

muse®

The Birds

Take flight and explore some of the Earth's most interesting winged creatures. Magical myths and factual information fill the pages of this month's MUSE, accompanied by bright colorful photographs.

CONVERSATION QUESTION

How does studying the behaviors of birds help us to learn about our world?

TEACHING OBJECTIVES

- Students will learn the basis for the many myths regarding ravens.
- Students will learn about the roosting behaviors of crows.
- Students will learn how barn owls have become a symbol of peace between Jewish and Muslim farmers.
- Students will compare and contrast three different myths about ravens.
- Students will collect evidence to evaluate the reasonableness of various hypotheses.
- Students will examine specific problem/solution relationships.
- Students will study animal myths and find examples in literature, art, and music.
- Students will plot geographical locations on a map of North America.
- Students will study the long history of tension between Israel and nearby Arab nations.



In addition to supplemental materials focused on core STEM skills, this flexible teaching tool offers vocabulary-building activities, questions for discussion, and cross-curricular activities.

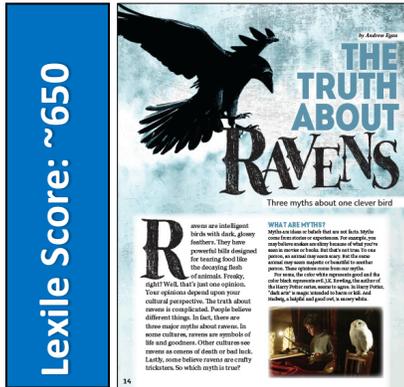
SELECTIONS

- **The Truth About Ravens**
Expository Nonfiction, ~650L
- **When the Crows Come Home to Roost**
Expository Nonfiction, ~750L
- **Barn Owls as Peacemakers**
Expository Nonfiction, ~1050L

The Truth About Ravens

pp. 14–15, Expository Nonfiction

Symbols of life or omens of the dark arts? This article invites readers to explore the cultural perspectives that shape our interpretation of raven imagery and the myths that validate our faulty beliefs.



RESOURCES

- Myth Busters

OBJECTIVES

- Students will learn the basis for the many myths regarding ravens.
- Students will compare and contrast three different myths about ravens.
- Students will study animal myths and find examples in literature, art, and music.

KEY VOCABULARY

- **myths (p. 14)** ideas or beliefs that are not facts
- **omen (p. 14)** an occurrence or phenomenon believed to portend a future event
- **perspective (p. 14)** a particular attitude toward something; point of view

ENGAGE

Conversation Question: How does studying the behaviors of birds help us to learn about our world?

Share some raven symbolism with the class. (Examples include Harry Potter excerpts, Edgar Allan Poe poetry, Greek mythology, etc.) Be sure to expose the students to negative and positive imagery regarding ravens. Pose the question: Why do you think that ravens are portrayed as both good and evil?

INTRODUCE VOCABULARY

Post and discuss the key terms with the class. Guide students to notice that all three words can have positive and negative connotations. Examine the polarity of these words and encourage the students to give specific examples.

READ & DISCUSS

Reinforce comprehension of the facts in the article by using the following prompts to direct discussion.

- Describe the appearance and behaviors of ravens.
- As a person living in Great Britain, how may J.K. Rowling's cultural perspective have influenced her imagery?
- How has the intelligence of ravens been scientifically proven?
- Where do ravens build habitations?

CONCEPT/SKILL FOCUS: Compare and Contrast

INSTRUCT: Students will compare and contrast the different myths regarding ravens that are discussed throughout this article. Instruct pairs of students to reread the text and to underline information that will be helpful for this purpose. Introduce the graphic organizer, *Myth Busters*, and have the partners record similarities and differences on their chart.

ASSESS: Collect the *Myth Busters* worksheet and review. Be sure that the students met the objective of correctly comparing/contrasting the different myths concerning ravens. Meet with a small group to remediate, if necessary.

EXTEND

Language Arts Arrange students into small groups and instruct them to share different animal myths. (Ex: wise owl, sly fox, sloppy pig, etc.) Have them find examples in art, music, and/or literature to support the myth. Allow time for each group to present their research to the class.

Compare: All three of the myths regarding ravens agree on the fact that ravens are _____. On the chart below, describe how each myth presents a unique perspective.

Myth Busters

Use information from the article, "The Truth About Ravens," to contrast the myths.

Myths	Contrasting Details (Explain each myth)
The Trickster Raven	
The Raven of Death	
The Raven of Life	

When the Crows Come Home to Roost

pp. 18–23, Expository Nonfiction

Dark shadows fly across the sunset sky and by nightfall the crows will quietly roost until the first light of morning. Students will learn about the winter roosting behavior of crows, in addition to studying the variety of hypotheses regarding the bird's habits and patterns.



RESOURCES

- Counting Crows

OBJECTIVES

- Students will learn about the roosting behaviors of crows.
- Students will collect evidence to evaluate the reasonableness of various hypotheses.
- Students will plot geographical locations on a map of North America.

KEY VOCABULARY

- **amateur** (p. 22) a person who engages in a pursuit on an unpaid rather than professional basis
- **ecology** (p. 20) a field of science that studies how living things interact with their environment
- **foraging** (p. 22) searching widely for food

ENGAGE

Conversation Question: How does studying the behaviors of birds help us to learn about our world?

Explain to the students that they will be reading an article about the roosting behaviors of large groups of birds. Allow the students to peruse the article to activate prior knowledge and then instruct them to underline all of the numbers in the text. Have them rewrite the numbers in standard form, in word form, and in exponential expanded form.

INTRODUCE VOCABULARY

Invite pairs of students to find definitions for the key vocabulary terms. Upon completion, post the definitions provided so that students may check their work for accuracy. Student pairs will choose an additional seven words from the article and procure definitions. They will then create a crossword puzzle using all ten words. Share puzzles with another class for use as a prereading exercise for this article.

READ & DISCUSS

Pose the following questions to the students to facilitate meaningful discussion following the reading of the article.

- What has changed about the roosting behavior of crows?
- How are hypotheses tested?
- Why is it beneficial for us to study crow roosting habits?
- Explain “crow funerals.”
- Who are the Crow Patrol and how are citizen scientists helpful?

CONCEPT/SKILL FOCUS: Collecting Evidence

INSTRUCT: This article presents the reader with an abundance of detailed information regarding the current roosting behavior of crows. Present the *Counting Crows* graphic organizer and tell students that they will be collecting evidence that explains and supports the three hypotheses presented regarding the changes in the nighttime habits of crows. They will need to consult the article to gather accurate information.

ASSESS: The objective of this lesson is to help students practice the skill of collecting evidence from a science-based text. Facilitate dialogue and then collect organizers to evaluate individual understanding.

EXTEND

Social Studies Instruct students to reread the article with a partner and to highlight all of the geographical locations contained in the article. Provide each pair of students with a blank map of North America and have them plot and label each location.

Counting Crows

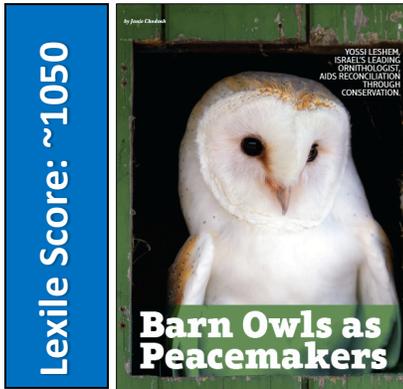
Use information from the article, "When the Crows Come Home to Roost," to provide evidence detailing the reasonableness of each hypothesis listed on the chart.

Hypothesis	Why is this a plausible hypothesis?	Why is this a faulty hypothesis?
Huddling for Warmth		
Safety in Numbers		
Information Center		

Barn Owls as Peacemakers

pp. 32–35, Expository Nonfiction

Join the barn owl in silent flight and learn how this magnificent creature has become a symbol of peace between nations. Students will learn about the behaviors, diet, and resourcefulness of these moon-white predators.



RESOURCES

- Peacemakers

OBJECTIVES

- Students will learn how barn owls have become a symbol of peace between Jewish and Muslim farmers.
- Students will examine specific problem/solution relationships.
- Students will study the long history of tension between Israel and nearby Arab territories.

KEY VOCABULARY

- **conservation** (p. 32) preservation, protection, or restoration of the natural environment and of wildlife
- **ornithologist** (p. 32) a person who studies or is an expert on birds
- **reconciliation** (p. 32) the restoration of friendly relations

ENGAGE

Conversation Question: How does studying the behaviors of birds help us to learn about our world?

Use a video clip, an instructional drawing book, and language from this article (heart-shaped face, pale white feathers, etc.) to have students draw a barn owl. They can attach this drawing to the graphic organizer that appears later in the lesson. This is meant to be a fun, motivational activity...perfection is not necessary!

INTRODUCE VOCABULARY

Post and discuss the vocabulary words and definitions. Guide students to notice that all of the key terms have 12 or more letters. Have the students choose one of the words and create new words using some of the letters. (Three-letter words = 1 point, four-letter words = 2 points, five-letter words = 3 points, etc.) Who can get the highest score?

READ & DISCUSS

Read the article aloud with the class. Have students reread the article in small groups and answer the questions below. Discuss responses.

- What is the meaning of this sentence on page 33 referring to barn owls: "It also has a larger global distribution than most land birds"?
- List other names for the barn owl and describe its identifiable features.
- What do barn owls eat?
- How can barn owls be used as an alternative to pesticides?
- According to the article, why do birds have the power to bring people together? Explain the cross-border program.

CONCEPT/SKILL FOCUS: Problems and Solutions

INSTRUCT: Inform students that they will remain in their group and instruct them to highlight passages that depict how the problems listed on the graphic organizer, *Peacemakers*, were solved. Tell students that they will be responsible for recording this information. Pairs should discuss their findings as they complete their work.

ASSESS: Review the information that the students listed on their charts. Evaluate the thoroughness and accuracy of their statements. If errors are noted, direct students to return to the text and to make corrections.

EXTEND

Social Studies In presenting the barn owl as a peacemaker between nations, this article includes many statements that reflect the tensions between Israel, an independent Jewish nation, and Arab countries with mostly Muslim populations. Use books and the internet to research this conflict further. Have students write a summary, configure a timeline, or create a PowerPoint presentation that depicts this friction.

Peacemakers

Use information from the article, "Barn Owls as Peacemakers," to explain the solutions to the problems listed below.

Problems	Solution(s)
<p>Ornithologist Yossi Leshem had too many barn owls.</p>	
<p>Farmers in Israel were using harmful pesticides, causing a sharp decline in birds of prey.</p>	
<p>Scientists faced some setbacks with their barn owl program due to political violence.</p>	