

“Safety in Numbers”: A Pre or Post Activity for Home on the Range (Grade 3)

Description: Students will engage in activities that explore why some species live together in herds.

Focus question: Is there “safety in numbers”?

Standard covered in this activity:

(Next Generation Science Standard)

3-LS2-1 Construct an argument that some animals form groups that help animals survive.

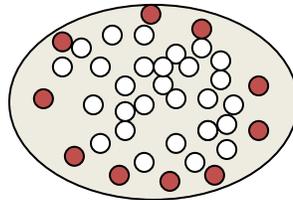
Activity #1 -Bunching Beans

Materials Needed

- Plastic Zip Lock bag of approximately 100 dried navy beans
- 10 dried dark red kidney beans
- 3 x 3 ft. sheet of newsprint paper (or other paper that is the color of the navy beans)

Procedure:

- Have students number off by twos, so that they can pair up for this activity.
- Have students spread out the paper on the floor, and student #1 spreads out the navy beans and the 10 dark red beans on the perimeter of the navy beans on the paper as shown:



Questions:

1. These white beans represent a herd of animals, while the red beans represent the cowboys keeping the animals together. Animals that want to eat the cattle, such as mountain lions, are going to want to grab the closest animal and run away from the herd with its prize. If the cattle get attacked, which animals are most likely to get killed, the ones on the outside of the herd or the ones in the middle? (*Answer: The ones on the outside*)
2. The job of the cowboy is to keep the herd together. This way, no one animal sticks out as different. The animals that stick out as different are seen as targets for a kill. Things that make them stick out might be one that has an injury and is limping, an old, tired cow, or a very young calf, that can't keep up with the herd. Let the red beans represent the old, tired or injured animals. Which ones would you pick on if you were the hunter? (*Answer: The red ones*)

Activity #2- Bunching Cows- a Role Playing Game

Materials Needed:

- 5 red strips of material(or any color, as long as it stands out from the background)
- 25 students

Procedure:

- Have students number off.
- Numbers 1, 5, 10, and 15 are now the “injured” cattle. They place the strip of material (flag) into their pocket so that $\frac{1}{2}$ of it hangs out.
- Numbers 2, 4, 6, & 8 are now the mountain lions, who will try to grab the material out of the pocket of the injured cattle.
- The rest of the students (12) are healthy herd animals and will try to put themselves in front of the injured cattle to protect them, keeping them in the middle of the herd.

Questions/Discussion:

- When was it easiest to defend the injured cattle? (*Answer: when the injured ones were in the middle. This is why some animals with limited defense mechanisms chose to live in herds.*)
- Look back at the drawing with the red and white beans. Pretend that the white beans are all cattle, and that the red beans are the cowboys or vaqueros. What is the job of the cowboy or vaquero? (*Answer: Keep the herd together.*)

Extension: Discussion could become a team building exercise, focusing on qualities of individuals, and how they enable the group to function better.