

HORSE POWER

EDUCATOR GUIDE

ACTIVITY: Ecosystem Engineers



ACTIVITY 2: Ecosystem Engineers

From the Film:

In the film, we see how wild horses, like Rudy's family, do their part to keep the grasslands in balance, along with the rest of the wildlife in their area. We also see them spending time by a critical water hole. This activity will help deepen student's understanding of the role of wild horses in their ecosystem.

Activity Overview:

Students will learn key facts about wild horses, their names, history, behavior, and habitat, and demonstrate what they know through a fun, fast-paced trivia challenge.

MATERIALS

- Printed copies of the Wild Horses: Grazing & Water Web Map worksheet (one per student or group)
- Pencils, colored pencils, or markers
- Optional: projector and short video on ecosystem engineers showing wild horses grazing or digging water holes

EDUCATOR PREP

- Print out copies of the Grazing & Water Web Map worksheet.
- Gather pencils or markers



EDUCATOR GUIDE

1) ACTIVATE PRIOR KNOWLEDGE:

Begin by discussing what students remember about how wild horses and burros behave in the wild. Ask:

- How might grazing affect plants?
- What happens when animals dig for water?
- How might other species benefit from these actions?

2) OPTIONAL VIDEO: ECOSYSTEM ENGINEERS - WILD BURRO RESEARCH

3) KEY ECOLOGICAL ROLES OF WILD HORSES:

- Grazing: Keeps grasslands healthy by trimming old growth and encouraging new shoots. Their manure returns nutrients to the soil and helps spread seeds.
- Seed Dispersal: Seeds pass through their digestive systems or stick to their coats, helping plants spread and grow in new areas.
- Water Holes: In dry environments, horses dig into sandy creek beds to reach groundwater. These small depressions collect rainwater and become critical water sources for many species.
- Habitat Creation: The water and new vegetation attract insects, birds, pollinators, and mammals, creating a web of life around the horses' actions.

4) MAP ACTIVITY:

- Pass out the Grazing & Water Web Map worksheet. Explain that the base shows a partially drawn rangeland landscape
- Students will draw wild horses on the map and label areas where grazing occurs.
- Next, they'll add water holes where horses might dig, and around each one, draw or label plants and animals that would benefit (e.g., birds, bees, deer, rabbits, new vegetation).
- Finally, students will draw arrows or lines showing how one action leads to another (e.g., Horse digs water hole → water collects → plants grow → insects arrive → birds nest).

5) CLASS DISCUSSION:

- Pass out the Grazing & Water Web Map worksheet. Explain that the base shows a partially drawn rangeland landscape
- Students will draw wild horses on the map and label areas where grazing occurs.
- Next, they'll add water holes where horses might dig, and around each one, draw or label plants and animals that would benefit (e.g., birds, bees, deer, rabbits, new vegetation).
- Finally, students will draw arrows or lines showing how one action leads to another (e.g., Horse digs water hole → water collects → plants grow → insects arrive → birds nest).

REFLECTION QUESTIONS

- What did you learn that surprised you about wild horses' impact on their environment?
- Why is grazing important for plant and soil health?
- How does a single water hole support so many different species?
- How do wild horses help build biodiversity on public lands?

Wild Horses: Grazing & Water Web Map

Activity 2: Ecosystem Engineers

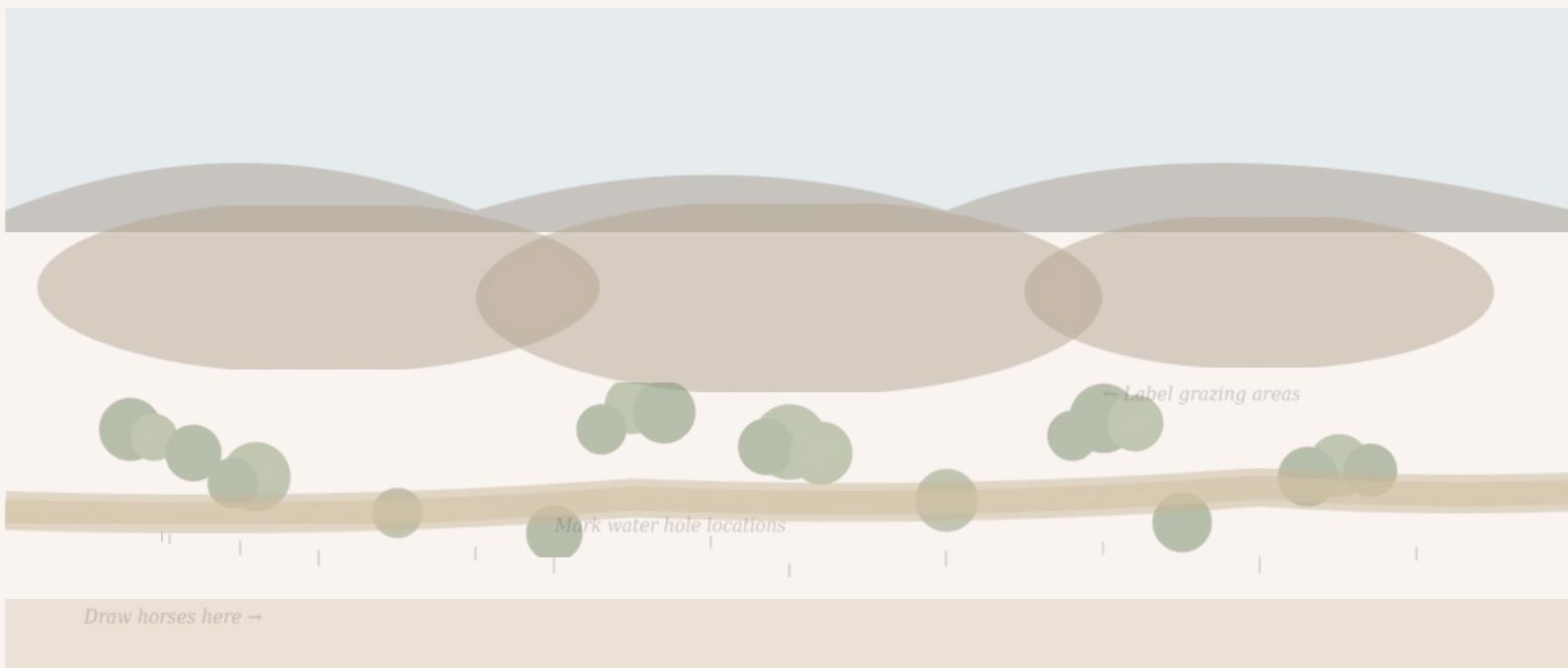
Instructions:

1. Draw wild horses on the map and label areas where grazing occurs.

Add water holes where horses might dig, and around each one, draw or label plants and animals that would benefit (e.g., birds, bees, deer, rabbits, new vegetation).

3. Draw arrows or lines showing how one action leads to another (e.g., Horse digs water hole → water collects → plants grow → insects arrive → birds nest).

4. Use colored pencils or markers to make your ecosystem web come alive!



Remember to Include:

Wild horses (draw and label)

Water holes where horses dig New vegetation growing near water

Insects (bees, butterflies)

Birds that use the area Other wildlife (deer, rabbits, etc.)

→ Arrows showing connections (who benefits from what?)