

FACTivity



Time Needed

One class period

Materials (for each student or group of students)

- Pencils
- Highlighters/colored pencils
- A copy of the map for each student (see map on page 30)
- Calculator

In this FACTivity, you will become a land manager for a National Forest. You will need to decide on the best barrier options to protect quaking aspen forests.

Methods

You are a public land manager of a National Forest that just had a wildland fire. The National Forest has numerous quaking aspen forests and many ungulates (figure 13). Some of the forest is healthy, but some of the forest is in danger from the increasing numbers of ungulates.

Use the legend on the map to locate the areas with quaking aspen forests and the areas with ungulates.

Use the map to identify the quaking aspen forests that are most at risk from ungulates. Which quaking aspen forest is most at risk? Which quaking aspen forest is the least at risk? Why?

Your goal is to protect these quaking aspen forests. The table on the next page shows your options for barriers to protect the three quaking aspen forests from ungulates (table 2).

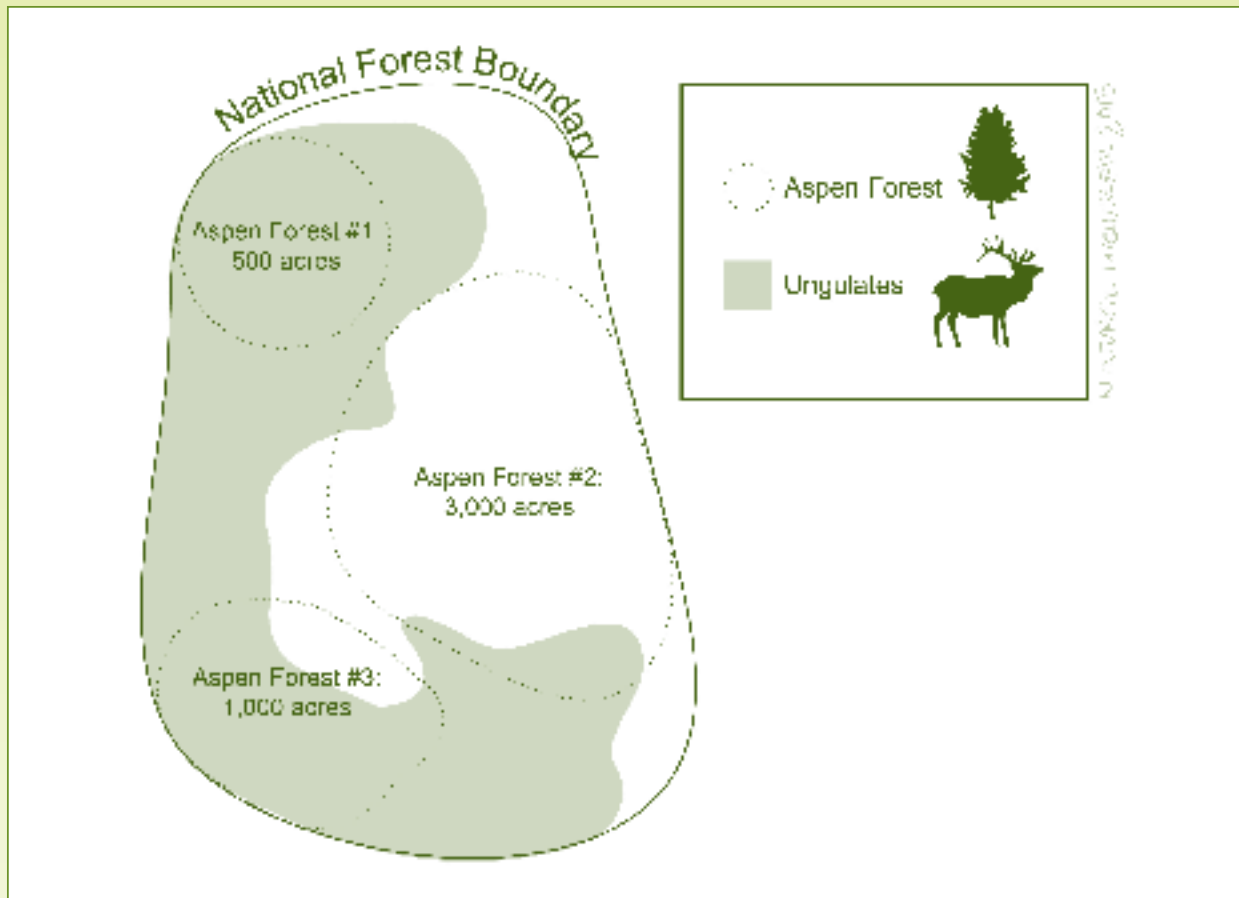


Figure 13. The National Forest with quaking aspen forests and ungulates.
 Illustration by Stephanie Pfeiffer.

Table 2. Barrier technique effectiveness and costs compared.

| Barrier technique | Effectiveness | Cost (dollars per acre) |
|--------------------|---------------|-------------------------|
| Wildlife enclosure | High | \$6,500 |
| Livestock fence | Medium | \$1,400 |
| Slash treatment | Medium | \$200 |
| Hinge treatment | Medium - High | \$200 |

You have been given \$500,000 to protect as much quaking aspen forest as possible from ungulate browsing. You are allowed to use multiple types of barriers if that helps you protect the quaking aspen and you have enough money.

Work by yourself or with a partner to find the best barriers to help the quaking aspen forests that fit your budget. The costs of each barrier, shown in dollars per acre, are in table 2. The size of each quaking aspen forest is located on the map on page 30.

Compare your plan with others:

Did you use \$500,000 or less?

Which barrier(s) did you use? Where did you use them? Why?

How are the plans of your classmates similar or different from your own?

Natural Inquirer Connections

You may want to reference this *Natural Inquirer* article for additional information and FACTivities:

- For more information on aspen trees, read “The Decline of the Quaking Aspen” in the *Natural Inquirer* December 1999 edition.

This article, along with others, can be found at:
<http://www.naturalinquirer.org/all-issues.html>.



FACTivity 2

Examine the two images of aspen bark. One is a photo and the other is a painting. Both images present the same subject. Compare and contrast these two images. What are their similarities and differences? Which do you like best and why?



Photo by Babs McDonald, used with permission.



Painting by Babs McDonald, used with permission.



If you are a trained Project Learning Tree educator, you may use “Forest Consequences,” “400 Acre Wood,” “How Big Is Your Tree?,” or “Living With Fire” as additional resources.

Web Resources



USDA Forest Service – Fading Gold: The Decline of Aspen in the West

<https://www.fs.fed.us/wildflowers/beauty/aspen/>

National Forest Foundation: Tree Profile

<https://www.nationalforests.org/blog/tree-profile-aspen-so-much-more-than-a-tree>

U.S. Department of the Interior, National Park Service – Quaking Aspen

<https://www.nps.gov/brca/learn/nature/quakingaspen.htm>

Colorado State Forest Service – Quaking Aspen

<https://csfs.colostate.edu/colorado-forests/forest-types/aspen/>