# Oh Deer! (Modified from Project WILD)

## Prep

Review the essential components of habitat that all wildlife species need to survive: food, water, shelter, and space. Ask students if they think that all of these things are readily available at all times. What are some examples of an increase or decrease to any one of these components? Examples include drought, habitat fragmentation, invasive species, or disease. Explain to students that they will be playing a game that illustrates how wildlife populations change over time in relation to the availability of food, water, shelter, and space.

## How to

- Ask students to count off in fours. Ones will stand on one side of the playing field, and will be deer. Twos, threes, and fours will be habitat components, and will scatter on the other side of the field. Have the deer stand with their backs to the habitat.

- Explain that deer must pick a habitat component to search for – food, water, shelter, or space. Once you pick what you are looking for, you have to stick with your choice, and can't change it in the middle of the round!

- Explain that the students representing the habitat also have to pick one component to represent. Again, you can't change your habitat component once you have picked it, but you can change it in the next round if you like.

- Habitat components can be represented with the following motions.
  - ➤ Food – Pretend to eat with your hands.
  - ➤ Water – Move your arms like flowing water.
  - ➤ Shelter – Make a roof over your head with your hands.
  - ➤ Space – Spread your arms out wide.

- The goal for the deer is to make the motion of the habitat component they pick, turn around, and find someone on the habitat side making the same motion. Once they find a partner, the deer will tag them, and walk back to the deer starting area. It can be understood that the deer survived the winter and reproduced in the spring. Their habitat partner has now become a deer.

- If a deer does not find a match, they "die" and become a part of the habitat.

- Record the number of deer at the beginning of the activity and at the end of each round to create a line graph depicting the deer population. Continue the activity for 15 rounds (or as time allows).

- To make things interesting, add in some challenges:
  - Have one student act as a hunter. They can only take 2 deer per season (per round).
  - Introduce Chronic Wasting Disease (CWD) – Give a few students out in the habitat a token to represent CWD. Do not tell anyone what the tokens represent yet. If a deer partners with an infected habitat component, they also contract CWD. At the end of that round, all of the deer with CWD die and become habitat. The infection persists in the habitat, and will further infect deer in subsequent rounds. Before moving on to subsequent rounds, ask students to make a prediction about what might happen to the population as CWD continues to be present in the environment.
  - Have one deer act as a doe with twin fawns. They have to find three of their chosen habitat component to be able to support themselves and their fawns
  - Have one deer pretend they have an injury (blindfold, hop on one leg, etc.) and try to find their habitat component.

- At the end of the game, work together to draw the graph on the board, and ask students to explain what they notice about it. Why did the deer population rise and fall? Can they figure out when CWD was introduced? Did the hunter have a huge effect on the deer population? Explain to the students that the highest peak on the graph is the population's carrying capacity, and that it is our job to balance wildlife populations so that they don't rise and crash too dramatically. Balance is key!