items in a group.
- Classify objects according to more than one property or attribute.
- Recognize, describe, and create patterns of objects or events.

-2.6 Students understand how living and nonliving things change over time and the factors that influence the changes.

Demonstrators for Academic Expectation 2.6

- Identify and predict small and large scale changes.
- Investigate variables that influence change over time (evolution).
- Describe situations where one change causes another change.

Secondary Targeted Standards:

-1.10 Students organize information through development and use of classification rules and systems.

Demonstrators for Academic Expectation 1.10

- Investigate relationships among real objects.
- Investigate classification systems using real objects.
- Identify and analyze relationships among objects, information, or ideas.

Academic Expectation 5--Thinking and Problem Solving:

-5.4 Students use a decision-making process to make informed decisions among options.

Demonstrators for Academic Expectation 5.4

-Define a goal, gather information, and generate alternative solutions.

-Predict consequences for solutions.

-Analyze alternatives; make a decision.

Elementary Core Content--Reading:

-RD-E-x.0.1 Use word recognition strategies (e.g., phonetic principles, context clues, structural analysis) to determine pronunciations and meanings of words in passages.

-RD-E-2.0.6 Use text features (e.g., pictures, lists, tables, charts, graphs, tables of contents, indexes, glossaries, headings, captions) to understand a passage.

-RD-E-2.0.9 Make predictions and draw conclusions based on what is read.

-RD-E-2.0.10 Connect the content of a passage to students' lives and/or real world issues.

Elementary Core Content--Writing:

-WR-E-1.4 Characteristics of transactive writing may include text and language features of the selected form

-WR-E-1.4 Characteristics of transactive writing may include information to engage/orient the reader to clarify and justify purposes

-WR-E-1.4 Characteristics of transactive writing may include ideas to communicate the specific purpose for an intended audience

-WR-E-1.4 Characteristics of transactive writing may include explanation and support to help the reader understand the author's purpose

-WR-E-1.4 Characteristics of transactive writing may include well-organized idea development and support (e.g., facts, examples, reasons, comparisons, anecdotes, descriptive detail, charts, diagrams, photos/pictures) to accomplish a specific purpose

-WR-E-1.4 Characteristics of transactive writing may include effective conclusions

Elementary Core Content--Mathematics:

-MA-E-3.1.3 The process of using data to answer questions (e.g., pose a question, plan, collect data, organize and display data, interpret data to answer question)

Elementary Core Content--Science:

-SC-E-3.1.2 Organisms have basic needs. For example, animals need air, water, and food; plants need air, water, nutrients, and light. Organisms can survive only in environments in which their needs can be met.

-SC-E-3.1.3 Each plant or animal has structures that serve different functions in growth, survival, and reproduction. For example, humans have distinct body structures for walking, holding, seeing, and talking.

-SC-E-3.2.1 Plants and animals have life cycles that include the beginning of life, growth and development, reproduction, and death. The details of a life cycle are different for different organisms.

-SC-E-3.3.1 Plants make their own food. All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.

-SC-E-3.3.2 The world has many different environments. Distinct environments support the lives of different types of organisms. When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.

-SC-E-3.3.3 All organisms, including humans, cause changes in the environment where they live. Some of these changes are detrimental to the organism or to other organisms; other changes are beneficial (e.g., dams built by beavers benefit some aquatic organisms but are detrimental to others).

---Students will ask simple scientific questions that can be investigated through observations combined with scientific information.

---Students will use simple equipment (e.g., magnifiers, magnets), tools (e.g., metric rulers, thermometers), skills (e.g., classifying, predicting), technology (e.g., electronic media, calculators, World Wide Web), and mathematics in scientific investigations.

---Students will use evidence (e.g., observations, data) from simple scientific investigations and scientific knowledge to develop reasonable explanations.

---Students will design and conduct simple scientific investigations.

---Students will communicate (e.g., draw, graph, write) designs, procedures, observations, and results of scientific investigations.

---Students will review and ask questions about scientific investigations and explanations of other students.

---Students will examine how designing and conducting scientific investigations fosters an understanding of issues related to natural resources (e.g., scarcity), demonstrate how the study of science (e.g., aquariums, living systems) helps explain changes in environments, and examine the role of science and technology in communities (e.g., location of landfills, new housing developments).

---Students will examine the role science plays in everyday life.

Essential Questions:

1. What are the basic needs for living things and why are they important?
2. How do the adaptations of a living organism help it to survive?
3. How do changes in the environment affect an organism's ability to survive?
4. How can one organism help control the population of another organism?
5. What would happen if animals or plants in Lexington (or Kentucky) became extinct?

Culminating Performance:

1. Choose an endangered organism that you would like to keep from becoming extinct.
2. Persuade someone to understand why you feel this is important, using one of the following formats:

power point
display/poster
newsletter
video/drama

(other ideas must meet teacher approval)

Scoring Guide

Criteria	Needs Improvement	Satisfactory	Good	Excellent	Points
Organization	Audience could not understand presentation because there was no sequence of information.	Audience had difficulty following presentation because student jumped around.	Student presented information in logical sequence which audience could follow.	Student presented information in logical, interesting sequence which audience could follow.	—
Content Knowledge	Student included one relevant fact.	Student included two relevant facts.	Student included three relevant facts.	Student included four or more relevant facts.	—
Visuals	Student used no visuals.	Student used a few relevant visuals.	Student used some relevant visuals.	Student used elaborate relevant visuals .	—
Delivery	Student mumbled, incorrectly pronounced terms, and spoke too quietly for students in the back of class to hear.	Student incorrectly pronounced terms. Audience members had difficulty hearing presentation.	Student's voice was clear. Student pronounced most words correctly.	Student used a clear voice and correct, precise pronunciation of terms.	—
				Total---->	—

Teacher Comments:

Evaluation Component (Pretest/Post test)

Plants and animals are becoming endangered every day.

Do you care?

Give at least two reasons to explain why you feel this way.

Use a scoring guide to assess

Partner Open Response question:

What would happen if animals or plants in Lexington (or Kentucky) became extinct?

Vocabulary:

Living vs. non-living organisms.

Ecosystems-characteristics

Endangered

Organism

Extinct

Adaptations

Environment

Conservation

Population

Skills/Abilities:

Follow directions

Predict

Observer

Infer

Identify

Create power point, newsletter, video, drama, poster

Organize information

Communicate with audience

Keyboarding skills

Presentation skills

Technology Standards:

T4.4 Locate information using the Internet

T5.1 Use proper keyboarding with speed and accuracy relative to the task.

T5.2 Evaluate information using electronic references

T5.6 Enter and edit word processing information

T5.9 Use Electronic Mail Software

T6.5 Create a presentation or product using application software.

Critical Resources:

Classroom science textbook

Library

TRT

Technology Lab

World Wide Web access

Word processing software

Guest Speaker

Email Access

Power Point

Teacher's trade books

Media center video

Websites:

1. Endangered species of Ky - <http://eelink.net/EndSpp/state-ky.html>
2. Endangered species – how did they become endangered, why save them, ways you can help, facts, laws, teacher’s page <http://www.endangeredspecie.com/>
3. <http://www.audubon.org/audubon/contents.html> National audubon society
4. <http://www.rain.org/~eis/wildlife/> Environmental Organization Directory
5. International Directory for Animal Welfare <http://www.easynet.co.uk/ifaw/home.htm>
6. International Wildlife Ed. And Concervation <http://198.68.160.16/~iwec/>
7. The Wilderness Society http://town.hall.org/environment/wild_soc/wilders.html
8. Endangered Species in Endangered spaces lesson plans - http://rbc1.rbc1.gov.bc.ca/end_species/es_plans/es_plans.html
9. Bagheera's Endangered Species Classroom To find out information and activities <http://www.bagheera.com/inthewild/classroom.htm>

Instructional/Assessment Activities: Textbook series Harcourt Fourth Grade Edition

Activity	Technology integration	Assessment	Critical Resources	Completed
Mealworm observations	http:// www.si.edu/harcourt/science Young animal		Text pgs. A 38-39 Trade Books	
Bird food and beak observation	http:// www.si.edu/harcourt/science Reptile body adaptations		TB pgs. A 46-47 Trade Books	
Monarch butterfly travel	CNN Video: Monarch Migration		TB pgs A 54-55 Trade Books	
How light affects plants	CNN Video: Bloomin Business		TB pgs A 70-71 TradeBooks	
How plants breathe	http:// www.si.edu/harcourt/science Garden Plants		Pgs A 76-77 Trade Books	
Seedling growth	CD ROM: Exploration Do you have a green thumb?		Pgs.A 82-83	
Plant colors			Pg A 91	

How parts of a system interact	http://www.scilinks.org/harcourt Natural Systems		Pgs. B 4-5 Trade Books	
An ecosystem	http://www.harcourtschool.com		Pgs. B 10-11 Trade Books	
The homes and roles of living things	CNN Video: Tide Pool		Pgs. B 18-19 Trade Books	
A Coral Reef	CD ROM: Coral Reefs		Pgs. 26-27 Trade Books	
Salt water and Fresh water	http://www.scilinks.org/harcourt Kelp Forest		Pgs. B 34-35 Trade Books	
Changes in a Pond	http://www.scilinks.org/harcourt Marine Ecosystems		Pgs. B 50-51 Trade Books	
Clean up pond pollution	CNN Video: Artificial Reef		Pgs. B 58-59 Trade Books	
Using our national parks	http://www.scilinks.org/harcourt Conservation		Pgs. B 66-67 Trade Books	

