



**BALL STATE**  
UNIVERSITY



# Survive the Winter



Educational Board Game

Ball State University

Field Station & Environmental Education Center

# Educational Standards:

## Indiana Science Standards:

- 4.LS.2 Use evidence to support the explanation that a change in the environment may result in a plant or animal will survive and reproduce, move to a new location, or die.
- 5.LS.1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
- 5.LS.2 Observe and classify common Indiana organisms as producers, consumers, decomposers, or predator and prey based on their relationships and interactions with other organisms in their ecosystem.
- 6.LS.4 Investigate and use data to explain how changes in biotic and abiotic components in a given habitat can be beneficial or detrimental to native plants and animals.

## Next Generation Science Standards:

- 5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
- MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
- MS-LS1-4. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

# Alternate Instructions:

- Explore the optional rules below to increase difficulty of play, to simulate different winter conditions, habitat quality, or other factors.
  - Decrease the amount of food each player starts with by increments of five (5).
  - Remove snowflake instruction from gameplay.
  - Remove higher quantity positive food cards from gameplay.
- Other rule ideas? Let us know!



# After you play:

- **Post-game Discussion Questions:**

- What animals survived the winter? Did any animals not survive?
- What was each species method of survival: hibernating, migrating, or toughing it out? How could you tell?
- Is your animal a carnivore or herbivore? Could your diet influence your survival method? How?
- If you had 4 players, did the players with the same species both survive the winter? If not, why didn't they?
- You started off with a specific amount of food based on your species' method of survival. Imagine if your animal could not find the food sources it needed in its habitat to survive the winter. What could your animal do instead to survive?
- What must animals that hibernate do so that they can survive the winter? Animals that migrate? Animals that tough it out?

# Before you play:

- **Please read all directions before playing**
- **Number of players:** 3 – 4
- **Suggested age of players:** 10 – 13 years old
- **Time to play:** 15 – 20 minutes
- **Introduction:** It is the beginning of winter, and your goal is to survive until spring. Work your way around the board to determine your method of survival, and try to survive four months of surprises and hardships until the first signs of spring.
- **Goal:** survive four months of winter and make it to spring
- **What you need to play:**
  - Game board
  - Player pieces (4)
  - Decks of cards (bat, bird, deer)
  - One (1) die
  - Food chips
  - Mother Nature box
  - Compost box
- **Pre-game Questions:**
  - Do we see the same animals in winter that we see in summer?
  - Where do the animals that we do not see in winter go?
  - What are some examples of ways that animals can survive throughout the winter?
  - What can prevent an animal from surviving the winter?

# Instructions:

- **Getting started:**

- Each player picks one animal to play as: bat, bird, or deer.
- Note: each game has 2 of one type of animal, to allow for observation of stochasticity in nature. The duplicate piece should be used if there is a 4<sup>th</sup> player.
- Distribute food chips to each player:
  - Bat = 45 chips
  - Bird = 35 chips
  - Deer = 25 chips
- Remaining chips go into the Mother Nature Box.
- Place the Mother Nature Box and Compost Box to side of board.
- Place each deck of cards on their respective spot on the board.

- **Game Play:**

- All players begin play on the 'START' tile.
- To determine who starts the game, each player rolls the die. Highest number starts, with game continuing clockwise.
- Roll the die to determine the number of spaces to move. Before moving, turn your food chips in to the Compost Box.

# Instructions:

- **Game Play (continued):**

- If you land on a tile with your species on it, draw a card from your species deck. Follow the instructions on the card.
  - If you discover food, collect the appropriate number of food chips from Mother Nature.
  - If you lose food, discard the appropriate number of chips to the Compost Box.
- If you land on a tile with a different species on it, your turn is complete.
- If you land on a snowflake, you do not have to turn in food chips on your next turn.
- If you do not have enough food chips to move the number you rolled, move the number of chips you have left and complete your turn.
  - If you land on your species tile and find food, you are still in the game.
  - If you land on a different species tile and are now out of food, you have died and did not make it to spring.
- Continue play until all players have either made it to spring or have died.
- As a group, answer the discussion questions on the following pages.