'Oh Deer' Game

What does a species need in its habitat to survive? Ask the students to choose three things they think are important for the survival of a species. A habitat is where an organism lives because that is where the species will find, food, water and shelter, the three things it needs to survive. Are these the same three aspects that the students came up with?

Materials

- Nerf ball or rolled up socks
- Coloured pinnies
- White boards and markers

Activity

1. To play 'Oh Deer', you'll need to split the class into four equal sized groups. The first group will be the native species and can be any species that you would like to use for the game. The three other groups will be the resources in the habitat that the species needs to survive; food, water and shelter. Each resource has an action associate with it, as summarized below:
    - Native species
    - Food: hands on the stomach
    - Water: hands on the mouth
    - Shelter: hands over the head (like a roof)
2. At the beginning of each round, count the number of native species as well as the total number of resources, and record your results in a table similar to the one below:

	# of Native Species	# of Resources
Year 1		

3. Have the native species line up on one side of the playing area, with their backs to the other students who are the resources on the other side. Before turning around, the native species have to decide what resource (food, water, shelter) they need to survive, and the other students must decide what resource they want to be. Similar to a game of rock-paper-scissors, students can't change the resource they choose once they've decided. Have students perform their action to indicate they know their resource.
4. Once each student has chosen a resource, the native species turn around and walk towards the students in the habitat to find someone with a matching resource (as indicated by the action).
5. If the native species finds a matching resource, they bring that student to the other side where they become a native species.
6. If the native species does not find a matching resource, they stay on the habitat side and become a resource.

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7. Repeat the game for several rounds (7 to 10-year cycle). Use the table to keep track of the numbers at the beginning of each round.
8. You can repeat the game with different scenarios which demonstrate other properties of an ecosystem.

Scenario 1

- Choose one student to be the predator and give them a nerf ball or ball of socks. They can throw this at native species to catch them. When a natural species is caught by the predator, they become part of the habitat. All other players continue as before. Use the table below to keep track of the number of native species, resources and predators at the beginning of each round. You can introduce more or less predators to change the scenario.

	# of Native Species	**# of Resources**	**# of Predators**
Year 1			

Scenario 2

- Choose a few students to be a non-native species by giving them different needs than what are available in the habitat and have them represent this with a different action. For example, a non-native species can put their hands on their hips to represent food. All other players continue as before. Use the table below to keep track of the number of native species, resources and non-native species at the beginning of each round. You can introduce more or less predators to change the scenario.

	# of Native Species	**# of Resources**	**# of Non-Native Species**
Year 1			

Scenario 3

- Choose a student to be an evasive species. The evasive species need the same resources as the native species but they get to choose before the native species and take two resources at a time. If you play with a predator, the evasive species can't be caught. All other players continue as before. Play this scenario until you run out of native species. Use the table below to keep track of the number of native species, resources, and evasive species at the beginning of each round. You can introduce more or less evasive species to change the scenario.

	# of Native Species	# of Resources	# of Evasive Species
Year 1			

Note

1. Use pinnies to help distinguish between native species, predators or evasive species.
2. Be sure to keep track of the population of each species at the beginning of each round. You can use the data collected from the different scenarios to create a graph representing the populations of each species in relation to the number or resources over time.
3. You can also add other scenarios such as a flood or a drought (by removing shelter or food from the habitat respectively)
4. Ask the students what happened to the native population in each scenario. Would humans have an impact on the population of a native species? How? Should we intervene to help native species? Are invasive species having a negative impact or do they help improve the biodiversity?

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