

WANTED ALIVE

METHOD

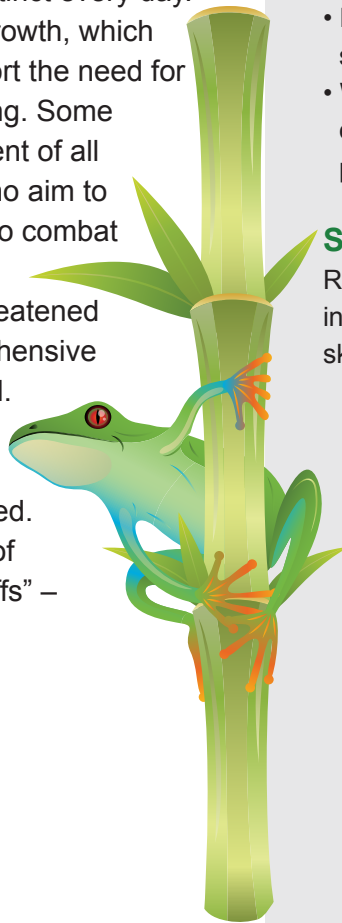
Students research an endangered species and then create an informational report and a poster to inform others about the importance of protecting their animal.

MATERIALS

- Reference materials on endangered species or computer with Internet access
- Wanted Alive poster (optional)
- Art supplies

INTRODUCTION

Extinction has always been a natural phenomenon – the natural rate of extinction is known as the “background” rate and is between one and five species per year. However, scientists estimate that our current rate of extinction is 1,000 to 10,000 times the background rate, with dozens of species going extinct every day. One of the leading causes is human population growth, which destroys more and more species’ habitat to support the need for agriculture, urban development, mining, and fishing. Some scientists believe that by mid-century, 30-50 percent of all species will be extinct. There are many groups who aim to raise awareness of endangered species in order to combat these alarming trends. The IUCN (International Union for Conservation of Nature) Red List of Threatened Species is widely recognized as the most comprehensive evaluation of threatened species around the world. The IUCN Red List monitors trends of species around the globe, highlighting threats and calling attention to plants and animals that are endangered. In this activity, students contribute to the mission of species conservation by acting as “Species Sheriffs” – informing others about an endangered species of their choosing and encouraging its protection.



CONCEPT

Wildlife preservation is worth fighting for and each of us can become a spokesperson for an endangered species.

GRADE LEVEL

Lower and upper elementary

SUBJECTS

Science, Social Studies, Language Arts, Art

OBJECTIVES

Students will be able to:

- Research and organize information about an endangered species of their choosing.
- Locate the habitat of a chosen species on a world map.
- Write about and illustrate an endangered species in order to promote its protection.

SKILLS

Researching, writing, analyzing information, drawing/painting, map skills

PROCEDURE

1. Ask students what they already know about endangered species and list all students' comments on the board. Students will most likely be familiar with the term and may already know some plants or animals that are endangered. Don't correct students at this point and list all students' ideas.
2. Go over with students the definition of **endangered species** (a species that will only survive for a short period of time unless actions are taken to save it) and then have students brainstorm in pairs some current threats to plant and animal survival. Have a few pairs share their answers and then discuss as a class the following reasons why species are endangered. The common acronym for causes of endangerment is HIPPO (Habitat loss, Invasive species, Population growth, Pollution, Overharvesting):

Habitat Loss: Human numbers and activities have caused the loss and destruction of millions of acres of prime habitat. Many plants and animals find themselves homeless as a rapidly growing human population scrambles to meet its basic needs for food, water, fuel, and shelter.

Invasive Species: New species introduced to the wild which kill off the old species. Exotic or nonnative species compete with native plants and animals for food, water, and shelter.

Population Growth: More people means increased use of natural resources as well as increases in habitat destruction and more waste and pollution generated.

Pollution (air and water): Acid rain, toxic chemical dumping, and plastic garbage threaten or kill plants and animals. Herbicides and pesticides also kill many non-pest plants and animals.

Overharvesting: Catching or using so many plants or animals that the population cannot replenish itself. This category also includes poaching and illegal trading of plants and animals.

Note: Most species are in trouble due to more than just one problem. Many are threatened or endangered due to a complex combination of factors.

3. Explain that each student in the class will choose a different plant or animal that is endangered and conduct research to learn more about it. Then, they will act as a "Species Sheriff," protecting their species by teaching others about it and relaying the importance of protecting it.
4. Allow time for each student to look over endangered species lists and choose a plant or animal for their research project. The Arkive.org website is a great way for students to choose a species and to learn more about endangered plants and animals. To access this site, visit www.arkive.org. In the "Explore Arkive" tab, click on the topic of Endangered Species and then click on "Arkive's top 50" in the upper right hand corner. From there, students can tailor their search based on a species group, where the species lives, or conservation status. Alternatively, you can access print materials from your school or community library.

Note: Lower elementary students might have more trouble researching on their own.

Consider having parent volunteers help with this task or arrange for your class to partner with an older class. The older students can help find and read relevant information and also help young students put the information into their own words.

5. Once students have chosen a plant or animal, they should conduct research to answer the following questions (all of this can be found directly on the Arkive website or in their “Find out More” section for each species). It might be helpful to make small “research journals” for each student, so that they can take notes on each of the questions. This can be done in the computer lab at your school, or as a take home project.

- a. What is the Latin name for your plant or animal?
- b. What is your species’ habitat? Where does it live? On a large world map displayed in the classroom, have each student mark where his or her species lives.
- c. What is something interesting about your species?
- d. Why is this species endangered?
- e. Why should this species be protected?
- f. What is being done to help this species (conservation projects, organizations, etc.)?

6. Brainstorm with your students how they might help the species they've research. (*Raising awareness about the species can be a way to help if students can't think of any direct ways.*) Also discuss why they think the species should be saved. Answers could include:

Ethics: Higher intelligence does not justify the willful extermination of other species.

Respect: Every plant and animal has intrinsic value.

Genetic Diversity: Every plant and animal is unique. If we lose one species, we have lost a model that can never be replaced; nature’s storehouse of genetic variation is necessary for the survival of all species.

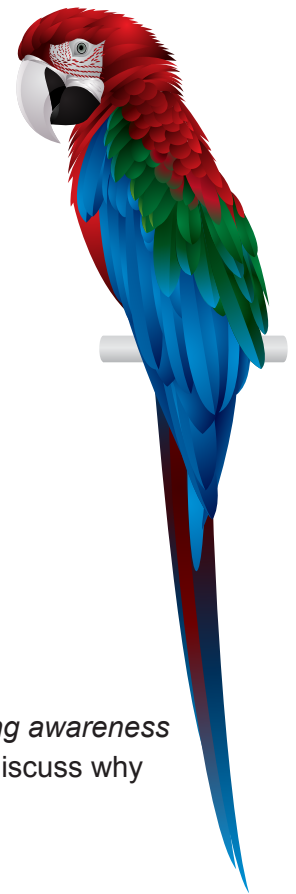
Balance of nature: Interdependence and interconnection.

Science: Uses in medicine and industry.

Agriculture: Expansion of food production.

7. After they have gathered all the information above, have students assume the role of “Species Sheriff.” As sheriffs, their job is to inform others about the dangers facing their species and to raise awareness so that others will feel the need to protect it. To do this, they should first organize their research into either a written report or a poem (younger students’ “reports” will be much shorter than older students’). Poems can be written from the animal or plant’s point of view and should include most, if not all, of the information that was gathered. You may also want to provide students the option to create a PowerPoint presentation or an informative video.

8. Finally, invite your students to create a Wild West style “Wanted Alive” poster for their endangered species. You can have students develop their own poster with a detailed drawing or painting of their species or copy and distribute the provided Wanted Alive poster template. Be sure that students also illustrate the surrounding habitat of their species.



9. To make posters appear a bit more rustic, the edges can be cut ragged, yellowed with boot polish, and “burnt” with pencil lead or black marker.
10. Have students share their poster and writing with each other, then display students’ posters with their reports and/or poems in the hallway so that other students can learn from your “Species Sheriffs.” Also display the class world map. If you choose, you can even have students design paper bag vests and sheriff badges to wear while they present their research!
11. Alternatively, create a class book of your students’ posters and writings. Use high quality photos of each of the posters (not the posters themselves) along with typed copies of the students’ writing. The book can be put in the school library to serve as reference material for other classes.

DISCUSSION QUESTIONS

1. After learning about the threats to classmates’ species, do you see any common threats among different species?
2. Based on classmates’ reports, does one type of habitat or one place in the world seem to have more endangered species than another?
3. What changes in human behavior do you think would have the most impact for saving endangered species?

MEASURING LEARNING

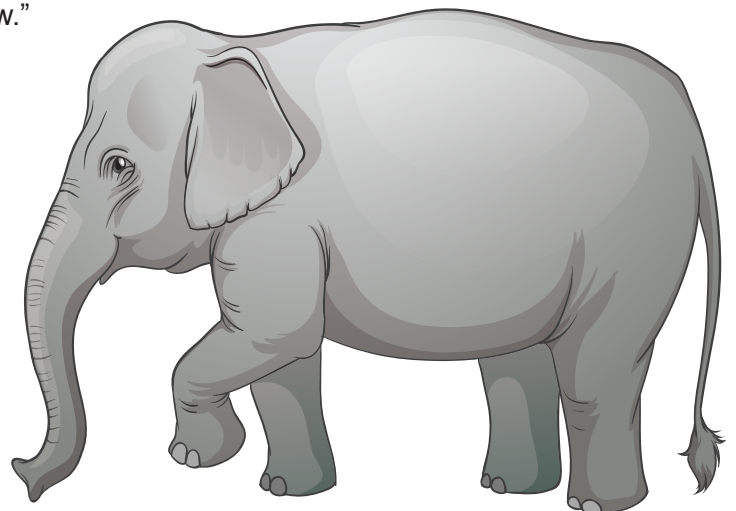
Review students’ research for organization and accuracy, then use the provided rubric to evaluate students’ posters and writings.

FOLLOW-UP ACTIVITIES

1. Overlay the endangered species information from the Arkive website into Google Earth. This will allow you to take a virtual “field trip” with your students to the homes of a number of endangered species. To do this, download Google Earth and then click on “Layers.” In the “Google Earth Gallery” search for “Arkive” and then click “View.”
2. Host an Endangered Species Night at your school. Students can display their projects and teach visitors about the importance of protecting their species.

Data Source: The Center for Biological Diversity.

Adapted, with permission, from Sheila B. Jones, Environmental Education Specialist, Wake Soil and Water Conservation District, Raleigh, NC as printed in The Conservation Catalyst Newsletter, 1994.



WANTED



~~**DEAD OR ALIVE**~~

**WANTED ALIVE
PROJECT RUBRIC**

	Beginning 1	Developing 2	Mastered 3	Score
Information and Accuracy	Some of the information is missing or is incorrect.	All the information is included but is lacking detail.	All information is detailed and is accurate. Student offered several ways to protect their species.	
Poster	Poster doesn't include any details.	Poster illustrates only a few details of the species and the habitat.	Poster has visual appeal, is detailed, and shows the species' habitat in detail.	
Organization and Style	The information is not organized and is hard to understand.	There are some pieces of information out of place. The call for species' protection is not strong.	Writing is well organized and advocates for the species' protection.	