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Taking Flight: North by South

Tallgrass Prairie Center, University of Northern Iowa

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Taking Flight: North by South

Adapted from Keepers of the Earth

* Educators please refer to **New to Nature** for information on becoming comfortable teaching through the outdoors

Overall Activity

Students will study a local song bird through its migration route, summer and winter grounds, and/or its seasonal locations using maps. Refer to Procedure for detailed instructions.

Grade Range and Relevant Iowa Standards: 6th - 8th

- MS-LS1-4 Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors affect the probability of successful reproduction of animals.
- MS-LS1-5 Construct a scientific explanation based on evidence for how environmental factors influence the growth of organisms.
- MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
- MS-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.

Goals/Objectives:

- Understanding of birds using the ends of their migration routes as wintering and breeding grounds
- Understanding of North American *flyways* acting as general migratory patterns and routes
- Understanding and researching environmental factors/dangers birds encounter

Materials:

- Maps of North & South America; map of 4 major North American flyways (2 copied below, 1 for waterfowl)
- Magazines or publications w/pictures of local songbirds; field guides
- Computers w/Internet access
- Fine point pens, paper, pencils, blank newspaper, cardboard, binoculars, glue, stapler

Procedure:

1. Students will pick a local bird to study its migration routes and habits as well as locate breeding and wintering grounds on the America maps
2. Students should research the time periods in which their chosen bird leaves in the fall, when it returns in spring, and its seasonal locations
3. Create or collect various pictures of chosen bird
4. Use large sheets of paper or cardstock backed by cardboard to make general maps of North and South America
5. Map the flyways onto these cardboard-backed America maps
6. Research the environmental hazards and dangers faced and draw these onto their flyway maps
7. Students should sketch in the migratory routes and patterns using various colors or lines
8. Pictures of birds can be placed at the geographic ends of their migration journeys for that appropriate time of year
9. Hang one or many of these maps up in the room and occasionally take your classes outdoors to mark observation sightings on their map murals

Extensions:

- Refer to **Iowa's Nature Series** for resources on vertebrates & prairies

- Visit **eBird** to help your students learn about places they could search for local bird species; allow them to report their findings for extra credit or as additional project research
- Take your classes on a field trip to a natural area known for bird activity
- Extend the experience to other wildlife and winter habits of fauna that undergo deep hibernation; keep logs of sightings and create reports of habits before winter and after spring
- Students can create collages or mobiles of their favorite birds

Prairie Connections (some information sourced from Iowa's Nature Series):

- Migration is a strategy for Iowa's birds to escape the cold temperatures and diminished food, many via the Mississippi Flyway. Some species such as the Dark-eyed Junco escape to Iowa from their northern breeding grounds while others may breed in Iowa and travel hundreds of miles to Central & South America. How can we protect their native habitats such as prairie and even the spill over into farms, cities, and buildings they're not naturally adapted to?
- Planting diverse native prairie (**Plant Iowa Native Brochure**) can be done in rural areas as well as in cities and towns where backyards and parks can provide important resources birds need such as food and shelter. Native plants also reduce soil erosion as well as pollutants to maintain clean waters for us and them. **Good Neighbor Iowa** promotes healthy and pesticide free lawn care as well as potentially converting turf to prairie.
- Converting just a small amount of land on crop fields to prairie strips or patches reduces soil erosion by as much as 90% (**Prairie on Farms**)
- Research birds that use tallgrass prairie as their choice habitat. Are there any species of concern, threatened, or endangered species (**Iowa DNR**)? What is being done or can be done to help them?
- Use the **Irvine Prairie Bird Observation Guide** as a starting point for potential birds for your students to research!



