

Constructing a Timeline

You have begun working as an Editorial Assistant at a wildlife magazine in the Editorial Department. The editor just received this letter from a biologist.

Endangered Wildlife Magazine
350 Ecology Way
Hometown, Your State 12345-6789

Dear Editor:

Declining levels of biodiversity is a serious ecological issue that concerns us all. But it is time to face the fact that captive breeding programs are an ineffective way of protecting endangered species. The inbreeding that occurs in small populations simply reduces genetic diversity still further.

Even when the breeding program is moderately successful, the animals experience high mortality rates when reintroduced back into the wild. Sometimes they even spread diseases through the wild population that lacks resistance to these diseases. This further devastates species. Funds that are spent on these programs would be better spent on protecting habitats, preventing poaching on existing preserves, and educating the public to value and protect wildlife.

Sincerely

Professor Judith Samson, Developmental Biology

The Editor does not have time to respond, but would like to include the letter in the next issue. Your assignment is to research the topic and help draft an article for *Endangered Wildlife*. Work alone or in a small group to gather information about captive breeding programs. To organize the information, draw timelines on breeding and recovery programs for two endangered species. You might look at any of the following species for this research: Arabian oryx, California condor, Florida panther, sea otters, swift fox, trumpeter swan, and red or gray wolves.

OBJECTIVES

Organize data about the selected species.

Summarize information for a timeline.

Compare and **evaluate** captive breeding programs.

MATERIALS

- books, journals, and magazines with conservation or environmental themes
- glue sticks
- paper or notebook
- pen or pencil
- poster board
- scissors or Exacto knife
- standard ruler



Constructing a Timeline *continued*

Procedure

1. Your first task is to select a species to investigate. Most captive breeding programs in zoos focus on large mammals, but do not overlook programs focusing on reptiles, birds, invertebrates (e.g., butterflies), marine and smaller mammals for consideration. Select any of the listed species or choose any other species that interests you. Record the species name.

2. Use the Research Summary Form found on the next page to keep track of the sources you use and to evaluate their reliability. You may use books, articles or computer Web sites.

3. Try to find out when the species was first identified, its original habitat range, and estimates of its original population size. List this information below.

4. Gather information about human or environmental threats to the species' survival and when the species was formally added to the endangered or threatened species list. Record your findings.

5. Look for dates and any available numbers on the growth of the captive population over time. Record what you find.

6. Find out what you can about the success or failure of any reintroduction programs associated with the species and related dates. List any organizations, zoological gardens, or foundations and when they became involved in breeding or recovery efforts.

Constructing a Timeline *continued*

RESEARCH SUMMARY FORM	
BOOKS	INTERNET
Title:	Web site:
Author:	Organization:
Publisher/Distributor:	Summary:
Date:	
Type of source:	
Main points:	Web site:
	Organization:
	Summary:
Title:	
Author:	
Publisher/Distributor:	Web site:
Date:	Organization:
Type of source:	Summary:
Main points:	
MAGAZINES	INTERVIEW
Article:	Person interviewed:
Summary:	Organization:
Article:	Questions asked:
Summary:	

Constructing a Timeline *continued*

Analysis

- 1. Describing Events** Species 1: Summarize the main events you want to include in the first timeline.

- 2. Describing Events** Species 2: Summarize the main events you want to include in the second timeline.

- 3. Organizing Data** Put the events for the first species in the format you plan to use for the related timeline. Then transfer your work to a sheet of poster board. Include a title, centerline from which information branches, and range of dates. You may add pictures.

- 4. Organizing Data** Put the events for the second species in the format you plan to use for the related timeline. Then transfer your work to a sheet of poster board. Organize the chart as in Step 3.

Constructing a Timeline *continued*

Conclusions

5. Making Comparisons Examine the two timelines that you constructed.
Compare the successes and failures of the two captive breeding programs.

6. Evaluating Write a brief reply (one paragraph) to the biologist's letter in which you take a position on whether captive breeding programs are an effective method of rescuing endangered species.
