

# MIGRATION MAYHEM

## Objectives

Students will be able to: learn the names of some at-risk water birds that migrate through Nebraska; 2) list limiting factors affecting populations of migrating water birds; 3) describe the effects of habitat loss and degradation on populations of migrating water birds; and 4) make inferences about the importance of suitable habitat for migrating water birds.

## Method

Students role play migrating, at-risk birds traveling between nesting habitats and wintering grounds, and are subject to hazards at either end of the migration path as well as along the way. Each student wears a name tag identifying which at-risk bird he represents (from the list provided).

## Background

Migration is a mysterious topic. How do birds, fish, mammals, and insects travel the immense distances they do with such exactness? Some travel at night, some during the day, some in the skies, and others deep within the sea. Yet they locate habitats necessary for the continuation of their species. Scientists have proposed that they use the stars, the sun and even the earth's magnetic field for guidance. Some animals, such as salmon, seem to use smell to guide them home from the sea. Migrating species probably use a combination of these means to guide their journeys.

Migrating water birds require the presence of wetlands in their breeding and wintering habitats. Since these two regions are often thousands of miles apart, wetlands are needed in between to provide them with food and rest. The main threats to the survival of migratory water birds are the disappearance and degradation of wetlands.

## List of At-risk Water Birds in Nebraska

Least tern, piping plover, whooping crane, long billed curlew, king rail, trumpeter swan.

## List of Common Water Birds

Wood duck, sand hill crane, snow goose.

## Materials

Large playing field or gymnasium 70-90 feet long; hula hoops or bases from the P.E. dept—one for every 3 students; chalk board or large cardboard and marker for graph; whistle; signs so each student is designated a certain species of bird (optional).

## Procedure

**1)** The hula hoops (or carpet samples) represent wetlands. Place them in two patches at each end of the playing field. One end represents the nesting habitat, and the other end the wintering habitat. **2)** Explain to the students that they are water birds and will migrate between these two areas at your signal. Tell them the hoops represent wetlands that provide good habitat for the birds. At the end of each journey, the students will have to have one foot inside a hoop in order "survive" and continue. Those who do not reach a "wetland", "die" and have to move to the sidelines temporarily. **3)** Explain the limiting factors: wetland drained and converted to farmland; drought; pollution; urban expansion; disease. **4)** Begin with all the students at the wintering habitat. Start the first migration in slow motion. All the birds will migrate successfully. Explain that habitat is available for all. **5)** Take away a hula hoop from the opposite region. Explain that a drought has occurred so some wetlands are dry. Some "birds" will not find "habitat" and "die." Tell the students they can come back as hatchlings when habitat is available in the nesting grounds. **6)** Continue to take away or replace hoops to represent loss or restoration of wetlands in the two regions. **7)** Bring the students together to mark and discuss the graph. The series of migration cycles can be graphed.