Bird Migration

Bird Observation Experiment

Supplies:
Become a bird tracker! Venture outside and observe birds. Notice their colors, listen to their sounds, and watch their behavior.

- Binoculars (*optional)*
- Pencil
- Bird Migration & Observation Chart
- Bird Identification Resources *(online or books)*

Instructions:

1. Spend 30 minutes looking in the sky, on the ground, and in trees.
2. What types of birds do you see?
3. What time of day are you observing the birds? Observe the birds in the morning, the afternoon, and the evening. What changes do you notice?
4. Continue your bird observations each month. Spend 30 minutes, once a month, to observe and count the birds.
    - What changes have taken place since the previous month?
    - What new birds can you find?
    - Do you see the same birds each month?
5. Record your observations on the Bird Migration & Observation Chart

Resources:

- The Great Backyard Bird Count
- North Carolina Spring Migration
- eNature.com

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Bird Migration & Observation Chart

	Migration pattern	*Diet*	*Sighting Location*	*Sighting Day/ Time*
Ruby-throated hummingbird 	-Leave North America in the fall -Migrate to Mexico or Costa Rica for the winter -In March – April migrate North -Males move north earlier than females -Some travel from Canada to Costa Rica	-Mostly nectar from flowers of red, orange, purple -Some tiny insects -Hang a Hummingbird feeder with sugar water -Flowers of red, orange, purple		
Juncos 	-Northern juncos migrate south -Southern juncos tend to stay in their habitat	-Millet -Forage on the ground -Insects, seeds		
Baltimore Orioles 	-Live in the east United States -Migrate to southern states -Some travel to Central and South America	-Nectar from flowering trees -Enjoy nectar feeders -Important role as pollinators as they move from tree to tree		
Bullock's Oriole 	-Live in the Midwest -Travel to Mexico and central America	-Forage in trees and shrubs -Insects -Berries -Nectar		

Common Nighthawk 	-Nocturnal -Only nighthawk that lives in northern North America -May travel 2,000-4,000 miles in one day during migration -One of North America's longer migrations	-Insects		
Common Yellowthroat 	-Species lives in Canada all the way to Mexico -Small songbirds -Habitat are marshes, wet areas with low vegetation -Northern birds are nocturnal migrants and travel to Central America	-Insects		
Black and White Warbler 	-Migrates from upper US and Canada all the way to Central America and Peru	-Insects		
American Robin 	-Widely distributed throughout North America -Many migrate from Southern Canada to Mexico -Mostly active during the day	-Worms, grubs -Late berries -They venture south later than other migraters		

Tufted Titmouse 	-Tufted titmice and Carolina Chickadees often form a mixed flock and fly as a group -They do not migrate far, so you will see them year-round. -They fly together to find food.	-Insects -Seeds, berries -Enjoy bird feeders (but are timid around other birds)		
Carolina Chickadees 	-Live from New Jersey to Florida -Permanent residents	-Insects		

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Science Experiences That Come To You

Bird Feeder Experiment

Spring migration is very exciting. It brings a wide variety of species to our backyard bird feeders. As birds fly from the south (some from South America), they need places to stop, rest, and eat! If you have a selection of food in your backyard, these hungry birds might take a “rest break” at your bird feeder.

Keep a source of fresh water and food in your backyard. These birds will be very thankful to have a safe place to rest as they journey to their final location up north.

Supplies:

- Cardboard tube – paper towel roll
- 2 x Wooden craft sticks
- Peanut butter
- Bird seed
- Spoon or butter knife
- Large plastic plate or tray
- Measuring cup
- 12 – 24 inches of string or yarn
- Single hole punch
- X-acto knife (requires adult supervision)

Instructions:

1. Make 2 hole punches at the top of the cardboard tube. Be sure the 2 holes face each other. (This will be for the string or yarn to hold the bird feeder.)
2. Ask an adult to make 2 slits 3-inches from the top of the cardboard tube. The 2 slits will allow the craft stick to be inserted through the tube.
   - Make 2 more slits 3 inches from the bottom of the tube for the other craft stick.
3. Insert the craft sticks through the slits so that the flat side of the stick faces up. This will be for the birds to perch while eating the bird seed!
   - Make sure the craft sticks fit. Remove the sticks for the next step.
4. Measure 2 cups of bird seed and carefully disperse it on the plastic plate or tray.
5. Using the spoon or knife, spread the peanut butter on the cardboard toilet paper tube. You want a thick layer of peanut butter.
6. Carefully roll the tube with peanut butter on the layer of bird seed. Be sure to cover the entire tube.
   - Press the tube down as you roll to ensure it sticks.
7. Carefully insert the craft sticks through the slits. (You will need to remove some of the bird seed to find the slits.)

8. Insert the yarn or string through the 2 hole punches.
9. Find a branch on a tree in your backyard.
10. Ask an adult to help attach the bird feeder to the branch using the string or yarn. Be sure to make a secure knot!
11. Step back and wait for hungry birds to find your bird feeder!

The Science Behind It:

When the temperature gets cooler and you bundle up in a jacket to go outside, you know that Winter has arrived. We know that it might snow or ice. Before leaving for school, you have to dress warmly and be sure to have a good breakfast. What other things might you do to prepare for the Winter months?

As the days and weeks go by, you notice that the weather begins to change and the sunny days seem longer. During Spring, it is warm outside and flowers begin to bloom. Finally, summer arrives and you can go swimming or have a picnic. It is very hot outside.

Think about the different seasons, and how you plan your days in the winter and summer. What do you wear in the colder months versus the hot, summer months? Do you eat different food in December than you might in July?

Just like we change our habits, food choice, and clothes during the year, animals are also affected by the changes of the seasons.

Different species of birds, travel from the northern locations to warmer areas during the winter months. As the temperatures drop and the daylight becomes shorter, birds ***migrate***. To move from one region to another is called ***migration.*** Migration is determined by geography, weather, and the availability of food. Bird migration is actually quite complex!

There are 2 types of migration patterns. Some birds are *obligate migrants.* This means that the timing of travel is dictated by instinct. No matter the weather conditions, these birds will fly south during the winter months no matter what! Even if it is a very warm winter, these birds are “obligated” to migrate. *Obligate* migrants live in the far north during the summer months. They include some songbirds, raptors, and shorebirds. During the winter, these birds head to the deep tropics of South America. Because these birds are so far south, they are not influenced by the slight changes and unseasonable weather in the far north of Canada. Therefore, their instincts to migrate never change.

Other birds are *facultative migrants*. These birds are more affected by the slight changes in weather patterns. For example, this past winter has been unseasonably warm. The weather has broken high temperature records during the winter months. *Facultative* migrants are in tune to these differences. They are more flexible when they move south for the winter. *Faculative migrants* do not travel very far. Many of these birds move within the United States. Therefore, they sense the local conditions. Weather patterns in the northern states affect those in the southern states. If it is unseasonably warm

in New York, for example, it will be warmer in Florida. Ducks, geese, swans, cranes, orioles, and warblers are all *facultative migrants*.

Real World Relevance – How Ornithologists Track Birds

Migratory birds are on the move; therefore, ornithologists use special techniques and devices to track their behaviors, habitats, and flight. Ornithologists attach devices, called *tags*, to the birds' feet. The tags usually have GPS devices that help scientists track where the birds go and how long they stay.