

# Winter Wildlife Game

## Outdoor Activity

### Curriculum: Science, Physical and Outdoor Education

#### Introduction:

The Winter Wildlife Game is a predator-prey game in which adaptations to the cold and snow conditions are emphasized. Participants become predators and prey. The predators (carnivores) try to catch the prey, but must also avoid being caught by other predators. The prey (herbivores) search for food cards which they can find at food stations. These food cards can also be lost if they are caught by predators.

Both predators and prey must endure a series of winter conditions that may result in their gaining or losing food cards. The introduction of humans into the game demonstrates the positive or negative effect that humans can have on an ecosystem during critical periods of late winter and early spring.

#### Roles:

The chart below indicates how to assign roles to the students, depending upon the size of the group. Once roles are determined, game materials can be prepared.

NUMBER OF FOOD CARDS REQUIRED BY EACH PLAYER

Players	Status	Number of Students in Class								
		17	25	30	35	40	45	50	55	60
Hare	Herbivore	4	6	7	8	9	10	11	11	12
Vole	Herbivore	5	8	9	11	13	14	15	17	18
Grouse	Herbivore	4	6	7	8	8	9	10	11	12
Coyote	Carnivore	2	2	3	4	5	6	7	8	9
Lynx	Carnivore	1	2	2	2	2	3	4	4	5
Owl	Carnivore	1	1	2	2	3	3	3	4	4

*For example, if you have a class of 30 students, you would have: 7 Hares, 9 Voles, 7 Grouse, 3 Coyotes, 1 Lynx and 2 Owls.*

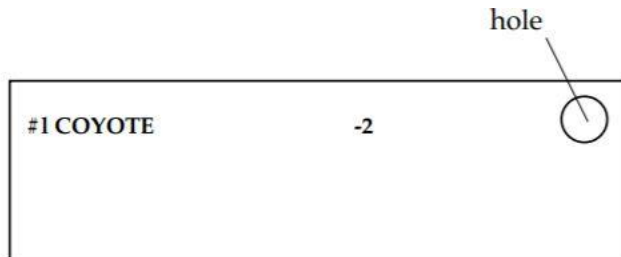
## Material:

- **Predator and Prey Materials:** Each Herbivore and Carnivore will receive a player kit which includes one small plastic bag containing the following:
  - 1 Animal Description Card with animal picture (see [appendix](#))
  - Prey: 3 Food Cards (5 cm x 5 cm squares of green poster board)
  - Predator: 1 Food Card (5 cm x 5 cm square of green poster board)
  - 4 Winter Condition Cards for that animal (see [appendix](#))
  - Prey: 1 green head / arm band for identification
  - Predator: 1 red head / arm band for identification
  - 1 shower curtain ring (or string) to hold the cards together.
  
- **General Game Materials:**
  - copy of Winter Wildlife Game Rules (see [appendix](#))
  - copy of Background Information for Winter Condition Cards (see [appendix](#))
  - brightly coloured flagging tape for marking boundaries (optional)
  - 1 hat to identify the 'human' (optional)
  - 10 food station buckets (plastic bowls or milk containers)
  - 10 sets of Green Food Cards (FC), one set per food station.

The number of food cards in each set should be equal to the number of herbivores playing the game plus 3-4 extra cards. (For example, if there are 8 herbivores in the game, then one set of food cards should contain  $8 + 3 = 11$  cards and the total number of FC would be  $11 \times 10$  food station buckets = 110 food cards. Label each set of food cards with the number of the bucket it belongs in (1 to 10). The FC's are numbered so that the students will only take one card per bucket.

## Preparation:

1. Make the Animal Description Cards (see [appendix](#)). The information about the animal should be on one side of the card and the picture of the animal should be on the other. Laminate all the cards.
2. Make the Winter Conditions Cards (see [appendix](#)). These can be made either by gluing the sheet to poster board and then cutting along the dotted line, or by simply laminating the sheet and then cutting along the dotted line. Note: Make copies of the cards for your whole class, using the table above to determine the number of each species needed. Much of the preparation for the game can be done in-class by the students themselves.
3. Punch a hole in the upper right-hand corner of each of the Winter Condition Cards and Animal Description Cards (see illustration) and tie all of the cards together with a shower curtain ring or string.



4. The game area should be at least 100 m x 100 m and ideally be wooded so that the players have a place to hide and must search for the feeding stations. If the location has few trees or if the players are older, double the size of the playing area. Consider marking the area with flagging tape and place the food stations randomly throughout the area.
6. Conduct the pre-game discussion (you might wish to do this part indoors).

## Pre-Game Discussion:

1. Explain to the students that the Winter Wildlife Game will show how different animals survive through the winter season. Each student will assume the role of an assigned animal and attempt to survive the winter in that role.
2. Choose the predators. You can control the dynamics of the game by assigning the role of carnivores and omnivores to faster or slower students; alternatively, you can select the students at random. Point out that the predators include the coyote, the lynx and the Great Horned owl. Pass out the appropriate player kits.

3. All remaining players are herbivores. These animals are the prey and include the snowshoe hare, vole, and ruffed grouse. Assign a role to each student.
4. The game can be divided into four rounds of equal lengths of time. One teacher or parent will play the role of the human in the fourth round of the game. When the time comes, hand out the hat to represent this player's role.
5. Before opening the player kits, read the **Winter Wildlife Game Rules** ([appendix](#)) to the students so that they understand the game and how it is played. The following notes serve to explain some of the rules:
  - a. You may wish to show the students one of the food stations, so students will know what they look like.
  - b. The food cards in each bucket will be number-coded; stress that each food station contains only enough Food Cards to provide 1 for each animal.
  - c. Collected food cards are to be stored on the player's string or ring until the end of each round.
  - d. When a new round begins and the winter condition cards are first read you may choose to have the students assemble around you to discuss the winter condition and its effect on them.
  - e. If the score on a winter condition card is a -1 or a -2, the weather described is difficult for that species. The player with a negative score must remove the number of FC's indicated by the score from those on his string or ring. The FC's are then placed in their plastic bag. In subsequent rounds, if the score reads +1 or +2, the animal is able to withstand that winter condition. If FC's are in the player's bag, one or two FC's can then be removed from the bag and put back on their string or ring for play during the remaining rounds. Note: You may wish to post these rules in the playing area as well.
6. Distribute and review the player kits, which contain each of the following:
  - a. Cloth Head Bands: to be worn around the player's head (can also be worn as arm bands—but halfway through this game students tend to warm up and take their jackets off). The herbivores' bands are green and the carnivores' are red.
  - b. Animal Description Cards: students should read their identification card to understand those characteristics that will help them to survive the winter. Quiz each group by reviewing their animal's distinctive traits, habits and adaptations to winter.

