

Mr. Bullfrog

LESSON

GRADE LEVEL 4-7

CATEGORY Plants, Animals & Habitats

TOPIC Invasive Species

TIME

30 minutes to 1 hour

MATERIALS

none

SETTING

class, outdoors or gym (large clear space necessary)

GROUP SIZE

15 or more preferred

SKILLS

analysis, reflection, coordination, cooperation, listening, synthesizing

SUBJECTS

Science, Physical Education

KEYWORDS

Invasive species, frog, habitat, bullfrog

Overview

Students participate in a game where native frogs and bullfrogs compete for habitat components (shelter, food, and water). This game teaches students about the relationship between an animal and its habitat, and what effect introduced animals (Bullfrogs) can have on that relationship.

Objectives

Students will be able to:

- Review the essential components of habitat
- Determine how invasive species can impact an ecosystem

Background

Another problem that amphibians face is the problem of invasive species. Invasive species are animals and plants that are introduced into an area where they don't really belong. Often somebody has released these animals or plants into a new environment without knowing what big problems they might cause. Because invasive species are new to an environment they often don't have any natural enemies and can therefore grow and have many offspring until there is a great number of the new species. If this happens these new species can take up much of the habitat that other animals need by using too much of the resources and the indigenous species suffer.

Procedure

- Start by explaining that students are about to participate in an activity that emphasizes the most essential things that animals need in order to survive. Review the essential component of habitat with the students. This activity will emphasize food, water and shelter as 3 habitat components.
- 2. The students will count off into groups. Ones become frogs. Twos are food, threes are water, and fours are shelter (habitat components).
- Each group will have a gesture or symbol to identify them. Have the students come up with these gestures. E.g. frogs hop, food is a hand to the mouth, water is a hand gesture of falling rain and shelter is a roof made by hands over the head.



- The game starts with all players lined up on their respective lines about 10 to 20 metres apart, depending on availability of space. (frogs on one side; habitat components on the other side) Each line has their backs facing the other.
- The first round begins with the teacher telling all the habitat components to make their signs. Frogs must decide what habitat component they would like to retrieve (and they can't change their mind!) On count of three, students face each other and continue tohold their signs/gestures.
- 6. When the frogs see the habitat component that they need they run to it. Once an amphibian reaches a habitat component, the two of them go back to the amphibian line, since the amphibian met its need successfully it can reproduce as a result and thus we have another amphibian.
- 7. Repeat this for a few brisk rounds (3 or 4).
- 8. Then introduce 2 bullfrogs (pick two students, have them stand in another line, making a triangle). The bullfrogs will be allowed to take their habitat components first. Then the frogs can go. Any frog left without their habitat component, becomes a bullfrog. Continue a few rounds to show how bullfrogs take over native frog populations. (By a few rounds most frogs should be gone and the bullfrog population should be high).
- **9.** Between each round, point out to the students how the frog population is faring.
- 10. After the game, discuss the activity and encourage the students to talk about what they saw and experienced. Discuss invasive species.

Assessment

Have the students write a page in their science journals about what they have learned about invasive species. The journal entry could include topics such as:

- what I observed
- important words
- what I learned
- what I would like to know more about

Extensions

- Have students work in groups to come up with a "public service announcement" (ad) to make the public aware of invasive species.
- Play a modified version of "Duck-Duck-Goose", where the kids sit in a circle and they are all native frogs. The "it" is an invasive frog. The "it" chooses someone and they stand up and also get to tap people on the head and eventually everyone is standing up and has become an invasive frog. This can illustrate how invasive species can dominate and take over in a very simplistic way.

