



Chimney Swift Adventure Game!

Adapted from New Jersey Audubon Society's "Migration Game", www.njaudubon.org

Grade Level(s): Grades 3-5

Estimated Duration: 60 minutes

Description: Students will play a game in which they pretend to be migrating Chimney Swifts. Through this imaginative role-play, they will learn some of the experiences that Chimney Swifts encounter and how events before migration may affect their success. This activity requires a space large enough for students to move around such as a wide hallway, gym, multipurpose room or outdoors. However, if a large space is unavailable, this game can be adapted to be played as a board game as well.

Goals: To gain a sense of the life of a Chimney Swift and to aid in the understanding of their arduous journey through life, including migration and the obstacles they will encounter along the way. To understand the human impact on the lives of migrating Chimney Swifts and learn how people can make positive changes to help migrating Chimney Swifts.

Objectives: The students will:

- Understand the natural history of Chimney Swifts
- Understand the basic reasons for bird migration
- Understand that birds encounter obstacles throughout their lives, especially during their migratory journey: both natural and those created by humans
- Develop strategies to help migratory birds, specific to Chimney Swifts

Wisconsin State Performance Standards:

Science, Life and Environmental, Standards F Grade 4

THE CHARACTERISTICS OF ORGANISMS

F.4.1 Discover how each organism meets its basic needs for water, nutrients, protection, and energy* in order to survive

F.4.2 Investigate how organisms, especially plants, respond to both internal cues (the need for water) and external cues (changes in the environment)

LIFE CYCLES OF ORGANISMS

F.4.3 Illustrate the different ways that organisms grow through life stages and survive to produce new members of their type

ORGANISMS AND THEIR ENVIRONMENT

F.4.4 Using the science themes, develop explanations for the connections among living and non-living things in various environments

Materials:

- 24 Migration Cards (text attached)
- 24 Life Cards (text attached)
- 16 Wild Cards (text attached)
- 64, 3"X5" index cards
- Glue stick, tape or stapler
- 26 clip-on clothespins**
- Felt-tipped marker
- Scissors
- 32 Feathers (images attached)

**clothespins are optional – their purpose is to prevent cards from blowing away, especially if played outside. Small rocks or other weighted objects can be used instead.

Teacher Preparation:

1. Prepare the Migration Cards. Print out the text for the cards (attached) and cut and attach each to its own index card. Write the card number (1-24) on the other side of the index card with marker.
2. Clip a clothespin to each card to prevent the cards from blowing away. These cards will be laid out to form the Migration Pathway!
3. Prepare the Wild Cards. Print out the text for the cards and cut and attach each to its own index card. Write "Wild" on the back of each card with a felt-tipped marker. Clip the pile of Wild Cards together with a clothespin.
4. Prepare the Life Cards. Print out the text for the cards and cut and attach each to its own index card. Write "Life" on the back of each card with a felt-tipped marker. Clip the pile of Life Cards together with a clothespin.
5. Cut out the Feathers on the dotted lines. The instructor should hold on to these and hand them out as instructed by the Life Cards during the game.
6. Find an appropriate location to play the game either indoors or outdoors. You will need approximately 100 feet of clear pathway for the students to follow with separate starting and ending points. The path does not have to be linear.
7. Prepare the Migration Pathway (just before the game is about to begin). Place the Migration Cards face-down in numbered, sequential order along the pathway, approximately four feet apart.
8. Create a Wild Card station by setting the Wild Card pile off to the side of the pathway.
9. Create a Life Card station by setting the Life Card pile off to the side of the pathway.

Motivational Activity:

Discuss the different reasons that birds migrate (most migrate to move from places with limited resources (food and nesting locations) to areas where resources are more abundant. They also migrate simply to escape the frigid temperatures of winter. Let the students know that they are going to focus on Chimney Swifts specifically. Learn about Chimney Swifts through the provided links: <http://swift.sepif.org/for-educators> and http://www.ct.gov/deep/lib/deep/wildlife/pdf_files/nongame/CTChSwiftCurriculum.pdf.

Discuss with the students what they need to make sure a journey goes smoothly. For instance, if the student's family were to go on a trip to Florida, what kinds of things would they need to get there safely and successfully? (Good weather, a car or airplane in good condition, fuel, money, food, suitcase, safe places to sleep and rest along the way, etc.)

What are some things that might make the trip more difficult? (Flat tire, car or aircraft breakdown, run out of gas, get into an accident, get sick, no place to eat or sleep, money lost or stolen)

Discuss how these things are similar to what Chimney Swifts need to have successful migrations. Talk about what kinds of things all birds need, i.e. fuel (food), a place to sleep (habitat), good weather, they need to be in good physical condition, avoid accidents, predators and collisions with tall buildings, windows, etc.

Procedure:

1. Tell students that they are going to pretend to be migrating Chimney Swifts by playing a game that simulates the life of a Chimney Swift. They will be on the migration route, but events that happened to them before they migrate will affect them during the game – just as it does in real life for Chimney Swifts.
2. Depending on the number of students, divide them into four "flocks" of two, three or four students each. Assign each flock a number from one to four, or give the students 30 seconds in which to choose a name for each of their flocks.
3. Each flock starts the game with 3 feathers. Remember – this is an overall indicator of health for the flock.

4. Once each flock is established, discuss where they are going. If it is fall, they are headed south to South America. If it is spring, they are headed north to the United States. To keep it very pertinent, it's fun to be specific to your state and even to your community.
5. Explain the rules of the game:
 - a. Explain that each flock will face different obstacles during their migration and that some flocks may not make it all the way. If your flock picks a card that ends your migration, students should take that card and sit down on the sidelines and wait quietly until the rest of the class finishes (but they should still listen to what other flocks are experiencing).
 - b. Show students where the Wild Card and Life Card stations are located along the Migration Pathway. If their flock is instructed to pick a Wild Card or a Life Card, the whole flock must fly to either the Wild Card or Life Card stations together, and then fly back to their correct place along the Migration Cards. For Life Cards, flocks will gain or lose Feathers. Your feather count functions as a health indicator – a healthy bird has good feather condition (more Feathers), while an unhealthy bird has poor feather condition (fewer Feathers). The healthier a bird is, the more likely they will be able to survive and breed the following year. Unhealthy birds may still survive, but will not be as successful breeding – resulting in overall population decline. The instructor should function as the “feather keeper” for this part of the game to keep things fair.
 - c. Start the game by sending each flock onto the Migration Pathway: Flock 1 to Migration Card #1, Flock 2 to Migration Card #2, and so on. Start your migration! *Note: Make sure to watch that Migration Cards are kept in order along the path throughout the game.*
 - d. Each flock takes turns to pick up their Migration Card, reads it out loud for the class to hear and then replaces it face down on the pathway. The flock then performs the actions on the card by role-playing as if they were the Chimney Swifts. When the first flock has completed their moves, it is the next flock's turn, etc. Encourage students in each flock to take turns reading card instructions so everyone in the flock has a chance.
 - e. If a flock lands on a space that another group is occupying, that flock should draw a Wild Card from the Wild Card station and do the activity indicated.
 - f. When all flocks have reached the finish, assemble the whole group for discussion. *Note: Sometimes a flock seems to get stuck in a “holding pattern” and is unable to progress. If this happens, you can end that flock's migration, if every other flock has ended their migration already.*
 - g. How to determine the winner? Any Chimney Swift flock that completes their migration route is successful. However, the flock with the most feathers at the end of the game is the “winner.”

Closure and Assessment:

1. What obstacles did you encounter as Chimney Swifts on your migration? Refer to Migration cards if needed. Have students describe specific events. Which of the obstacles were created by people? (*Pollution, windows, bright city lights, wind turbines, communication towers*) Which were natural? (*Hawks, cold spells, storms*)
2. What happened before your migration that affected your overall health? Refer to Feathers if needed. (*Lost eggs – ultimately affecting flock population success, limited food, plentiful food, predators, human interference, inaccessibility to roosts/chimneys*)
3. What things helped you complete your migration? Which of these were created by people? (*Wildlife refuges, wildlife hospitals, available chimneys*) Which were natural? (*Good winds, plentiful food*)

4. Why didn't you all finish at the same time? (*Held back by obstacles or advanced by helpful things*)
Why didn't some flocks finish at all? (*Collided with windows*)
5. In the wild, what do you think happens to the birds that are exhausted or injured? Are they likely to survive? Why or why not? (*They would very likely perish*)
6. What kinds of habitats would birds use as they migrate through Wisconsin? (*Marshes, fields, coastal regions, yards and gardens, parks, ponds, streams, rivers, woodlands*)
7. What should people consider when altering a natural habitat by building and development? (*How the land is currently being used by wildlife; what impact the changes will have on wildlife; and how they can plan ahead to make any necessary development "wildlife-friendly"*)
8. Most games require a strategy in order to improve your chances of winning; the more you play, the better your strategy becomes. Do you think with practice you could "win" this game more easily? (*No – nearly all hazards to migratory birds are outside their control – successful migration, while certainly is a lot of hard work on their part – is up to chance. However, it could be stated that a more experienced Chimney Swift may have better navigation skills.*)
9. What are some things that we can do to help migrating birds, especially Chimney Swifts? (*Use natural landscaping, help keep birds from colliding with our windows, turn off the lights in tall buildings during migration, create or restore "green-spaces" for birds, reduce use of toxins/pesticides, preserve existing roosts and chimneys, raise awareness to preserve chimney roosts by partaking in Swift Sits, etc.*).
10. Ask the students what they think they can do to keep birds from colliding with windows at their homes and school. (*Window decals or stenciled designs on the glass, netting in front of the windows, close drapes on windows that align and let birds see through a building; in tall apartment buildings, close drapes at night during bird migrations. See <http://www.wihumane.org/wildlife/wings/homecollisions.aspx>.*)