

It's All About Birds!

**Grade 7
Math**

I. Introduction to Birds

With feathers that make them unique and wings that lift them into the air (or that once lifted them into the air), birds are everywhere! Birds come in a variety of colors, sizes, and shapes, are found on all continents, and live in nearly all habitats.

II. Birds in Oklahoma

Oklahoma is a host to hundreds of breeding or resident birds. The ‘Sooner State’s’ aquatic, forested, and prairie habitats provide a variety of food sources and shelter for many different species of birds. Some Oklahomans put out bird feeders to attract birds for viewing and to help migrating birds ‘fuel up’ for their long flight. Seed-eating birds such as Cardinals, Jays, Mourning Doves, and Starlings are commonly seen at feeders across Oklahoma.

Activity: Backyard Birds

Standard 2:2b – Set up equivalent ratios, estimate and solve problems using ratio, proportions, and percents including percents greater than 100 and less than 1 (e.g., determine missing sides of similar figures, heart rate per minute, cost per pound, pay to hours worked overtime).

Standard 5:1 – Use data from a sample to predict possible outcomes and compute simple probabilities as fractions, decimals or percents (e.g., use data from lists, three diagrams, frequency distribution tables, area models).

Objective: Students learn to identify and observe common backyard and feeder birds, analyze data, and present findings in graphic representations.

Materials: Observation Sheets

Pens/Pencils
Colored Pencils or Markers
Bird Field Guide or Pictures for Identification
Compass
Glue
Texture Supplies (yarn, beans, seeds, etc.)

Procedure:

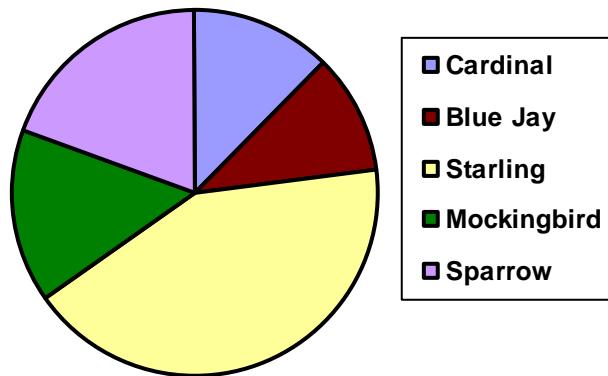
- 1) Divide students into groups of 2-3. Familiarize students with which birds are most common at feeders and how to identify them (use Field Guide or pictures).
- 2) Have each group observe bird feeders for a designated amount of time. Students should identify and record frequency of bird species observed. Be sure that each student has a copy of his/her group’s data.

*If it is not possible to observe birds at feeders, consider printing out several pictures of birds at bird feeders, distributing different pictures to each group of students, and having students calculate their data from the pictures.

Check out pictures at:

www.birdsofoklahoma.net/Byardfeed.htm
www.backyardbirdcam.com/bird-pics.htm

- 3) Using data collected as a group, each student will individually complete an Observation Sheet.
- 4) Using calculations from the Observation Sheet have each student construct a circle graph (see below). Allow students to use color and/or texture.



Observation Sheet

Backyard Birds

Name: _____ Date: _____

1. Determine the number of birds of each species observed.
 2. Determine total number of birds observed.
 3. Determine what percentage each species is of the total number of birds observed (round to the nearest whole number).
 4. Convert percentages to degrees of a circle by using proportions.
Example: If you have 25 Cardinals, use the equation $25/100 = x/360$.
 5. Construct a circle using a compass.
 6. Make a starting point on the circle and use a protractor to determine the number of degrees indicated by each proportion.
 7. Label each section of the circle to indicate which species it represents (allow students to use color and/or texture to differentiate sections).

This activity is a modification of [Birds of a Feather, an Interdisciplinary Unit](#) written by Vicky Smathers.
For more information visit www.learnnc.org