

April-May 2002
Teacher's Guide
Vol. 1 No. 6

"FOR THE INCREASE
AND DIFFUSION OF
GEOGRAPHIC KNOWLEDGE."

NATIONAL GEOGRAPHIC for Kids!

Dear Educator:

We're approaching the time of year when spring fever hits. If your students feel like horsing around, they'll love this issue's cover story on the **Wild Ponies** of Assateague, pages 4-9. The article explains how these remarkable creatures adapt to life on a marshy island off the coasts of Virginia and Maryland. Students learn some surprising information about the ponies, including the fact that, technically, they aren't ponies at all.

That's not the only story in this issue of NATIONAL GEOGRAPHIC FOR KIDS that comes with a surprise. Do you know who designed the first American flag? If you think it was Betsy Ross, you'd better read **Broad Stripes and Bright Stars**, pages 18-22. The article details the true beginnings of our nation's most powerful symbol and chronicles the importance of the U.S. flag as a sign of American unity.

This year marks the 80th anniversary of an important discovery in Egypt—King Tutankhamun's tomb. **In Search of the Boy King**, pages 10-16, tells the story of Howard Carter and Lord Carnarvon's long search for the Egyptian king's burial place. It describes the tomb's surprising location and some of the unusual artifacts Carter and Carnarvon uncovered. The **Diagram of the Month**, pages 17-18, is a fascinating, three-dimensional drawing of the tomb and its contents.

We have one more surprise. In honor of Earth Day on April 22, we are including a special supplement called "**The Fantastic Forest**," pages 1a-8a. Brought to you in cooperation with the International Paper Company Foundation, this eight-page section celebrates the forest as one of our most valuable natural resources. Your students will learn that a forest is much more than just a bunch of trees. It is a community of interdependent creatures and a significant contributor to major environmental processes, such as the water cycle and the oxygen-carbon dioxide cycle.

Enjoy your summer. And be sure to encourage your young readers to log on to www.nationalgeographic.com/ngforkids in June for our summer website issue. They'll find great games, a feature on the Grand Canyon, and lots of other summer fun.

See you in September.

Sincerely,



Mary Dalheim
Editor, NATIONAL GEOGRAPHIC FOR KIDS

NATIONAL GEOGRAPHIC FOR KIDS is a publication of the
NATIONAL GEOGRAPHIC SOCIETY brought to you in cooperation with the
INTERNATIONAL PAPER COMPANY FOUNDATION
and NATIONAL GEOGRAPHIC SOCIETY EDUCATION FOUNDATION

Wild Ponies

Background

For hundreds of years, ponies have run wild on Assateague Island, located off the coasts of Maryland and Virginia. Though historians offer conflicting explanations for how the ponies first arrived there, all agree that the animals' ancestors were once tame. There are two main pony herds, one on each side of the island. Within the herds the ponies live in smaller bands of two to twelve animals.

Because an overpopulation of ponies could severely damage the island's ecology, humans have stepped in to manage the population. One way they thin the herd is through the annual pony auction on nearby Chincoteague Island. Local cowboys herd ponies from Assateague across a narrow channel. There some of the foals are auctioned for as much as \$10,000. The auction is a very popular tourist attraction and raises funds for the Chincoteague Fire Department, which organizes the event.

Discussion Questions

- What is a pony? *(A horse that is less than 58 inches tall when fully grown)*
- Why aren't the ponies of Assateague real ponies? *(If they lived in a less harsh environment, they could grow taller than 58 inches.)*
- What is a feral animal? *(A wild animal whose ancestors were tame)*
- How do you think the ponies of Assateague became feral? *(No one knows for sure. Some people think the first ponies were aboard a Spanish ship that wrecked near Assateague Island and that the ponies swam ashore. Many think the first settlers of mainland Maryland and Virginia brought the ponies there to graze.)*
- What is a band of ponies? *(A small group of ponies that live together. Bands range from two to twelve ponies.)*
- What's the difference between a band of Assateague ponies and a herd of Assateague ponies? *(A herd has many bands of ponies. There are two main herds on Assateague Island. One lives on the Maryland side of the island. The other lives on the Virginia side. A fence at the state line separates the herds.)*
- Why is life hard for ponies on Assateague Island? *(Summer brings hot temperatures and lots of biting insects; winter brings very cold winds. There's not a lot to eat on the island.)*



- What do you think would happen if park rangers didn't control the number of ponies that live on Assateague Island? *(A larger number of ponies would harm the ecology. For example, the increased pony population might eat most of the island grasses, destroying homes for some animals and causing serious soil erosion. Plus, the ponies would eventually run out of food.)*
- How do park rangers control the number of ponies on the Maryland side of the island? *(They inject mares with a vaccine that keeps them from having babies.)*
- How do park rangers control the number of ponies on the Virginia side? *(They conduct an annual pony auction.)*

Book Link

Misty of Chincoteague by Marguerite Henry (several publishers, first published in 1947; approximately 200 pages). In this classic horse tale, two children dream of owning a wild pony. Their desire increases when Phantom and her colt are rounded up for the annual auction in Chincoteague.



Web Links

Wild Pony Express: Gallop to www.nationalgeographic.com/ngforkids/teachers for more facts and photos.

Answers

"Geography Horseplay," page 9

1. Chincoteague; 2. Assateague; 3. Atlantic;
4. Maryland; 5. Virginia

Answer to the Riddle: It is a little hoarse.

In Search of the Boy King



Background

This year marks the 80th anniversary of the discovery of King Tutankhamun's tomb. In 1922, after searching for five years, Egyptologist Howard Carter and his patron, Lord Carnarvon, found the ancient pharaoh's grave in the rocky cliffs of Egypt's Valley of the Kings. The tomb, more than 3,000 years old, was the first pharaonic grave ever found intact, and its contents stunned the world.

King Tutankhamun was just a boy when he ascended the throne. Experts debate his exact age and the years of his reign, but many believe he became pharaoh in 1333 B.C. when he was only eight years old.

Discussion Questions

- Who was King Tutankhamun? (*An ancient Egyptian king or pharaoh*)
- Where in Egypt were Howard Carter and Lord Carnarvon searching for King Tut's tomb? (*In the Valley of the Kings*)
- In what year did Carter and his team discover the tomb? (*1922*)
- What did Carter see when he first peered into the tomb's antechamber? (*Gold-covered couches, statues, chariots, chests, a throne, etc.*)
- What's the most important object in the burial chamber? (*The pharaoh's mummy*)
- What did Carter do before he opened the shrine doors in the burial chamber? (*He wrote down each object they'd found so far, photographed or drew it, then removed it and stored it safely.*)
- Why was it so important to carefully document each object they found? (*Every object was a clue to the ancient civilization. If anything got broken or misplaced, it might be impossible to figure out what the object was.*)
- Why did Carter suspect King Tut had been murdered? (*King Tut died very young, and his tomb wasn't fit for a king. Carter wondered if the pharaoh had been buried quickly so no one could investigate his death.*)
- We now know something about King Tut's mummy that Carter didn't know. What is it? (*X-rays of King Tut's skull show he received a blow to his head that could have killed him.*)

- Why is 2002 a good year to remember the discovery of King Tut's tomb? (*Because it's the 80th anniversary of the find.*)
- What was the hardest part of Carter's job? (*Possible answers: Having the patience to keep looking for so many years; working in the heat; carefully documenting every object in the tomb; getting the money to pay for the search*)

Book Link

Mummies of the Pharaohs: Exploring the Valley of the Kings by Melvin Berger and Gilda Berger (National Geographic, 2001; 64 pages). For more information, go to www.nationalgeographic.com/books/kids_splash.



Web Links




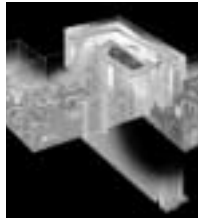


Dig deeper into ancient Egypt's hidden tombs at www.nationalgeographic.com/ngforkids/articles.

Answers










"Clues to the Past," page 15

1. A headrest
 - Ancient Egyptians believed that besides giving the king a place to rest his head, headrests ensured his rebirth in the next life.
2. An earring
 - A falcon
 - Ancient Egyptians believed it protected the king.
 - King Tut standing between two rearing cobras, another symbol of protection
3. A gold-covered cobra
 - Ancient Egyptians believed that this amulet, or charm, would help the pharaoh pass safely through the next life, or underworld.

NATIONAL GEOGRAPHIC *for* Kids!

ARTICLE/ DEPARTMENT	Reading	Writing	Science	Social Studies	CONTENT OVERVIEW <ul style="list-style-type: none"> ● Literacy Skills ⊕ Topics
 <p>Geo News pp. 2-3</p>	■		■	■	<ul style="list-style-type: none"> ● Reading for information ⊕ Threatened species ⊕ Ecology ⊕ Alternative energy source
 <p>Teaching Unit "Wild Ponies" pp. 4-9 ■ Feature Article ■ On the Map</p>	■		■	■	<ul style="list-style-type: none"> ● Reading for information ● Developing vocabulary ● Reading maps ⊕ Populations and ecosystems ⊕ Animal behavior ⊕ Animal habitat
 <p>Teaching Unit "In Search of the Boy King" pp. 10-15 ■ Feature Article ■ Think About It</p>	■		■	■	<ul style="list-style-type: none"> ● Reading for information ● Developing vocabulary ● Analyzing information ⊕ Archaeology ⊕ Ancient Egypt
 <p>Diagram of the Month "Rooms in a Tomb" pp. 16-17</p>	■		■	■	<ul style="list-style-type: none"> ● Reading a floor plan ⊕ Ancient Egyptian burial practices
 <p>Teaching Unit "Broad Stripes and Bright Stars" pp. 18-23 ■ Feature Article ■ Writing Workshop</p>	■	■		■	<ul style="list-style-type: none"> ● Reading for information ● Developing vocabulary ● Writing to persuade ⊕ U.S. History ⊕ Civic pride; citizenship ⊕ Flag symbolism
 <p>Photo Finish "Spring Cleaning" p. 24</p>	■		■		<ul style="list-style-type: none"> ● Interpreting a photograph ● Reading for information ⊕ Sea ecosystem ⊕ Symbiotic relationships

Issue at a Glance

DIRECTED ACTIVITY	SMALL GROUP ACTIVITY	INDEPENDENT ACTIVITY
<ul style="list-style-type: none"> Read and discuss the news items on pp. 4-5. <p>20 minutes </p>		<ul style="list-style-type: none"> Complete the activities in the Earth Day supplement entitled "The Fantastic Forest."
<ul style="list-style-type: none"> Read the article. Discuss the questions on p. TG 2. <p>60 minutes </p>		<ul style="list-style-type: none"> Solve the riddle in "Geography Horseplay" on p. 9. Watch Chincoteague ponies live on a ponycam at www.nationalgeographic.com/ngforkids/articles.
<ul style="list-style-type: none"> Read the article. Discuss the questions on p. TG 3. <p>60 minutes </p>	<ul style="list-style-type: none"> Have student groups complete the "Clues to the Past" activity on page 15 and report their answers to the class. <p>30 minutes </p>	<ul style="list-style-type: none"> Find out more about King Tut's life, death, and funeral at www.nationalgeographic.com/ngforkids/articles.
<ul style="list-style-type: none"> Examine the diagram and answer the questions on pp. 16-17. <p>15 minutes </p>		<ul style="list-style-type: none"> Get another perspective on King Tut's tomb and learn more about the artifacts buried with him at www.nationalgeographic.com/ngforkids/articles.
<ul style="list-style-type: none"> Read the article. Discuss the questions on p. TG 6. <p>60 minutes </p>	<ul style="list-style-type: none"> Have student pairs design a flag for your school. <p>30 minutes </p>	<ul style="list-style-type: none"> Find out your state flag by visiting www.nationalgeographic.com/ngforkids/articles.
<ul style="list-style-type: none"> Read and discuss the article on p. 24. <p>5 minutes </p>	<ul style="list-style-type: none"> Have student pairs report on other symbiotic relationships (e.g., relationship between hermit crab and sea anemone). <p>40 minutes </p>	

Broad Stripes and Bright Stars

Background

What does the U.S. flag mean? There's no easy answer. Marilyn Zoidis, curator of the Smithsonian's Star-Spangled Banner Project, says that the flag's meaning has varied by time, place, and person. Both Ku Klux Klan and civil rights marchers have proudly carried Old Glory. So have Daughters of the American Revolution, Little League teams, veterans, AIDS activists, and pacifists.

The Stars and Stripes can mean something slightly different to each person who salutes it. Yet the flag's deep power stems from the one thing everyone sees—a vivid emblem of the United States.

Discussion Questions

- If I stuck a T-shirt on a pole and hung it from the wall, would people salute it? (*No*)
- Why not? (*Possible answers: It's just a piece of cloth. People would think it's a joke.*)
- But people salute this piece of red-white-and-blue cloth. Why? (*Possible answers: It's the flag. It represents the United States. It's a way of showing respect for the country.*)
- So when we salute the flag, we're honoring more than just a piece of cloth, right? (*Yes*) That means the flag is a what? (*A symbol*)
- And what's a symbol? (*Possible answers: A sign, something that stands for something else*)
- What does the flag symbolize? (*Possible answers: The country and its people, freedom, democracy, unity, hope*)
- What does the flag mean to you? (*Answers will vary.*)
- Look at the pictures at the top of pages 20-21. What do they show? (*They show how the American flag has changed.*)
- When was the first U.S. flag created? (*1777*)
- When was the most recent flag created? (*1960*)
- What part of the flag has basically stayed the same? (*Red and white stripes*)
- How many stripes were there usually? (*13*)
- What do they represent? (*13 original states*)
- How has the flag changed the most? (*There are more stars in the blue corner.*)
- How many stars does today's flag have? (*50*)
- Why are there more stars than there were? (*The stars represent states, and the number of states has increased.*)
- What are some nicknames for the flag? (*Old Glory; the Stars and Stripes; the Star-Spangled*



Banner; the Red, White, and Blue)

- What are some other symbols of the United States? (*Possible answers: Uncle Sam, American eagle, Statue of Liberty, White House, Mount Rushmore*)

Book Link

Star-Spangled Banner by Margaret Sedeen (National Geographic, 2001; 288 pages). Photos, paintings, and stories chart Old Glory's history—including reactions to September 11, 2001. Learn more at www.nationalgeographic.com/books.



Web Links

Find these resources at www.nationalgeographic.com/ngforkids/teachers.

Star-Spangled Banner: The Smithsonian provides a detailed overview of America's most famous flag.
Awesome Library: Link to lesson plans and other resources.

Flag of the United States: A flag lover has compiled a wealth of images and information.

Flags of the World: The U.S. section includes historic flags, state flags, and a 39-star flag that has become a collector's item.

Writing Contest

Students submit paragraphs that describe a new U.S. symbol. The grand prize is a trip to Washington, D.C. See p. 23 in the Student Magazine for details.

Name: _____

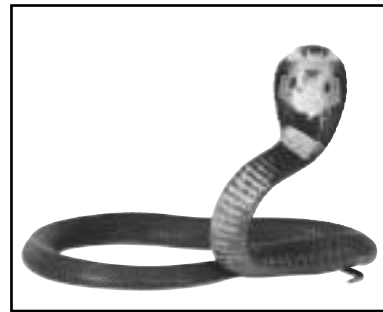
School Mascot

It's your job to select your school's new mascot. The mascot you pick must meet certain qualifications, however. Use the list below to cross out those candidates that don't qualify. You'll be left with the right mascot.

The new mascot:

1. must not be a mummy.
2. must be smaller than an elephant.
3. must not live in a band.
4. must have legs.
5. must not have a beak.
6. must be larger than a football.
7. must not have hooves.

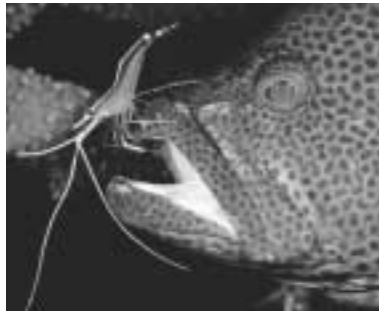
Art will
be LIVE



Cobra



Goat



Cleaner Shrimp



Basking Shark



Pony



King Tut



Eagle



Cowboy

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 PAGE 6: WALTER BIBKOW/FOLIO. PAGE 7: PHOTODISC; JIM LEACHMAN; FRED BAVENDAMMINEN PICTURES; NICK CALOYANIS/NATIONAL GEOGRAPHIC IMAGE COLLECTION; JAMES L. STANFIELD; KENNETH GARRETT; DIGITAL VISION; JAMES L. STANFIELD. PAGE 8: EMANUELE TARONIPHOTO/PICTUREQUEST.

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Puzzling Postcard



Look! You got a postcard from your best friend, who just visited a national park. Unfortunately, the postcard fell out of a pile of mail, and your dog picked it up. Dog slobber smeared some of the words. How will you figure out what it says?

Here's some help. Look at the list below. For each blank, write a word that fits the description. When you're done, fill in the blanks in the postcard with the words from your list. You'll get a funny story.

Word List

1. _____ your name
2. _____ a color
3. _____ an adjective
4. _____ a liquid
5. _____ a verb
6. _____ an "-ing" verb
7. _____ a wild animal
8. _____ an adjective
9. _____ an adjective
10. _____ your best friend's name

Dear _____ 1. _____ stone National Park with my
 I had a great time at _____ 2. _____ Faithful.
 family. One of the first things we saw was _____ 3. _____
 It's a famous geyser. A geyser is a spring in the ground that shoots hot
 _____ 4. _____ high into the air.
 I brought binoculars with me so I could _____ 5. _____
 wildlife. It turns out I didn't need them. One night, I was _____ 6. _____
 in my tent when I heard a funny noise. I peeked out of the tent and saw a big
 _____ 7. _____ going through our trash. Not all the wildlife at the
 park is _____ 8. _____. The trumpeter swan we saw was
 _____ 9. _____. So was the bald eagle that flew over our campsite.
 I can't wait to go back next year. Your pal,
 _____ 10. _____

NATIONAL
GEOGRAPHIC
for
Kids!
EXTRA

THE FANTASTIC FOREST

Teacher's
Guide



Dear Educator:

Earth is a beautiful planet. It is also a fragile one. The way we use its natural resources in a single location can affect ecosystems around the globe. Every April 22, millions of people from all over the world call special attention to Earth's beauty, and fragility, when they celebrate Earth Day. As part of their celebration, many observers participate in community projects that help protect resources such as air, water, soil, and forests.

This NATIONAL GEOGRAPHIC FOR KIDS supplement, brought to you by International Paper, takes a close look at one of these important resources—forests. Informative articles and engaging activities teach students that forests do more than decorate our land. They purify our air, protect our soil, regulate our water supply, and provide food and shelter for millions of species. In short, they are a fantastic resource worth sustaining.

You'll find that all of the material in "The Fantastic Forest" supplement supports your science curriculum by reinforcing the following standards-based objectives.

- **Forests sustain broad communities of plants and animals.**

"Organisms are interdependent. They depend on other organisms and nonliving components of the earth." *National Science Education Standards/National Academy of Sciences*

- **Trees are living things with a life cycle and special parts that help them grow and produce offspring.**

"Plants and animals have life cycles that include being born, developing into adults, reproducing, and eventually dying. The details of this life cycle are different for different organisms."

National Science Education Standards/National Academy of Sciences

- **Forest management helps meet the needs of the forest community as well as those of a growing human population.**

"People continue inventing new ways of doing things, solving problems, and getting work done."

National Science Education Standards /National Academy of Sciences

Celebrate Earth Day this year by reading and discussing "The Fantastic Forest," pages 1a-8a, with your students. After you finish the supplement, encourage students to share their new knowledge with family members. After all, Earth is everyone's home!

Sincerely,

Mary Dalheim
Editor, NATIONAL GEOGRAPHIC FOR KIDS

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What Is a Forest?

Background

When most people think of a forest, they picture lots of trees close together. A forest is much more than trees, however. It is a complex community, or group of living organisms, that includes many types of plants and animals. Delicate relationships exist among these living things.

Discussion Questions

- What is a community? (*All the living things in a certain area*)
- What community members do you see in the picture of a forest on pages 2a and 3a? (*Trees, skunk cabbage, woodpeckers, fox, squirrel, bee, flower, mushrooms, earthworms*)
- How do some of these community members help others? (*Possible answers include: Bees help flowers make seeds, oak trees provide squirrels with food and shelter, squirrels bury acorns that can grow into oak trees, mushrooms break down dead trees and return nutrients to the soil, woodpeckers help rid tree trunks of harmful insects.*)
- How might an oak tree and a skunk cabbage compete for food? (*Tree leaves grow and block the sun that the skunk cabbage needs to grow.*)
- Can you name a member of this forest community that eats another member? (*Possible answers include: The squirrel eats the oak tree's acorns; the fox eats berries.*)
- What nonliving things exist in this forest? (*Water, sun, air, soil*)
- How do the nonliving parts of the forest affect the living things? (*The nonliving things help the living things survive and grow.*)

Extension Activity

Community Roles: Scientists often sort members of a community into producers, consumers, and decomposers.

A *producer* is an organism that makes its own food by using energy from the sun. Most plants are producers. They convert the sun's energy, via photosynthesis, into sugars and starches.

Consumers must eat other living things to get the energy they need to survive. All animals and insects fit into this category because they do not have the ability to make their own food.

Decomposers are organisms (bacteria, fungi, certain insects) that get their energy by breaking down dead plant or animal matter.

Explain the concept of producers, consumers, and decomposers to your students. Then ask these questions about the forest picture on pages 2a-3a:

- Which of the living things in the forest picture are producers? (*Possible answers include oak tree, skunk cabbage, and flower.*)
- Which are consumers? (*Possible answers include bee, squirrel, fox, and woodpecker.*)
- Which are decomposers? (*Mushrooms*)

Answers "Forest Riddle," page 3a: 1. squirrel, 2. oak tree, 3. cabbage, 4. earthworm, 5. woodpecker, 6. Bees. Answer to the riddle: It barks.

Tree-mendous Gifts

Background

Forests cover almost one-third of the world's land. That includes approximately 750 million acres in the United States. These wooded lands play a crucial role in our environment and our lifestyle. Following are just a few of their contributions.

Air: Some people call forests Earth's "lungs" because their trees take carbon dioxide from the air and replace it with oxygen. To grow a pound of wood, a tree uses 1 1/2 pounds of carbon dioxide and gives off about a pound of oxygen.

Water: Trees also play a valuable role in the water cycle. They pull groundwater up through their roots, then release it through their leaves as water vapor. Trees also help water return to the ground in beneficial ways. When rain falls on bare ground, nothing breaks its force. The pounding rainwater loosens soil and carries it off, causing erosion. But in a forest, branches and leaves reduce the rain's velocity. This allows the rain to seep into the soil and collect in underground reservoirs that are essential to the forest's water cycle and our own water supplies.

Forest Products: Every day we use things derived from trees (and, to a lesser degree, from other forest plants). These items include oils, resins, waxes, gum, rubber, food, medicines, wood, and paper products. Each year the average American consumes the equivalent of a 100-foot tree with an 18-inch-wide trunk.

Discussion Questions

- Why do some people call forests the world's "lungs"? (*Trees take carbon dioxide from the air and replace it with the oxygen we need to breathe.*)
- What else do trees do to keep our environment in good condition? (*Possible answers include: They release moisture into the air; they help prevent soil erosion; they help keep Earth cool by absorbing the sun's energy and giving us shade.*)
- What objects in our classroom come from the

forest? (Possible answers include pencils, paper, cardboard, desks, flagstaff, musical instruments, books, and cellophane tape.)

- Imagine what Earth would be like without forests. How would your life change? Could we live without forests? (Students might focus on living without forest products. Or they might speculate about a world facing air quality problems and water shortages.)

Extension Activity

Natural Moisturizer: Use the following demonstration to show students how trees return moisture to the air.

1. Find a leafy tree branch that is easy to reach and not exposed to full sunshine.
2. Put a plastic bag over a leafy part and tie the bag tightly.
3. "Bag" a bare branch in the same manner.
4. After three hours, compare the two bags. The one enclosing the leafy branch will be foggy and coated with droplets of water. The other bag will be clear.
5. The water droplets are from moisture released by the tree through its leaves. A healthy 100-foot tree can return 11,000 gallons of water to the air in a single growing season.

Answers

"Wood You Believe?" pages 4a-5a: All of the products come from trees.

PAGES 6a-7a

Forests for Our Future

Background

There are two types of natural resources. Resources that can replace themselves are called *renewable resources*. Resources that are gone after we use them are called *nonrenewable resources*. Fortunately, trees are renewable resources, but we must depend on science and forest management to keep our forests healthy.

Take the constant battle against disease and insects. A hundred years ago, for example, 25 percent of hardwood trees in the Appalachian forests were American chestnuts. Then a fungus called chestnut blight invaded the United States and virtually wiped out this species. Diseases have also attacked Dutch elms and dogwoods. And the larvae of the gypsy moth eat away at many types of trees, making it difficult for the trees to survive.

We are combating such problems by restricting imported plant material that might carry disease or harmful insects, by working on cures and treatments to tree diseases and insect devastation, and by breeding strains of

disease-resistant trees.

Still other breeding programs are creating straighter, faster growing trees that will yield more usable wood for paper and other products. These trees are typically planted on managed timberland, much like a tree farm.

Other issues that must be tackled to ensure the health and future of forests include acid rain and other air pollution, global climate change, water pollution, and overuse of our parks.

Discussion Questions

- What is the difference between a renewable and a nonrenewable resource? (A *renewable resource can be replaced by natural processes within a reasonable amount of time; a nonrenewable resource cannot.*)
- What type of resource is a forest? (*Renewable*)
- Even though forests are a renewable resource, they need our help to stay healthy. Why? (*Possible answers include: Disease and insects can destroy them; if we don't manage forests properly, we'll use up forestland too quickly.*)
- How are science and industry helping forests to stay healthy? (*By finding ways to fight diseases and insects that harm trees; by managing forests in ways that avoid waste*)
- How can you help conserve tree resources? (*Recycle tree products whenever possible*)
- How can you help trees grow? (*Possible answers include: Don't swing on young branches that could break; don't peel a tree's bark.*)

Extension Activity

Tree Detective: Distribute photocopies of the activity sheet on page 4a of this Teacher's Guide and ask students to complete the sheet independently.

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Web Link

Lively interactive games teach students more about the fantastic forest at www.forestsforourfuture.org.

Tree Detective

NAME _____



Find a tree in your neighborhood that you would like to investigate.

Log In the Basics

1. What type of tree is it? Ask an adult to help you identify it. Write its name here.

2. Draw a picture of your tree's shape.

3. Draw the shape of one of its leaves.

4. Draw the pattern of your tree's bark.

5. Draw the tree's flowers, seeds, and fruit (if you see them). Label each one.

6. Put one leaf of your tree between two sheets of newspaper. Then place the newspaper under heavy books for a day. Tape the "pressed" leaf to the back of this paper.

Who Lives in Your Tree?

7. **Mammals:** Footprints around your tree tell you an animal was there. Do you see any? Look for gnawed bark. A deer could have done that. Do you see nuts or seeds half-eaten on the ground? Mice or squirrels may have left them. Write down any mammal signs you see.

8. **Birds:** Lie on your back. Look up into your tree. What do you see? Do you see any nests in the branches? Are there any feathers on the ground? What types of birds might live in your tree?

9. **Insects:** Put a large sheet of paper under a low, leafy branch. Shake the branch with short, quick shakes. Draw the creatures that fall onto your paper.

NATIONAL GEOGRAPHIC FOR KIDS

APRIL-MAY 2002 - SCAVENGER HUNT ANSWER KEY

STUDENT FORM:

www.nationalgeographic.com/ngforkids/adventures

SOURCE FOR ANSWERS: www.nationalgeographic.com/sharks

<p>1. The nurse shark is the largest fish on Earth.</p> <p>whale</p>	<p>6. Sharks appeared on Earth after the dinosaurs.</p> <p>before</p>
<p>2. Sharks kill about 200 people in an average year.</p> <p>10</p>	<p>7. Shark-fin soup is a popular food in South America.</p> <p>Asia</p>
<p>3. People kill hundreds of sharks every year.</p> <p>millions</p>	<p>8. There are about 50 species, or types, of shark.</p> <p>370</p>
<p>4. Sharks have a lousy sense of smell.</p> <p>keen <i>or</i> strong <i>or</i> good</p>	<p>9. Basking sharks use their huge mouths to eat dolphins.</p> <p>plankton (tiny animals and plants)</p>
<p>5. Studying sharks may help doctors fight dandruff.</p> <p>cancer</p>	<p>10. Great white sharks probably live 10 to 15 years in the wild.</p> <p>25 to 30</p>