

# Create a Buffalo Game

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**SUMMARY:** Students create games that help other students understand buffalo behavior and ecology.

**GRADE LEVEL:** 5-8

**TIME** ⌚: 2-3 periods, depending on the size of your class and if the students present their games to other classes.

**SUBJECTS:** Biology, Ecology, Language Arts, Art, Drama

**MATERIALS:**

- ◆ hide with fur
- ◆ tail
- ◆ bladder
- ◆ teeth
- ◆ information on box items (pp. 50-52)
- ◆ photographs of buffalo
- ◆ supplies teams need to construct and/or conduct their games



**LEARNING OBJECTIVE:**

- ✓ Describe typical behavior of a buffalo, and reasons for that behavior.
- ✓ Understand how buffalo interact with their habitat and other animals.

**BACKGROUND:**

Buffalo are great subjects for a variety of games—quiz, board, card, action—because they are both predictable *and* surprising.

Their daily behavior is a simple routine of eating, chewing, resting, and walking. Cows take turns “baby-sitting” calves so the other females can graze without looking out for their young. Calves box and jump and leap and spin. Young bulls butt heads, playing and learning to fight. An especially frisky bull might scamper through the herd as if asking the others to quit eating and play. The adults keep on grazing and chewing their cud—unless trouble appears.

If an adult buffalo smells, hears, or sees a predator, it might grunt as if to gather other buffalo around. Then they approach the intruder, check it out, maybe bluff charge, or maybe truly charge. They keep watch until the threatening animal leaves.

Afterward, the herd resumes grazing. They take a bite then take a step, in a steady motion across their habitat. They head for the same watering holes each season; they move up the same hills each summer to escape biting insects. In the winter, they return to the same valleys they used the year before.

In their daily and seasonal movements, buffalo follow trails used by generations of buffalo before them. Sometimes, though, events occur that disrupt this pattern. An example of such an event: Hundreds of animals can die while crossing a river during a flood. The older animals, who knew the trails, may have drowned. Survivors have to find food, water, and shelter on their own.

Each day of their lives, buffalo interact with other animals. A fly lands; they flick their tails to shoo it away. A magpie lands; they stand still while it forages for pesky insects and mites. Cowbirds flutter in and out of buffalo legs, snatching insects stirred up from the grass as the buffalo grazes.

Buffalo can often be found near prairie dog towns. There, the plants tend to be more nutritious—the soil is stirred up by the little animals' digging, and it is enriched by their droppings. As buffalo graze, they crop the plants close to the ground. The shorter plants mean that prairie dogs can see their predators more easily.

To create a game about buffalo, think about the patterns of a buffalo's life and how it interacts with other animals. These inquiries, together with the information provided in the main background section, the trunk, and through additional research, will lead to accurate and interesting games.

### **PREPARATION:**

The final step of this activity is for your students to present their games to another class. Decide ahead of time what grade level they will be working with, and discuss the activity with that grade's teacher. Be prepared to offer advice to your students about what level of information their "players" will be able to understand and what kinds of games might work best for the age group.

### **PROCEDURE:**

1. You may wish to begin by reading the background above to your students, or provide them with copies to refer to as they develop their games.
2. Using photographs of buffalo and the items from the trunk, talk about the adaptations and characteristics of buffalo. Show the teeth and discuss what buffalo eat. Pass around the tail and talk about how a buffalo might use it. Let the students touch the fur and bend the hide; discuss why buffalo have hair and thick skin, and encourage the students to wonder how buffalo remove winter hair and scratch their itches.
3. Divide the students into groups of four. Assign each group a topic to research:
  - ◇ individual buffalo behavior (eating, scratching, etc.)
  - ◇ group buffalo behavior (how they communicate and interact)
  - ◇ where buffalo live
  - ◇ other animals that buffalo interact withExplain that all members of each group must become "experts" on their assigned topic.
4. After the groups have conducted their research, have each group present their information to the class. Allow 10-15 minutes per group.
5. Divide the students into new groups. Each group should have at least one "expert" from each of the topics; group size will vary with class size.

6. Tell each group that they will be creating a game for other students about buffalo. They can choose what kind of game to create (board, quiz, active, etc.), as long as it:
  - ❖ follows at least one buffalo through a “typical” day
  - ❖ includes at least two facts from each topic
  - ❖ is understandable, interesting, and fun for their players
  - ❖ can be played in half of a class period
7. Test the games by having each team play another team’s game.
8. Arrange for each team to present its game to at least one other group of students.

**MODIFICATIONS AND ADAPTATIONS:**

- ❖ Adjust the number of teams creating games to suit your circumstances. We suggest four groups so that the maximum knowledge and energy goes into each game but doesn’t consume an entire semester; however, you may prefer to have more or fewer groups and create more or fewer games.
- ❖ You can modify this activity for younger students by specifying what kind of game they are to create. (Be aware, though, that this could lessen creativity or focus on only one learning style or ability.)
- ❖ If you want to modify the activity for younger students while retaining their option to choose the type of game, limit the information used in the games. For example, ask the students to make a game that presents information on buffalo behavior, but leave out the instructions to include habitat and interactions with other animals. Similarly, you can ask more advanced students to concentrate on the ecology of buffalo and their environment.

**EXTENSIONS AND ASSESSMENTS: (\*\* extensions can also be used to assess the students’ mastery of the learning objectives)**

- \* Arrange for your students to present their games to younger students or peers. First have them do a short presentation on buffalo behavior, emphasizing the details needed in their game. Afterward, moderate a discussion about the effectiveness of the games.
- \* Include the games in a school field day or sponsor an after-school buffalo games session so that all the students in the school can play the games.
- \* If you would like to share your students’ games with other schools around the country, include written instructions for the games in the trunk when you return it.
- \* Instead of games, students might create a puppet show or play.
- \*\* Have students write and illustrate a fact sheet about buffalo behavior that will be used as an introduction to their games.