

Migration Matters



Grade Level: 1-6

Setting: Preferably on grass or large indoor space with room to spread out and freely move.

Key Vocabulary: bird, migration, flyways, wetland, habitat, invasive species, carrying capacity

Summary: Student participants increase their understanding of migration and migratory birds by playing Migration Matters. This simulation demonstrates the main needs (habitat, food/water etc.) for migratory birds and various obstacles and dangers of NOT having some of those needs readily available along the migratory flyway.

Objectives: Students will...

- * understand the concept of migration/migratory birds
- * identify three reasons/barriers that explain why migration isn't easy (example: loss of food/habitat)
- * describe how invasive species and human impact affects migratory birds

Materials:

- * colored "pom-poms" to represent food
- * laminated representations of various wetlands
- * laminated "Northern Ground" and "Southern Ground" cards
- * dilemma cards

Background: Providing food, water, and habitat for migratory birds is a major portion of the US FWS & Bear River MBR's mission. Migratory birds are historically the reason the refuge exists, and teaching the students about the many species of migratory that either nest or stop-off at the refuge is an important goal.

The refuge hosts over 200 migratory species and also has upwards of 70 species nesting on refuge land. Without wetland stopovers, large and small, many of these species would not have many alternatives for foraging or nesting suitable to their needs, and the energy-consumption of migration, molting, and breeding could be detrimental without readily available food and shelter.

Set-up/Warm-up: Set up the "game board" in a large outdoor space - preferably on grass if possible. A large indoor space will work if weather does not allow outdoor time. A good alternative (if time permits) is to have the student participants help set up the game area as it peaks their curiosity and keeps time interactive. Start by setting up the two ends of the migration by placing the "Northern Ground" on one end and "Southern Ground" on the other. Two alternatives that help define the space is to use a large rope to create a boundary for each or using large tarps (blue work exceptionally well as wetlands) to indicate the northern and south ground and also delineates a place to sit and debrief.

Place the wetlands strategically between the northern and southern ground. (Note that most wetlands are small wetlands with a carrying capacity of only four participants but a few are larger wetlands with a carrying capacity of 10.) Place 10-12 pom-poms of various colors in small sandwich bags. (This keeps them together, cleaner and keeps them from blowing away in a breeze. Placing a small rock in each bag is helpful as well.)

Introduction/Background: Before the game starts explain that they are each a migratory bird that, for survival, must leave its summer habitat far in the north and begin a long and treacherous journey to find suitable winter habitat in the south. Because your habitat is wetlands, you must have open water that does not freeze over. If they have ever taken a long trip, they know they have to stop, eat, fuel and rest along the way. Migratory birds must also find numerous suitable resting wetland habitats along the way. If you pass through a small town that has only one motel and its has a "no vacancy" sign out... you must keep going on. Wetland habitats have a limited area with a limited amount of food and shelter. This is called "carrying capacity." Each wetland stop indicates its carrying capacity. If you find a carrying capacity is "full" you must fly on. You will need to make **four (4) different stops** before you reach "Southern Ground."

Activity: The activity itself is simple, but can have several incarnations repeated to prove the point that migration isn't easy.

All participants will gather on Northern Ground. They will need to stop, get food and rest at four different wetlands on their journey to Southern Ground. At each stop they will gather (staying within carrying capacity) reach in the bag for some food, then wait and rest. At this point the teacher will share one of the dilemma cards with the participants. If a dilemma card eliminates a wetland, those in that wetland will need to "fly" on to another available wetland. (That wetland card should be turned upside down indicating it is no longer available during this migration. Some wetlands are temporarily not available while others are permanently gone.) If the dilemma card is a contaminated food card... those with that colored pom-pom would be dead. (You can choose to let them continue or not.) After four migration stops, they will finally arrive at their southern habitat.

Wrap Up: Have the students identify some of the dangers that face migratory birds, as well as reiterate the basic needs (food/water/habitat) for migratory birds.

Extensions: The initial migration may take 15 to 20 minutes. If you have time, you can have the students do another migration back north with the changes from the southern migration (loss of habitat etc.) still in play. You may also want to reinforce the types of wetlands and their importance in a dry state such as Utah. If you choose, you can have students who can not survive gather to the side in a "migratory bird cemetery" to underscore the importance of maintaining viable flyways.

