Ducks & Geese

ACTIVITY DESCRIPTION:

A simulation of the effects of loss of nesting and wintering habitats on waterfowl.

OBJECTIVE:

- *To gain an appreciation of the beauty and economic value of waterfowl.*
- *To identify limiting factors (problems) affecting migrating waterfowl.*
- *To learn ways to help waterfowl.*
- *To exercise skills in science, social studies, and physical education.*

AGE GROUP:

Grades 6-8

MATERIALS:

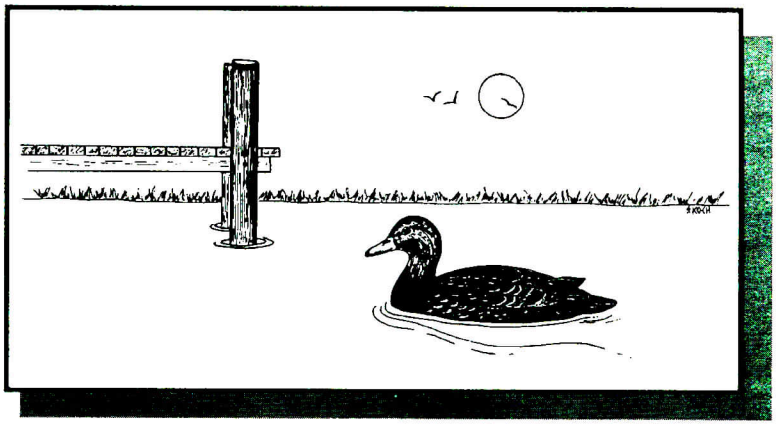
- *Large room or field 70-90 feet long*
- *Paper plates or carpet samples--enough for every three participants to have two (2) of either*

REFERENCES:

The activity was adapted with permission from "Migration Headache" in Aquatic Project WILD. Copyright 1983, 1985 Western Regional Environmental Education Council.

Introduction:

When the explorers from Europe first set foot upon the continent of North America, the skies and marshes were filled with millions of ducks and geese which the Indians hunted regularly. Even today, many people in North Carolina enjoy watching ducks raise their young in a pond or look forward to fall when they can travel to the Sounds and coastal marshes to hunt or watch ducks, geese, and swans. Even those who do not often see waterfowl like to know they are out there, somewhere, following their ancient migrational paths from north to south and back again.



Unfortunately, in our modern world this precious natural heritage needs our help to survive and flourish. Numbers of some of our most popular ducks are significantly lower than they were fifteen years ago and most of the Canada geese no longer migrate as far south as North Carolina. Millions of acres of wetlands and other vital habitat for ducks and geese have been lost, and more are destroyed each year.

In addition to the great enjoyment and beauty that viewing waterfowl may bring us, these birds are important to many of our families for income. People who work at hotels, restaurants, gas stations, as outdoor guides, and in vehicle and equipment sales make money from tourists and hunters during the seasonal migrations. In order to maintain these aesthetic and economic benefits, waterfowl populations must be large enough to provide enjoyment for millions of people. Currently, however, many species of ducks are at lower population levels than they have been in decades due to losses of critical wetland habitat and other limiting factors. Most of our ducks are raised in northern areas where many of the wetland nesting sites have been plowed into farmland or developed for homes, stores, or industry. Even the two species of ducks that historically nest in North Carolina, wood ducks and black ducks, have experienced similar habitat losses. Only wood duck numbers in North Carolina have increased. Black duck populations are still in trouble.

Historically, as the harsh northern winters approached, ducks, geese, and swans, came to North Carolina to eat the grasses that grew abundantly in our Sounds. In the 1970's, many of the underwater grasses (submerged aquatic vegetation or **SAV**) began dying due to changes in water quality. Since the availability of this food source was limited, many birds did not remain here. Geese that once wintered here

now overwinter in northern areas such as the Chesapeake Bay where they find an abundant supply of corn to eat in farm fields.

What can we do to reverse these negative trends and insure that waterfowl populations are protected for future generations? We can use management practices which preserve wetland habitat quality and quantity. These include:

• Maintaining forested buffer strips along waterways to reduce erosion and sedimentation.

• Observing the proper fertilizer and herbicide/ pesticide application rates in order to reduce the amount of nutrients entering our streams and improve water clarity for SAV growth.

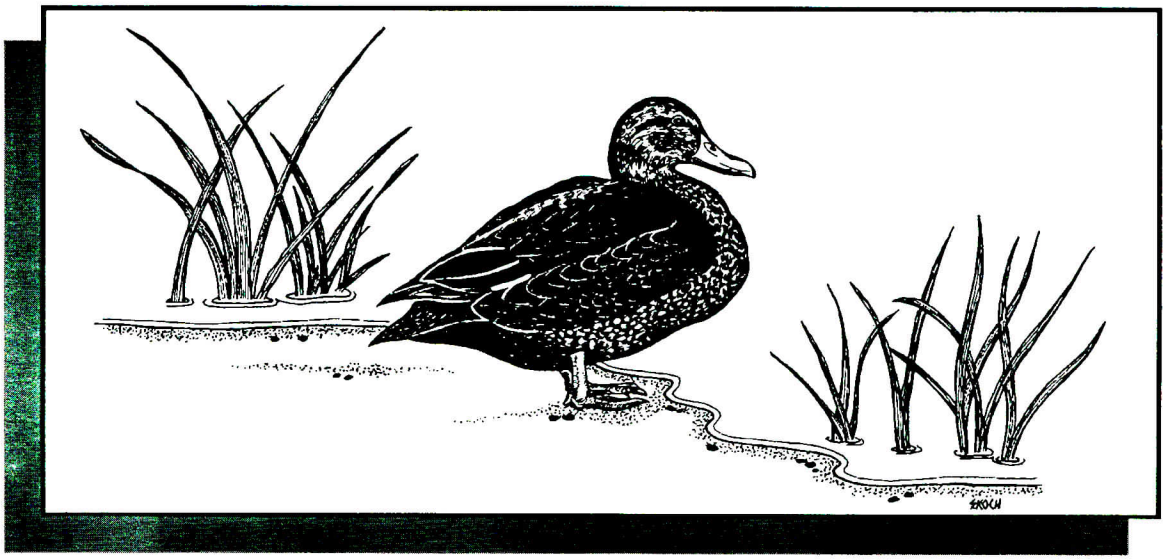
• Ensuring that sewage treatment facilities do not release waste that harm our waters.

• Avoid boating through and disturbing shallow grass beds.

• Finally, habitat quantity can bepreserved if we support habitat purchasing and conservation efforts by private organizations, State, and Federal governments. Federal duck stamps, which support public lands and inform others about the importance of wetlands, can be purchased to show our committment to protecting these avian treasures for future generations.

Activity:

Select a playing area 70-90 feet long. Place the paper plates in a grouping on each side of the area and designate one side as nesting habitat (north, spring) and the other side as wintering habitat (south, fall). Tell the students that the paper plates represent wetlands which they will migrate to (as waterbirds) and nest in during the spring and summer or find food in during the harsh winter. Up to three students may migrate to a plate. At the end of a journey, a student must have one foot on a plate in order to be allowed to continue. The instructor removes plates with each repeating sequence (change of seasons) to illustrate the loss of habitat. If a student cannot find a foothold as plates are removed, they have not found suitable habitat and must retire to the sidelines. The instructor may invent a scheme of limiting factors affecting the habitat and survival of the flock (drought year = fewer plates, wet year = more plates; oil spill--place an ink spot on the bottom of the plate and if a "duck" lands on this plate it can no longer fly). Allow the "dead ducks" on the sideline to reenter as hatchlings during good years with an overabundance of nesting habitat.



Illustrations by Sandra Koch