



Raptors Over My Schoolyard (Grades 6-8)

Overview: Students will learn about 5 groups of raptors and identify them by their silhouettes, then apply their knowledge to identify raptors flying over their school.

Student Learning Objectives: Students can—

1. Access raptor information on allaboutbirds.org. (Optional)
2. Identify 5 groups of raptors in New Hampshire.
3. Make a model of a raptor silhouette.
4. Use binoculars to look for migrating raptors. (Optional-enhances viewing)
5. Access New Hampshire hawk watch data at hawkcount.org.
6. Communicate raptor information to schoolmates.

Vocabulary

Raptors: Birds of prey that share specific characteristics: hooked beak, sharp talons, keen eyesite.

Hawk – Raptors that are active during the day time.

Bird Migration – The regular seasonal journey undertaken by many species of birds.

Silhouette – The image of something represented by a solid outline of the image usually in black.

Correlation to Standards: Go to the end of the lesson.

Materials: Copies of Raptor Groups by Silhouette and Raptors of New Hampshire Summary (note size: 11x14), (insert download link), card board or poster board, access to AllAboutBirds.org, Optional Books:

Hawk Watch: A Guide for Beginner's by Peter Dunne

Hawk's in Flight by Peter Dunne

Hawks and Owls of Eastern North America by Chris Earley

Sibley's Raptors of Eastern North America by David Allen Sibley

Preparation

Because of the landscape of New Hampshire, schoolyards may actually provide a great place for watching migrating raptors. Make the most of your time by doing this anytime from late morning into the afternoon. Though, you can increase the odds of seeing raptors, by tracking the weather and hawk watching after a cold front passes and/or northwest winds. Download the *Raptor Groups by Silhouette* and *Raptors of NH* pdfs from <http://www.nhaudubon.org/learn/teachers-school-youth-groups/> --scroll down to teacher resources. Make copies for students. Gain permission from your school's webmaster to access Cornell Lab of Ornithology's website Allaboutbirds.org. Using the list of most common migrating raptors in New Hampshire from *Raptor Groups by Silhouette*, prepare the links from allaboutbirds.org to show your students. Gather raptor books from school or community library. These books are also available from NHA's nature store.

Lesson

Using a smartboard or computer projector, display the [allaboutbirds](http://allaboutbirds.org) website, then show your students' pictures of the most common raptors of New Hampshire. Discuss if they have seen them and where. Red-tailed hawks are the most commonly seen raptors, often perched along roads looking for meals. Introduce a discussion about migration: why do animals migrate? Where do they go? Animals follow the food! They move to habitat that can still provide the resources they need during winter.

Next have students look at the silhouettes by raptor groups. Ask students, why are we using silhouettes to identify these raptors? When raptors migrate, they are usually flying high in the sky. Usually we will not be able to see their specific features but only their silhouette. Is this enough to tell the difference between raptors? Have them closely observe the pictures of the silhouettes. What's different between them? How's an eagle different from a falcon? Have them consider wing and tail shape and length to identify the differences between the raptor groups. Divide class into 5 groups and assign each a raptor group. Give each student group a copy of the *Raptors of New Hampshire Summary* and *Raptor Groups by Silhouette*. Have each group make a model of their assigned raptor group and learn about the basic identifying characteristics of their raptor and the species in that group that live in New Hampshire. Follow their research with class presentations and crafting a hallway bulletin board about raptors to share what they are learning with fellow students.

After students have a foundation on basic raptor identification, go to the schoolyard and watch! Make a chart for the week and watch at the same time each day. Record the weather for the day too. Does the weather impact what you and how many you see?

Extend class learning by going to HawkWatch.org. Find migration data for the Carter Hill Raptor observatory or the Pack Monondack Observatory. Compare student results for the day to what was seen at these sites on the same day in 2014. Discuss why the results at the raptor observatories might be different. (Location is important for best hawk migration observations. The observatories are strategically located to have the best chance for observations. Weather also plays a significant role in observations. Also, remind students not to give up—the staff and volunteers watching birds at the observatories do it daily and have done it for years. They have a keen eye for seeing and identifying the raptors which can be difficult.)

Extend learning by looking at a topographic map with students. Locate the observatories and your school. What's different about the topography and land features at these locations that might play a factor in how many birds are seen.

Visit Carter Hill Raptor Observatory with New Hampshire Audubon! Call 603-224-9909 x333 or e-mail swall@nhaudubon.org to schedule a program.

Correlation to Common Core Standards

English Language Arts Standards

Reading Information Text

Grade 6

CCSS.ELA-Literacy.R.4.1 Key Ideas and Details

CCSS.ELA-Literacy.R.4.7 Integration of Knowledge and Ideas

Speaking and Listening

Grades 6-8

CCSS.ELA-Literacy.SL.6.1 Comprehension and Collaboration

CCSS.ELA-Literacy.SL.6.4 Presentation of Knowledge & Ideas

Science and Technology:

Grades 6-8

CCSS.ELA-Literacy.RST.6.8.3 Key Ideas and Details

CCSS.ELA-Literacy.6-8.7 Integration of Knowledge & Ideas

CCSS.ELA-Literacy.6-8.9 Integration of Knowledge & Ideas

Math Standards

Statistics and Probability

Grade 6

SSCC.Math.Content.6.SP.B.5: Summarize Statistics & Probability

Grade 7

CCSS.Math.Content.7.SP.A.1: Use Random Sampling to draw inferences about Population.

CCSS.Math.Content.7.SP.B.4: Draw informal comparative inferences about two populations.

Grade 8

Investigate patterns of association in bivariate data. (Specific standard met depends on how the teacher decides to use the hawkcount.org data.)