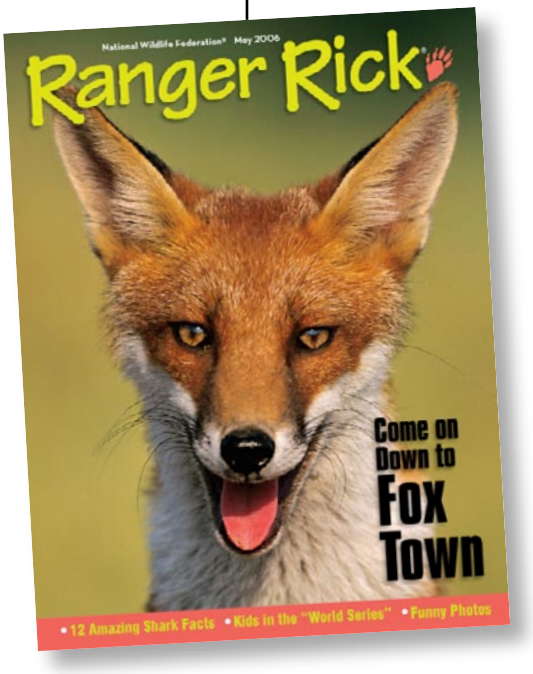
MAY 2006

National Wildlife Federation®

Ranger Rick® EDUCATOR'S GUIDE



This guide is designed to complement the May 2006 issue of National Wildlife Federation's *Ranger Rick*® magazine.

NATIONAL WILDLIFE FEDERATION™

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It is available online, free of charge, in PDF format. To access the guide, go to www.nwf.org/rrguide

To subscribe to Ranger Rick® *and find other fun stuff for kids, visit* www.nwf.org/kids

Introduction

Welcome to the *Ranger Rick Educator's Guide!*

This guide provides you with educational activities to bring **National Wildlife Federation's** *Ranger Rick*® magazine alive in the classroom and beyond. Using *Ranger Rick* feature articles as an entry point, this guide engages students ages 7-12 in exploring the natural world to build literacy, critical and creative thinking skills, and understanding across the disciplines. Activities are correlated with the National Education Standards for science and language arts, and are designed to assist you in meeting required curriculum objectives.

Can we have class outside today?

Find out how you can say "Yes!" at **www.nwf.org/backyardwildlifehabitat**. The outdoor environment offers excellent opportunities for active, hands-on, interdisciplinary learning. You can enhance the learning experience by creating your own habitat site. Revitalize an entire schoolyard, a garden, or even a rooftop, windowsill, or balcony by creating an outdoor classroom and sanctuary for birds, butterflies, and other wildlife.

How To Use This Guide

Each section of the guide is matched with a specific *Ranger Rick* feature. After you read through the magazine, choose the stories and activities that complement your curriculum and that will interest your students. Sections include:

- ***Learning Links.*** A summary of concepts presented in the article.
- ***Discussion Questions and Writing Prompts.*** Entry points to engage students in discussion or writing to develop literacy and thinking skills.
- ***Resources.*** Web sites and books where you can find further information.
- ***Activity Ideas.*** Quick investigations and extended projects to complement article topics.
- ***Student Pages.*** Ready-to-copy activity sheets for students.

We have also provided a ***Family Fun*** activities page for you to copy and send home with students.

Fox Town

pages 4-9

Learning Links:

Can a city be good habitat for wildlife? Students will discover how red foxes survive in the midst of London, and also how one wildlife watcher's careful observations over time revealed their story.

DISCUSSION QUESTIONS & WRITING PROMPTS

Pre-Reading Questions:

- What kinds of animals have you seen living in cities?
- Do you think a city is a good habitat? Why or why not?

Comprehension Check:

- Where is Laurent (the author and photographer of this story) originally from?
- Where does he live now?
- Where did he find the foxes he photographed?
- According to Laurent, how do people feel about sharing their neighborhood with foxes? Do they all feel the same?

Critical and Creative Thinking Connections:

- Are "city foxes" wild? Explain your answer.
- Would you like to have foxes in your neighborhood? Why or why not?
- Do you think foxes could live in your town or city? If so, where would they find food, water, and shelter? (Be specific!) If not, what's missing?
- Laurent says "I shoot foxes . . . with my camera!" It's clear that he learned a lot from watching and photographing the foxes. Have you ever "shot" an animal with a camera? Did it help you learn anything new about that animal?

RESOURCES

Fox by Caroline Arnold (Harper Collins, 1996). An in-depth look at the world of foxes, highlighting each of the six fox species in North America.

Red Fox Running by Eve Bunting (Clarion, 1996). This lyrical rhyme about a red fox hunting on a cold winter day is illustrated with beautiful paintings by Wendell Minor.

www.foxforest.org A good source of information about red foxes in general and their interactions with people in particular.

ACTIVITY IDEAS

Town Fox Country Fox

To survive from one generation to the next, animals need habitat that provides food, water, shelter, and a place to have their young. Discuss the habitat needs of red foxes. How do they find what they need in the forests and fields where they usually live? How do they find what they need in a city? After the discussion, invite students to tell a "day in the life" story about a fox in each habitat. By folding a piece of paper in half lengthwise, they can write and illustrate the two stories side by side, one on each half of the paper.

TIME:
30 Minutes
MATERIALS:
Paper
Pencils
Crayons, colored pencils, or markers

Habitats Here and There

For further explorations of the difference between city and country habitats, read Jan Brett's charming adaptation of the traditional fable Town Mouse Country Mouse (Putnam, 1994). Ask your students to consider whether they are "town mice" or "country mice" and how their own lives might be different if they lived in a place that was more rural or more urban. Exchanging letters or email with a group who lives in a different "habitat" from yours is a great way to expand students' horizons. To find out about the creative way two teachers from Wisconsin and Massachusetts approached this project, visit myschoolonline.com/folder/0,1872,52947-130799-56-26842,00.html.

TIME:
30 Minutes
MATERIALS:
Town Mouse Country Mouse by Jan Brett

Wild City Guide

Engage students in a brainstorming session about wildlife in your own city or town. List all the animals you've seen nearby. (Squirrels, rabbits, pigeons, sparrows, hawks, ducks, geese, frogs, turtles, insects, worms . . .) Match them with specific places where they find what they need to survive. Then use the lists as a springboard to create a field guide to local wildlife. For each entry, include an illustration or photo of the animal and its tracks; tips for identifying the animal; information such as what it eats, what eats it, where it finds shelter, and if and how it takes care of its young; and the best nearby places to see it. When it's complete, share the Wild City Guide with your community. You could distribute it at a public library, community center, or local nature center, or even sell it to raise funds for habitat improvement projects.

TIME:
60 Minutes or more
MATERIALS:
Library/Internet access for research
Computers
Cameras (optional)

Wildlife Observer

Point out how this story records events that took place over a span of two years. Then invite students to choose something in nature they'd like to watch for a period of time. They can find a place in their yard or neighborhood to visit regularly and keep a journal about their own "city creature" or another natural phenomenon. Photos, drawings, and written observations are all good ways to document these observations. Model how to record the date and create an entry, and encourage students to share their discoveries. This project can be as long- or short-term as you wish. Spring is an ideal time for observing phenomena with a distinct ending point such as a tree leafing out, a flower blooming, or a bird building a nest and chicks hatching.

TIME:
Variable
MATERIALS:
Nature journal
Camera (optional)
Pencils, pens, colored pencils

My First World Series

pages 16-20

Learning Links:

As Sophie describes the World Series of Birding, readers experience birdwatching from a kid's perspective. The elements of competition and teamwork add appeal to an outdoor activity that many students may have thought belonged only to expert adult birders.

DISCUSSION QUESTIONS & WRITING PROMPTS

Pre-Reading Questions:

- Have you ever been part of a team? What kind of team was it?
- What qualities does a team need to succeed?

Comprehension Check:

- What's special about Cape May, New Jersey?
- What happens during Cape May's World Series of Birding?
- What was the name of Sophie's team? How many kids were on the team?
- About how many teams competed in the World Series?
- Before the World Series, how did Sophie's team get ready?
- Describe what happened on "the big day."

Critical and Creative Thinking Connections:

- The Rockin' Robins counted 75 species of birds in one long day of birding. Does that seem like a lot to you? How many species of birds can you name?
- The team spent lots of time practicing and preparing for the World Series. How did they put their work to use on the big day?
- What makes a good team? Would you say the Rockin' Robins worked well as a team? Find examples in the story to support your opinion.
- Is birdwatching interesting to you? Did reading this story change your feelings about it in any way?
- Would you compete in the World Series if you had the chance? Why or why not?

RESOURCES

Take a Backyard Bird Walk by Jane Kirkland (Stillwater, 2001). Especially for kids, this book is full of tips for attracting, watching, and identifying birds.

Stokes Beginner's Guide to Birds (Little, Brown, 1996). This pocket-sized field guide is perfect for the beginning birder, highlighting the most common birds. Available in eastern and western versions.

www.njaudubon.org/wsb Find out all about the World Series of Birding, including the results from this year's competition, at the official Web site.

www.audubon.org/local The National Audubon Society is a great resource for birding. On this page, you can find local Audubon chapters and events in your area.

www.birdday.org International Migratory Bird Day takes place in May each year. Check out this year's activities, resources, and events!

ACTIVITY IDEAS

Be a Birder

TIME:
30 Minutes or more
MATERIALS:
Binoculars
Field guides
Bird Observer student page

Use this story to inspire some birdwatching of your own. If you already know a few of the most common birds in your area by sight and sound, teach them to your students. If you don't, learn them together! Take binoculars and field guides outside and show students how to use them. Put up birdfeeders to increase your success, and check out a variety of habitats. Try "pishing" to bring curious birds closer. (*See the next activity for ideas about enhancing your walk with an expert perspective.*) Have students record their observations on the **Bird Observer student page**. For extra motivation, organize your own "world series" event where teams of students count as many species as they can in a given time period.

Bird Talk, Bird Walk

TIME:
60 Minutes
PREPARATION:
Arrange a visit with a local birder

Invite an expert birder to speak to your group about his or her hobby. Ask questions such as: How did you first get interested in birding? Did someone inspire you to begin? How long have you been doing it? How did you learn your identification skills? Where are your favorite local places to watch birds? Have you traveled to any faraway places to birdwatch? What are your favorite things about birdwatching? To top off the treat, invite the birder to take your students on a birdwatching walk after the talk.

Whose View?

TIME:
30 Minutes
MATERIALS:
Past issues of *Ranger Rick*

Sophie tells her birdwatching tale firsthand in "My First World Series." Have students compare this story with others in *Ranger Rick* written in third person or narrated by animals or imaginary characters. Discuss students' observations about point of view. Does the voice in which the story is told make a difference? Do they prefer one style over another? For other *Ranger Rick* stories that feature kids describing their outdoor adventures, check out "Iceland is Hot!" (May 2005), "Smile, Say Grebes" (June 2005), and "We're Herp Hounds" (coming in June 2006). Extend the activity by having students write about their own outdoor adventures to create a class magazine. Send a copy to the *Ranger Rick* editors, too! Or write and tell them which point(s) of view you like best, and why. They'd love to hear from you. (**rick@nwf.org**, 11100 Wildlife Center Dr, Reston, VA 20190)

Flyway Highways

TIME:
15 Minutes
MATERIALS:
U.S. map
Internet access

Cape May, New Jersey, is a great place for birdwatching because of its location along the Atlantic flyway. Migrating birds fly along this "highway in the sky" every spring and fall as they travel between their summer and winter habitats. Have students find Cape May on a map and trace the path a bird might take as it flies over Delaware Bay. Can they see how Cape May acts as a funnel that concentrates birds? Migrating birds also travel the Mississippi, Central, and Pacific flyways. Have students look at the flyway maps at **birdnature.com/flyways.html** and then determine whether they live in the path of any of these flyways.

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Student Page

BIRD OBSERVER

Be a birdwatcher! Each time you see a new bird, add it to the list below. If you know the bird's name, write it down. Then draw or describe how it looked, where you saw it (such as on the ground, at a feeder, or in a tree) and what it was doing (such as eating, flying, or resting).

Name of Bird	Seen Where?	Doing What?	Description or Drawing of Bird

Sharks

pages 22-29

Learning Links:

Sharks occupy a variety of niches in their ocean habitat. Stevie, an enthusiastic great white, engages readers in an in-depth look at the many different sizes, shapes, feeding strategies, and abilities within the shark family.

DISCUSSION QUESTIONS & WRITING PROMPTS

Pre-Reading Questions:

- True or false? Sharks kill hundreds of people every year.
- True or false? People kill millions of sharks every year. Take a guess. Then read the story to find out the truth!

Comprehension Check:

- How long have sharks swum the seas?
- How big was the extinct shark cousin megalodon?
- What's the biggest shark alive today?
- Which shark swims fastest?
- Describe three different ways that sharks featured in this story get their food.
- What are the two ways a baby shark can begin its life?

Critical and Creative Thinking Connections:

- According to Stevie, most sharks are usually harmless. How do you feel about them? Can you explain the reason for your feelings?
- If you could, would you swim with a whale shark as the divers are doing in the photo on page 25?
- Adaptations are body parts or behaviors that help an animal survive. What are some of the adaptations that sharks in this story have? How do they help the shark get food, avoid a predator, or find a mate?

RESOURCES

Sharks: Challengers of the Deep by Mary Cerullo (Cobblehill Books, 1993). A complete reference book on sharks, illustrated with many excellent photographs.

Sharks by Seymour Simon (Harper Trophy, 1996) An introduction to shark diversity and characteristics paired with fascinating photographs.

seaworld.org/infobooks/Sharks&Rays/home.html Sea World's compilation of shark facts. A good reference for specific questions.

flmnh.ufl.edu/fish/sharks/attacks/relarisk.htm The International Shark Attack file compares the relative risk of shark attacks with other hazards. Fascinating!

ACTIVITY IDEAS

The Truth About Sharks

Stevie, the great white shark who narrates this story, tried hard to set the record straight about sharks. But on the Truth About Sharks student page that follows, someone has gotten Stevie's facts all mixed up. Have students rewrite each of these false statements to make it true. Stevie will thank them for helping to spread the real story about sharks!

TIME:
30 Minutes
MATERIALS:
Truth about Sharks student page

Swallowed by a Shark

Wondering how big a shark really is? Have students measure out 40 feet (12 m) on an asphalt play area or parking lot and draw a life-size whale shark outline. Inside it, they could also add outlines of other sharks from the story, such as the 16-foot (5-m) great white, the 12-foot (3.5-m) hammerhead, the 8-foot (2.5-m) mako, and the 3-foot (1-m) epaulette. How many students lying end-to-end can fit inside the whale shark? Which shark is closest to their own size? Are any sharks smaller than they are?

TIME:
30 Minutes
MATERIALS:
Chalk
Measuring tape

Record Setters

This story is full of facts about "extreme" sharks, from the biggest and fastest to the farthest travelers and the weirdest looking. Have students create a "Book of World Records" for sharks using what they learned in *Ranger Rick* as well as in the other recommended resources. Encourage them to make up their own fun and zany categories, too!

TIME:
30 Minutes
MATERIALS:
Library/Internet access to research sharks

Cool Human Facts

In this story, Stevie the shark takes students on a tour and introduces them to a variety of fascinating sharks. After they read his story, tell students it's their turn to share some cool facts about humans with Stevie. Have them create a skit or write a story about taking him on a tour of their school or neighborhood. On the tour, they can introduce him to their friends and explain how people move around, how we get food, and other details about how we live. Perhaps they can even help clear up some of Stevie's misconceptions about humans. (For instance, we aren't *all* shark killers! Some shark fans might even hang pictures of sharks in their bedrooms!)

TIME:
30 Minutes
MATERIALS:
Paper and pencils

National Wildlife Federation® Ranger Rick®

Student Page

THE TRUTH ABOUT SHARKS

Stevie the shark tried hard to set the record straight about sharks in *Ranger Rick*. But somebody got Stevie's facts all mixed up. Fix each of these statements to make it true.

Mixed-Up Tales	The True Story
"Each year, sharks of all kinds kill millions of people."	
"Great whites like Stevie are the biggest sharks that ever lived."	
"Whale sharks get their name because they eat whales."	
"Sawsharks and hammerheads get together to work on construction projects."	
"Wobbegong is a kind of seaweed disguised as a shark."	
"A basking shark once won an Olympic medal for drinking up a whole swimming pool."	

Ranger Rick's Adventures

pages 30-33

Learning Links:

By meeting up with Wally Warbler in Deep Green Wood and later in Canada's boreal forest, Ranger Rick and his friends discover how the choices we make in one place can affect other places far away.

DISCUSSION QUESTIONS & WRITING PROMPTS

Pre-Reading Questions:

- Do you know anyone who lives in one "habitat" in the summer and another in the winter? Why do some people do this?
- On a typical day, how many different kinds of paper products do you use? Where do you think the paper you use comes from?

Comprehension Check:

- Why are Wally Warbler and his friends in Deep Green Wood?
- What makes Wally worried when he sees Ranger Rick open his mailbox?
- Where is the boreal forest?
- How are paper products and the boreal forest connected?
- Why are Wally, Wendy, and their eggs in danger?
- How does Sammy save the day?

Critical and Creative Thinking Connections:

- Why did Wally and Wendy come to the boreal forest?
- For birds, what are some advantages of migrating? What are some advantages of staying in one place all year?
- Do you think Wally, Wendy, and their eggs are safe at the end of the story? Why or why not?
- At the end of the story, Sammy says next time he'll bring recycled paper. Why?
- What are some ways that people could use less paper?

RESOURCES

borealbirds.org The Boreal Songbird Initiative's Web site is packed with information about boreal birds.

www.borealforest.org/edresc.htm Here you can learn about the many other plants and animals that live in the boreal forest.

birdday.org International Migratory Bird Day takes place on May 13. This year's theme is the boreal forest. Check out the Web site for a wide variety of activities, resources, and events to help you celebrate.

nrdc.org/land/forests/gtissue.asp Here's a helpful guide for choosing paper products that are better for our environment.

ACTIVITY IDEAS

Birds of the Boreal

TIME:
Variable
MATERIALS:
Internet access
Field guides

Explore the bird guide at borealbirds.org to find out more about the birds that rely on the boreal forest to raise their young. Can you figure out what kind of warbler Wally is? What other warblers, and what other kinds of birds, join him in the boreal forest? Do any of them migrate through your area on the way to their summer habitat? Investigate how to identify them by sight and sound, as well as what their favorite foods and habitats are. Then keep an eye out for them this spring. Try putting up a bird bath or visiting a wetland. (These are important resting places along the way.) Can you spot any of them?

Snowbirds and Sunbirds

TIME:
45 Minutes
MATERIALS:
Internet access
Paper and pencils

Just for fun, have students take the Bird Personality Quiz at www.nwf.org/migratorybirds. After they determine their "identities," ask them to research the birds and write postcards or journal entries about their migration journey and their destination. The migratory birds could address their letters to resident birds who remain all year in the north or in the tropics. Encourage them to describe the journey and what they saw along the way, discuss what they've been doing since they arrived at their destination, and ask questions about life back in the other habitat.

Boreal Adventure

TIME:
45 Minutes
MATERIALS:
Internet access
Paper and pencils

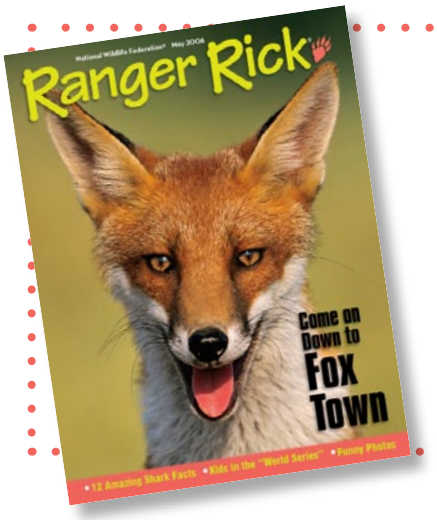
Invite students to explore the boreal forest Web sites in the Resources section. Then ask them to imagine that they, like Ranger Rick, are taking a camping trip in the boreal forest. Have them write some journal entries from the trip describing how the forest looked and felt, the sounds they heard, the birds and other animals they saw, and what they did there.

Trees in the Mailbox

TIME:
Variable
MATERIALS:
Mail
Internet access
Paper-making supplies, if desired

Have students inventory the contents of their mailboxes at home, tallying up a day's worth of postcards, letters, catalogs, flyers, etc. Have them also note how much of this was "junk mail," unsolicited mail that got tossed straight into the recycling bin or trash can. They can total the amounts for the whole group and calculate averages over different time scales (a week, a month, a year). Then invite students to explore some options for reducing their impact on the boreal forest due to paper consumption:

- Check out newdream.org/junkmail for tips to reduce junk mail.
- Brainstorm ideas for reducing paper consumption, such as choosing reusable rather than disposable products.
- Find out about alternatives to paper from trees, such as recycled paper and "tree-free" papers made from kenaf, hemp, rice and wheat straw, and other materials.
- Learn about the paper-making process by creating handmade paper. Here are two helpful Web sites: exploratorium.edu/exploring/paper/handmade.html and denisefleming.com/pages/papermaking.html.



Family Fun!

Dear Parent or Guardian,
Your child is reading* Ranger Rick *magazine in class. Each month, amazing photos, feature articles, and activities bring nature, wildlife, and conservation to life. Extend the learning and fun at home with these engaging family activities. Enjoy!

MONKEY BUSINESS

Check out the photo of the macaques on pages 2-3. Those expressions speak as loud as words! What do you think they might be saying to each other? If you enjoy this game, make up more captions for the "Funny Fotos" story on pages 34-39. Have fun telling stories about what might have happened before and after each photo was taken.

AMAZING TREES

In "Ask Rick" on page 11, you read about tall trees. Where do the biggest trees grow in your neighborhood? Head outside and find out! Seek out the tallest tree around, or one that's so wide you can't get your arms all the way around it. For more interesting tidbits about record-setting trees, explore the National Register of Big Trees at **americanforests.org/resources/bigtrees**.

BIRDS ON THE BRAIN

May is a great time for birdwatching. After you read about competitive birdwatching in "My First World Series" (pages 16-20) and birds in the boreal forest in "Ranger Rick's Adventures" (pages 30-33), see how many birds you can spot in your neighborhood. Do you recognize any year-round residents? Any "visitors" just passing through on their way north? Look them up in a field guide and see where they might be headed.

MIGRATORY BIRD PARTY

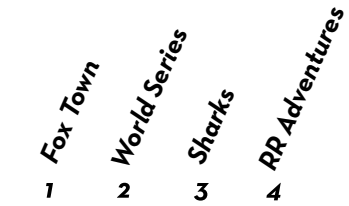
May 13 is International Migratory Bird Day. At **birdday.org/events**, you can check the map of events to find out if there's a celebration planned in your area. If so, make plans to attend and learn more about migratory birds!

JUNK YOUR JUNK MAIL

In "Ranger Rick's Adventures" (pages 30-33), Wally Warbler explains to Ranger Rick that his boreal forest home is disappearing as trees are cut to make paper. Even worse, a great deal of paper becomes junk mail and catalogs that no one even reads. Want to make a difference starting with your very own mailbox? You'll find lots of tips for reducing junk mail at **newdream.org/junkmail**. And a little bird will thank you!

For more interactive family fun, be sure to visit www.nwf.org/kids

NATIONAL EDUCATION STANDARDS



NATIONAL SCIENCE EDUCATION STANDARDS

Science as Inquiry

		1	2	3	4
K-8	Abilities necessary to do scientific inquiry	■	■		■
K-8	Understandings about scientific inquiry	■	■		■

Life Science

K-4	Characteristics of organisms	■		■	■
K-4	Life cycles of organisms			■	■
K-4	Organisms and environments	■	■	■	■
5-8	Structure and function in living systems				
5-8	Reproduction and heredity			■	■
5-8	Regulation and behavior	■			■
5-8	Populations and ecosystems				■
5-8	Diversity and adaptations of organisms	■		■	■

Earth & Space Science

K-4	Properties of Earth materials			■	
K-4	Objects in the sky				
K-4	Changes in earth and sky				■
5-8	Structure of the Earth system				
5-8	Earth's history			■	
5-8	Earth in the solar system				

Science & Technology

K-4	Abilities to distinguish between natural and human objects	■			■
K-8	Abilities of technological design				
K-8	Understanding about science and technology				■

Science in Personal and Social Perspectives

K-8	Personal health			■	
K-4	Characteristics and changes in populations				
K-4	Types of resources		■		■
K-4	Changes in environments	■			■
K-4	Science and technology in local challenges				■
5-8	Populations, resources, and environments				■
5-8	Natural Hazards			■	
5-8	Risks and benefits			■	■
5-8	Science and technology in society				■

History and Nature of Science

K-8	Science as a human endeavor	■	■		■
5-8	Nature of science				■
5-8	History of science				

ENGLISH LANGUAGE ARTS

1	Reading for perspective	■	■	■	■
2	Understanding the human experience		■		
3	Evaluation strategies	■	■	■	
4	Communications skills	■	■		■
5	Communications strategies	■		■	■
6	Applying knowledge	■	■		
7	Evaluating data	■		■	■
8	Developing research skills	■		■	■
9	Understanding and respecting diversity				
10	Developing English competency	■	■	■	■
11	Participating in literary communities		■		
12	Using language for oneself	■			