

FROM THE STUDIO THAT BROUGHT YOU
"HAPPY FEET"



LEGEND OF THE GUARDIANS

THE OWLS OF GA'HOOLE

TAKE FLIGHT IN 3D SEPTEMBER 24

VELAZQUEZ/ROADSHOW PICTURES

www.legendoftheguardians.com

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**NATIONAL
WILDLIFE
FEDERATION**

GUIDE FOR EDUCATORS

LEARN HOW TO "ADOPT AN OWL" AND MORE WWW.NWF.ORG/OWLS

LEGEND OF THE GUARDIANS THE OWLS OF GA'HOOLE

Acclaimed filmmaker Zack Snyder makes his animation debut with the fantasy family adventure *Legend of the Guardians: The Owls of Ga'Hoole*, based on the beloved Guardians of Ga'Hoole books by Kathryn Lasky. The film follows Soren, a young owl enthralled by his father's epic stories of the Guardians of Ga' Hoole. The Guardians, a mythic band of winged warriors, had fought a great battle to save all of owlkind from the evil Pure Ones.

While Soren dreams of someday joining his heroes, his older brother, Kludd, scoffs at the notion, and yearns to hunt, fly and steal his father's favor from his younger sibling. But Kludd's jealousy has terrible consequences—causing both owlets to fall from their treetop home and right into the talons of the Pure Ones. Now it is up to Soren to make a daring escape with the help of other brave young owls. Together they soar across the sea and through the mist to find the Great Tree, home of the legendary Guardians—Soren's only hope of defeating the Pure Ones and saving the owl kingdoms.

National Wildlife Federation has teamed up with *Legend of the Guardians: The Owls of Ga'Hoole* to inspire kids and families to learn about wildlife and protect habitat.

The film features the voices of Emily Barclay, Abbie Cornish, Emilie de Ravin, Ryan Kwanten, Miriam Margolyes, Helen Mirren, Sam Neill, Geoffrey Rush, Jim Sturgess, Hugo Weaving and David Wenham.

Snyder is directing *Legend of the Guardians: The Owls of Ga'Hoole* from a screenplay by Emil Stern and John Orloff, based on the Guardians of Ga'Hoole novels by Kathryn Lasky. The film is being produced by Zareh Nalbandian, with Donald De Line, Deborah Snyder, Lionel Wigram, Chris DeFaria, Kathryn Lasky and Bruce Berman serving as executive producers.

Warner Bros. Pictures is presenting the film, in association with Village Roadshow Pictures.

About National Wildlife Federation

National Wildlife Federation inspires Americans to protect wildlife for our children's future. For more than 70 years, NWF has been connecting people of all ages with nature through award-winning education programs and resources, including the children's magazines Wild Animal Baby®, Your Big Backyard®, and Ranger Rick®.

National Wildlife Federation is proud to be the education partner for *Legend of the Guardians: The Owls of Ga'Hoole*. National Wildlife Federation is asking children and their parents to help save "owlkind" and play an important role in wildlife conservation with symbolic adoptions of the species featured in the film. These adoptions help NWF in its efforts to protect species, restore wildlife habitat and help everyone appreciate the benefits of nature where they live.



About this Guide:

This guide, designed for use with the film *Legend of the Guardians: The Owls of Ga'hoole*, will help you explore the film's themes in an education setting. The activities are designed for grades 3-5, with extensions for younger and older children. These activities meet national standards for English/Language Arts, Science, Social Studies, and Visual Arts.

Please see the corresponding Kids and Family Activity Guide for fun crafts and take-home projects that support the following classroom activities.

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ACTIVITY ONE:

GIVE A HOOT ABOUT HABITAT

Subjects: Biology, Natural Science, Environmental Science

LEARNING OBJECTIVES:

- Define the concepts of habitat, ecosystems, and limiting factors
- Apply these concepts to a particular owl species

MATERIALS:

- Copies of the work sheet
- Pencils

WHAT YOU DO:

1. Ask your students “Habitat—what’s that?” Explain that habitat is the place where a plant or animal lives. Without habitat, living things can’t survive. With healthy habitat, they’ll thrive. For animals, habitat has four parts: food, water, cover, and places to raise young.
2. Review or introduce the terms habitat, ecosystem, and limiting factor.
3. Hand out copies of the work sheet on the next page. Have students choose a species from the list of owls and fill in the blanks as they learn about the owl’s habitat. What does the species need to live and raise its young? What does it eat? What is the climate to which it is adapted?
4. Explain that all over the world, habitat for wildlife is shrinking as the human population grows. But here’s the good news: People are helping by bringing habitat back one yard, schoolyard, garden, or park at a time.

USEFUL LINKS:

The Schoolyard Habitat® project found at the National Wildlife Federation’s website, www.nwf.org/schoolyard, is a great opportunity for students to spearhead a wildlife habitat effort for the entire school community. The result will be a wonderful outdoor classroom where students may practice many cognitive skills by studying, researching, and documenting wildlife in their area.

Dissect owl pellets. You can order them in quantity and use them to investigate what the owl ate—and even reconstruct the prey’s skeleton. If you can’t do the real thing, try this virtual pellet dissection: www.kidwings.com/owlpellets/index.htm.

GIVE A HOOT ABOUT HABITAT

Student activity page

Help find the right habitat for your favorite owl characters from the film! Choose a species from the list below and fill in the blanks as you learn about the owl's habitat. What does it need to live and raise its young? What does it eat? What is the climate to which it is adapted?

Soren: *Barn Owl*

Eglantine: *Barn Owl*

Gylfie: *Elf Owl*

Boron: *Snowy Owl*

Digger: *Burrowing Owl*

Bubo: *Great Horned Owl*

Twilight: *Great Gray Owl*

1. Species of Owl: _____

2. Describe the region or ecosystem where this owl is found: _____

3. Habitat needs for this owl:

Food:

Water:

Cover:

Places to Raise Young:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

4. Other plants and animals that might live nearby: _____

5. What are the limiting factors for your owl that might keep it from surviving or raising its young?

Now that you know more about what it takes to provide wildlife habitat, go to www.nwf.org/habitat and design your own schoolyard or backyard habitat project.

Terms to know

Habitat – A place that provides a species with everything it needs for survival.

The four requirements of habitat are 1) food, 2) water, 3) cover and 4) space – including places to raise young.

Cover – Shelter to hide an animal from predators or to protect an animal from cold, hot, wet, or dry conditions.

Limiting factor – Something required by an animal to survive. If it is not present, the animal cannot survive or reproduce. For example, many owls need nesting cavities in trees, which are often in short supply. The number of nesting cavities limits how many owls can raise young.



ACTIVITY TWO:

ADAPTING TO AN OWL'S WORLD

Subjects: Biology, Natural Science, Environmental Science

LEARNING OBJECTIVES:

- Define the concept of camouflage
- Identify some ways that animals camouflage themselves
- Demonstrate understanding of how a species adapts to its habitat as a means of survival
- Develop observation skills

An adaptation is a trait that helps an animal survive in its habitat. Animal species change over time to better fit their environments. Plant or animal species subjected to a major change in their environment over a long period (years of flooding, the appearance of a new predator, etc.) will do one of three things: leave, change, or die. If a species changes in any way over time to better fit into its environment, it has adapted to it. Adaptation involves changes that are passed on to the next generation, not just changes to one animal.

One primary illustration of an adaptation is camouflage. For example, a Great Horned Owl can sit still on a tree branch and remain unnoticed by a predator or its prey, because the colors and patterns of its feathers match the tree bark and branches. The species has adapted to its surroundings with camouflage; a bright pink owl would not fare so well in the forest. Camouflage describes any color, shape, or behavior that helps an animal hide from predators or prey.

MATERIALS:

- Paper and pencils
- 15-20 objects of various sizes and colors, some that will blend into and some that will stand out from the environment. A sample list might be:
 - 1 pink ribbon
 - 2 soda cans: one red, one green
 - 4 small pieces of construction paper: one green, one brown, one pink, one blue
 - 1 green bandana

- 1 drinking straw
 - 4 crayons or pencils: one red, one yellow, one green, one brown
 - 1 piece of string
 - 2 pens: one black, one blue
1. Set up an “Unnatural Trail” before the group arrives by placing 15-20 objects along a stretch of trail or row of trees or bushes. Some items should blend in; others should be noticeable. The length of the trail depends on the size of the group: the larger the group, the longer the trail should be. (Example: with 10 participants, 10 yards might suffice, while with a group of 25, participants would likely run into each other at anything less than 20 yards.)
 2. Explain to students that they are about to go on a special trail. They will be able to walk the length of the trail at their own pace (without actually stopping or leaving the trail) to look carefully for some objects that do not belong. Ask students to find as many objects as they can and keep a list. Emphasize that they should not collect the objects and they should keep their findings a secret.
 3. Once everyone has had a chance to navigate the trail, have them re-group and report how many items they saw.
 4. After every participant has reported, tell the group how many objects were actually there, and go through the trail as a group to pick up the objects one by one. Ask students, “Why did some objects stand out while others were much harder to find? Did anyone see all of them?”
 5. After finishing with the trail, explain that the objects that were hard to find were camouflaged, which for animals is an important adaptation to their habitat. As a group, discuss these questions: “What are some animals that use camouflage? How does it help them hide? Why is camouflage necessary for the survival of some animals?”

ADAPTATIONS:

For younger students. Simply shorten the trail. Instead of listing individual items, students could just keep a count of how many things they saw.

For older students. Owls are very well adapted to succeed in their niche as nocturnal hunters. Their features include huge eyes with excellent night vision, off-center ears for sensitive triangulated hearing, flight feathers with special fringed edges for silent hunting, and sharp talons for grabbing prey. Have students draw an owl outline and then label its special body parts and describe how each one is used.

USEFUL LINKS:

For lots more about habitat, go to www.eco-schoolsusa.org and click on “How to become an Eco-School” in the menu at top, then click on “Eight Pathways,” “School Grounds,” and “Curriculum Connections” in the menu at left.





ACTIVITY THREE :

TREES ARE MAGICAL

Subjects: Life Science, Language Arts, Visual Arts

LEARNING OBJECTIVES:

- Refine observation skills
- Develop attitudes of empathy and stewardship

MATERIALS:

- Paper and pencils
- Clipboards
- Crayons
- Camera (optional)

In the film, the Great Tree plays an important role. Right outside your own door, trees of all kinds are waiting for you to discover them.

WHAT YOU DO:

1. Have each student choose his or her own special tree. Ask students to give their tree a name and make some observations about it. Is it taller or shorter than the other nearby trees? Can they reach their arms around its trunk? What shape are the leaves or needles? What patterns do the branches make? Are birds, squirrels, or any other animals using the tree as a home?
2. Have students draw their tree and write their observations about it. If you like, take photos of students with their trees.
3. Have students make leaf and bark rubbings of their tree. Place a sheet of paper on top of the bark, a leaf, or some needles, and rub over it with a crayon to see the pattern appear.
4. Try to make return visits to the trees in different seasons to observe changes throughout the year. Students can collect all their tree drawings, writing, and photos in a folder or book that they add to with each visit.

ADAPTATIONS

For older students. Ask students to research the characteristics and habitat needs of their chosen tree species and design a poster, short video, field guide entry, or other creative project to highlight these features.

USEFUL LINKS:

National Wildlife Federation's Trees for the 21st Century is a unique educational and tree-planting program for children ages 6 to 18, involving science-based learning, tree-planting, and ongoing stewardship activities. The Trees for the 21st Century initiative aims to teach children about the value of the environment; to expand the world inventory of trees to protect and improve natural resources; and to help children value long-term stewardship of trees, Earth's "perfect organic machines."

www.nwf.org/Get-Outside/Be-Out-There/Educators/Trees-for-the-21st-Century.aspx





ACTIVITY FOUR :

WRITER'S CORNER

Subjects: Language Arts, Visual Arts

LEARNING OBJECTIVES:

- Explore and expand upon themes from the film
- Compare the film with the books on which it is based
- Distinguish between natural and human objects

WHAT YOU DO:

The film *Legend of the Guardians: The Owls of Ga'hoole* and the book that inspired it are imaginative works of art. They provide ideal starting points for students to embark on artistic endeavors of their own. Here are some ideas for language and visual arts activities.

1. Read one or more of the books from the *Guardians of Ga'Hoole* series by Katherine Lasky. Compare the books with the movie. How does the movie expand on things that are just suggested in the book? What does the book tell us that the movie left out, and why?
2. Stage a play or puppet show based on the book.
3. Have students design a bookmark inspired by the images or ideas from the film.
4. Use a theme from the film as a jumping-off point for a writing assignment, a class discussion, or a creative work such as a video or collage. For example, what does it mean to "follow your gizzard?"
5. Have students invent an interview with one of the characters. Ask why they chose the character – what qualities are appealing about the character?
6. Introduce the concept of anthropomorphism. Ask students to explore, in writing or a discussion, how the movie owls are like and unlike real owls.
7. Contact a local nature center to find out if it has an owl kit or an owl program. This is a great way to learn more about owls and may also include some hands-on exploration of artifacts such as feathers and talons to inspire creative writing.

USEFUL LINKS:

Visit www.nwf.org/owls for more ideas and to download the corresponding Activity Guide for Kids and Families.



ACTIVITY FIVE :

ADOPT AN OWL!

Subjects: Language Arts, Visual Arts, Community Service, Technology

LEARNING OBJECTIVES:

- Define and describe specific owl adaptations and behaviors
- Communicate information about owls to others
- Build decision-making, prioritizing, and teamwork skills
- Participate in a community service project

WHAT YOU DO:

1. You can help save owlkind!
2. Hand out copies of the “All About Owls” factsheet. Lead a discussion with your students about the owl facts. Ask students, “What do all owls have in common? How are owls different from each other? What is your favorite owl species and why?”
3. Introduce your students to ways they can educate others about owls. Then organize an owl celebration in class, as part of a club activity or as a community event after school.
4. A goal of the event could be to raise funds to adopt an owl. These adoptions help NWF in its efforts to protect and recover wildlife habitat, and to educate people to appreciate nature right outside their doorstep.

PLANNING CHECKLIST FOR THE CELEBRATION:

- Identify your intended audience
- Choose a date and time
- Decide on a location
- Make and distribute flyers for the event
- Decide what activities will be included
- Decide on any other elements, such as food or beverages to be served

- Recruit volunteers to lead crafts and games
- Gather materials and equipment
- Set up for the day
- Have fun!
- Be sure to recruit a clean-up crew!

ACTIVITIES FOR THE EVENT:

Collaborate on a habitat mural in sidewalk chalk or on a large piece of paper

Make owl masks and have a parade

Fly kites – name some “owls” and some “prey” and chase each other!

ADAPTATIONS:

For older students. Students can take a central role in all of the event planning activities and outreach communications. They can put their computer skills to work to accomplish the tasks.

USEFUL LINKS

To Adopt an Owl and for more fun crafts, art and project ideas, download the Activity Guide for Kids and Families at www.nwf.org/owls

Help the National Wildlife Federation track wildlife sightings in your area through NWF’s Wildlife Watch at www.nwf.org/wildlifewatch. Ask students to write about or draw animals they see and submit sightings through the website.





ALL ABOUT OWLS

Circle true or false for the following statements about owls. After you have finished be sure to check your answers.

- True or False** There are lots of kinds of owls! Around the world, there are around 225 owl species. Nineteen species breed in North America.
- True or False** Most owls are nocturnal. They do their hunting at night and sleep during the day. Burrowing owls, though, aren't just night owls. They're often out and about during the daytime.
- True or False** Like most birds, owls have hollow bones. A lightweight skeleton and very large wings make them powerful fliers. Soft, fringed edges on their wing feathers muffle the whooshing sounds that most birds' wings make, so they can fly almost silently.
- True or False** An owl can't really turn its head all the way around. But it can rotate it an amazing three-quarters of the way (270 degrees). That means it can see in every direction—even straight backwards!
- True or False** Owls are stealthy! Owls depend on surprise to catch their prey. Owls' dull colors camouflage them and make them almost invisible at night.
- True or False** Big eyes collect more light than small ones, and owls' eyes are huge! They have some of the best night vision in the animal kingdom.
- True or False** Owls are far-sighted. Things that are very close-up seem blurry to them. They can see for long distances, though, especially in the dark.
- True or False** Owls have incredible hearing. From its perch in a tree, an owl can hear a tiny mouse scurrying on the ground beneath a thick blanket of snow.
- True or False** Your ears are straight across from each other, but owls have one ear opening higher than the other. Why? It helps the owl to pinpoint the exact location of a sound, which could be the difference between a good dinner or going hungry.

- True or False** Owls are loud! Their calls are at a low “sound frequency” that isn’t absorbed by trees and brush, so the sounds travel long distances.
- True or False** Does an owl’s face remind you of a satellite dish? The circular shape gathers and focuses sound and light to make the owl an even more effective hunter.
- True or False** Once owls catch their prey, they can feel it with filoplumes, tiny feathers like hair on their beaks and feet.
- True or False** What passes for polite table manners at your house wouldn’t “fly” in an owl family! Owls don’t chew their food. They swallow it whole or tear it into pieces with their sharp beaks. Then all the parts they can’t digest—bones, claws, teeth, fur, and feathers—are compacted into a pellet and coughed up. Scientists dissect these pellets to identify what’s inside to learn about owls’ diets.
- True or False** Favorite items on the owl menu include mice and other small mammals. Great Horned Owls are especially fond of skunks. It’s a good thing owls have a poor sense of smell!
- True or False** Some owls even eat other owls! The Great Horned Owl often kills and eats other owl species as well as hawks and falcons.
- True or False** Burrowing owls are only a little bigger than a robin. But they’re tough! Young owls will hiss like a snake to scare predators away from their burrows.
- True or False** Of all the animals in the world, barn owls are the best at finding prey just by sound. They can catch prey under the snow or even in total darkness and they can even tell what kind of prey it is by what kind of sounds it makes!
- True or False** Owls help people. They can be useful for rodent control. People put up nesting boxes for them so they can control rodent pests nearby. One family of owls can eat thousands of mice in a season!



NATIONAL EDUCATION STANDARDS

ACTIVITY ONE

GIVE A HOOT ABOUT HABITAT

Science: NSES

- Grades K-4 Standard C: Life Science
Characteristics of organisms, Organisms and environments
- Grades 5-8 Standard C: Life Science
Populations and ecosystems
- Grades K-8: Standard A: Science as inquiry
Abilities necessary to do scientific inquiry

English/Language Arts: NCTE/IRA

- Standard 7: Evaluating data
- Standard 8: Developing research skills

ACTIVITY TWO

OWL ADAPTATIONS

Science: NSES

- Grades K-4 Standard C: Life Science
Characteristics of organisms, Organisms and environments
- Grades 5-8 Standard C: Life Science
Regulation and behavior, Diversity and adaptations, Populations and ecosystems

English/Language Arts: NCTE/IRA

- Standard 7: Evaluating data
- Standard 8: Developing research skills

ACTIVITY THREE

TREES ARE MAGICAL

Grades K-4 Standard C: Life Science

- Characteristics of organisms, Life cycles of organisms, Organisms and the environment
- Grades K-8: Standard A: Science as inquiry
Abilities necessary to do scientific inquiry

English/Language Arts: NCTE/IRA

- Communications skills

Visual Arts: CNAEA

- Standard 1: Understanding and applying media, techniques, and processes

Social Studies: NCSS

- Standard IV: Individual development and identity

ACTIVITY FOUR

WRITER'S CORNER

English/Language Arts: NCTE/IRA

- Standard 1: Reading for perspective
- Standard 4: Communication skills
- Standard 5: Communication strategies

ACTIVITY FIVE

ADOPT AN OWL

English/Language Arts: NCTE/IRA

- Standard 4: Communication skills
- Standard 5: Communication strategies

Visual Arts: CNAEA

- Standard 1: Understanding and applying media, techniques, and processes

Social Studies: NCSS

- Standard X: Civic Ideals and practices

ACTIVITY SIX

FACT SHEET: ALL ABOUT OWLS

Science: NSES

- Grades K-4 Standard C: Life Science
Characteristics of organisms, Organisms and environments

