

Teaching Guide
and Lessons

Elephants **Never Forget**

Learning Objectives

The lessons in this programme meet learning objectives in science, social studies, and language arts. Among other programme goals, students will learn life science concepts, practice purposeful reading and comprehension strategies, and conduct role-play, public speaking and other activities that encourage understanding and presentation of various viewpoints and perspectives on an issue.

Resources

Text: *Elephants, Never Forget*

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- 6 Room to Roam
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Lesson Plans and Worksheets

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Companion DVD

The educational video runs for approximately 18 minutes and is appropriate for general youth audiences.

Online Resources

- IFAW-Animal Action education programs offers a wealth of resources about animals and the environment; Join our Facebook Group, follow us on Twitter or sign up for our newsletter on www.wti.org.in.
- Write to aee@wti.org.in for more information.

Animal Action Education

Each year, the International Fund for Animal Welfare (IFAW) launches a new thematic education programme focusing on animals and the environment. Free educational materials are locally adapted for free distribution in 15 countries, reaching some 5,000,000 young people worldwide each year. All of the resources for this programme and others are available online at www.ifaw.org/education. For more information about IFAW, its partner in India WTI and the Animal Action education programme, email aee@wti.org.in or call the WTI office on 01204143900 or fax on 01204143933

How to Use This Programme

Elephants, Never Forget aims to educate students about wild elephants and their unique role in our shared world, including topics related to biodiversity and habitats, as well as some of the issues and challenges elephants face. Here's one possible approach to teaching this programme:

1. Introduce Topic and Develop Content Knowledge Video (on DVD), Lesson Plan 1, Worksheet 1, Video Quiz

A. Video Viewing

View the video with your class to build background and tap into students' prior knowledge about elephants. Students may use Worksheet 1 to build background around key vocabulary as they watch the video. Following the viewing, students may take the short Video Quiz and discuss what they have learned.

B. Read Text Pages

Use suggestions from Lesson 1 to prepare students to read the Text pages in this guide. During reading, students may also use record information about key vocabulary.

2. Conduct Lesson Activities Teaching Guide: Text Pages, Lesson Plans and Worksheets

- Lesson 2 focuses on understanding concepts of habitat loss and building empathy for elephants;
- Lesson 3 presents activities to support the learning about biodiversity and the interactions between elephants and other species in their ecosystems;
- Lesson 4 and Worksheet 2 provide a narrative about an elephant rescue with various possible written, dramatic, and discussion-oriented activities;
- Lesson 5 guides students to categorise and compare threats to elephants with threats to other animal species—to reflect topics described in the text;
- Lesson 6 and the News Article Handout presents one way in which the physical environment is stressed by human activities. Students use reading skills and strategies to understand and communicate what they have learned from an informational text.

3. Extend Learning and Take Action

Teaching Guide Lessons plus: Interactive online poster, Take Action for elephants, elephant crafts and activities

Use the optional suggestions within the lessons as homework or extra projects to reinforce learning. Younger students may enjoy some fun elephant crafts and learning activities on the Crafts, Activities, and Colouring pages.



Ground Rules Activity

Prior to discussions that may involve strong views or feelings, many teachers and students like to develop ground rules within their classrooms to promote positive listening, respect, and sensitivity to different points of view.

Ask the class to pair up and answer the following question: 'How do people behave toward me that makes me feel confident and comfortable to talk with them about things that really matter to me?'

Ask the pairs to move into groups of six and share their ideas. Have them make a list of the behaviors that all six can understand and agree with. These may include:

1. They listen to me.
2. They don't laugh.
3. They don't shout out what I say to other people.

Gather the whole class and ask each group to report their list—one behaviour at a time. Check for understanding and agreement with the whole class. Only write down those behaviours that everybody accepts and understands.

Steer the group towards identifying clearly observable behaviours rather than broad concepts. Display the list as a means to encourage individuals to take responsibility for their actions within the group.

Elephants Never Forget



Elephants, Then and Now

Scientists estimate that there are fewer than 550,000 wild elephants in Africa and as few as 39,000 in Asia, where they are considered in danger of extinction. A century ago, there were at least twice as many wild elephants on our planet.



© IFAW/J. Hrusa

The first thing people notice about elephants is that they're big—*really* big. In fact, elephants are the largest land animals on the planet. But there's much more to these enormous animals than their size and power. They are also clever and sensitive. Elephants care for their families and live by complex social rules. They appear to remember long-lost relatives and grieve for loved ones long after their deaths. These majestic animals, which can live as long as you and I, are a fascinating mix of strength and gentleness. They are impressively huge, but also incredibly vulnerable. Despite their tremendous power, many populations of wild elephants are fighting to survive.

Elephants are the only living members of a group of mammals that includes the **extinct** American mastodon and the woolly mammoth. Among living mammals, manatees and hyraxes are considered elephant relatives because of the ancestors they share.

Today's elephants fall into two main groups—African and Asian—which are easy to tell apart if you know what to look for. Until recently, scientists considered African and Asian elephants the only two **species** of living elephants. Then **DNA** studies suggested that there may be two different species of African elephants—forest and **savannah**—bringing the total number of living elephant species to three. Savannah elephants are larger than their forest cousins, and they have larger ears as well as tusks that are more curved.

All elephants are **herbivores** that eat grasses, bark, twigs, leaves, and fruit. They can spend 18 hours each day eating. Because their bodies only make use of about 40 per cent of the food they eat, they must eat large portions. An adult elephant might eat almost 180 kg (400 pounds) of food in one day. They need 114–189 L (30–50 gallons) of water each day and will travel long distances to find it.



© IFAW/J. Hrusa

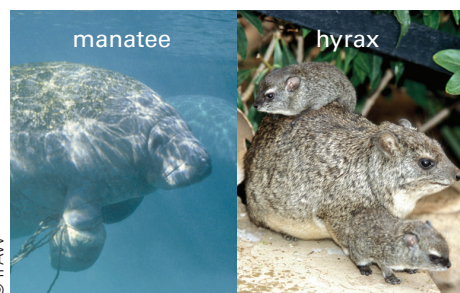
Elephants in Africa



© IFAW/M. Booth

Elephants in Asia

About 3.1 m (10 feet) tall at shoulder	2.4–3.1 m (8–10 feet) tall at shoulder
Males weigh up to 6,000 kg (13,200 pounds)	Males weigh up to 5,000 kg (11,000 pounds)
Huge ears cover shoulders	Large ears don't reach shoulders
Flat back with a dip in the middle	Rounded back
Trunk has two finger-like tips for grasping	Trunk has one finger-like tip for scooping
Long tusks on both males and females	Shorter tusks, only found on some males; females may have very short, blunt tusks called <i>tushes</i>
Skin is more wrinkled and brownish-grey	Skin is less wrinkled; grey to brown, with pink patches
Relatively flat crown of head with no dent in middle	Domed crown of head with dent in middle
Lives up to 70 years in the wild	Lives up to 60 years in the wild



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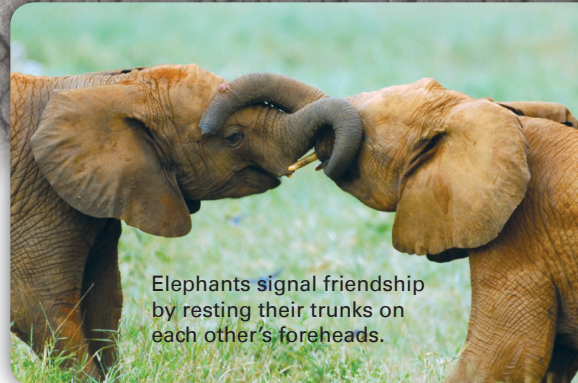
Believe it or not, these animals are relatives of elephants!

Big Is Just the Beginning

Elephant bodies are unusual not only for their size, but also for their many unique features. Among these, their trunks and tusks may be the most noticeable—elephants use these body parts as tools for many purposes, from eating to communicating. The ears and feet of an elephant are also unusual for their size and usefulness. Overall, elephant bodies are very well adapted for life in their wild homes.

Besides having amazing bodies, elephants have impressive brains. One thing their brains help them do is work well together in groups. Elephants live in family groups that include female elephants from several generations, along with young elephants of various ages. Females stay in their groups for life. Males usually leave between the ages of 12 and 17 years old to live alone or together in small herds. After this, they get together with females only for the purpose of mating.

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Elephants signal friendship by resting their trunks on each other's foreheads.

A **matriarch** leads each family group, and this matriarch is clearly in control. She keeps her group together, ensures its safety, and helps group members find food and water. She makes the group's major decisions, such as when to charge and when to flee from danger. This matriarch also educates other females about caring for their young and sets an example of leadership for another group member to follow after she dies.

Elephants have remarkable memories. They remember other elephants even after decades of separation. When they are reunited, they sometimes turn in circles, raise their heads high, flap their ears, and trumpet loudly. Elephants also remember places to find food and water. A herd might well survive a drought because the matriarch remembers the location of a faraway water hole.

It's a Fact!

- A newborn elephant may weigh up to 120 kg (265 pounds). That's a lot more than the average *adult* person!
- Elephants can collect cool water in a special throat pouch and spray it later, when they get hot.
- An elephant trunk has tens of thousands of muscles. A whole human body has fewer than 650!
- Baby elephants suck their trunks for comfort, just as human children suck their thumbs.

Ears: Elephants use their ears to cool down—they can pump blood to their ears and release body heat when they fan them. Their ears also help them hear faraway sounds, shoo insects, show feelings, and look bigger when facing enemies. This Asian elephant has big ears; African elephant ears are even bigger.

Hair: Elephants, like other mammals, have hair, but not very much!

Tusks: Some elephants don't have tusks. But those that do use these overgrown teeth to carry things, pull bark off trees, clear paths, dig for roots and water, fight enemies, and impress other elephants. Tusks keep growing through an elephant's lifetime.

Skin: Elephants have sensitive skin that is strongly affected by sunburn and insect bites. For this reason, they roll in mud or give themselves dust showers to get extra protection. Water on their skin cools them when it gets trapped in wrinkles.

Tail: Like other large animals, elephants use their tails to shoo insects. A young elephant will sometimes follow its mother by grasping her tail with its trunk.

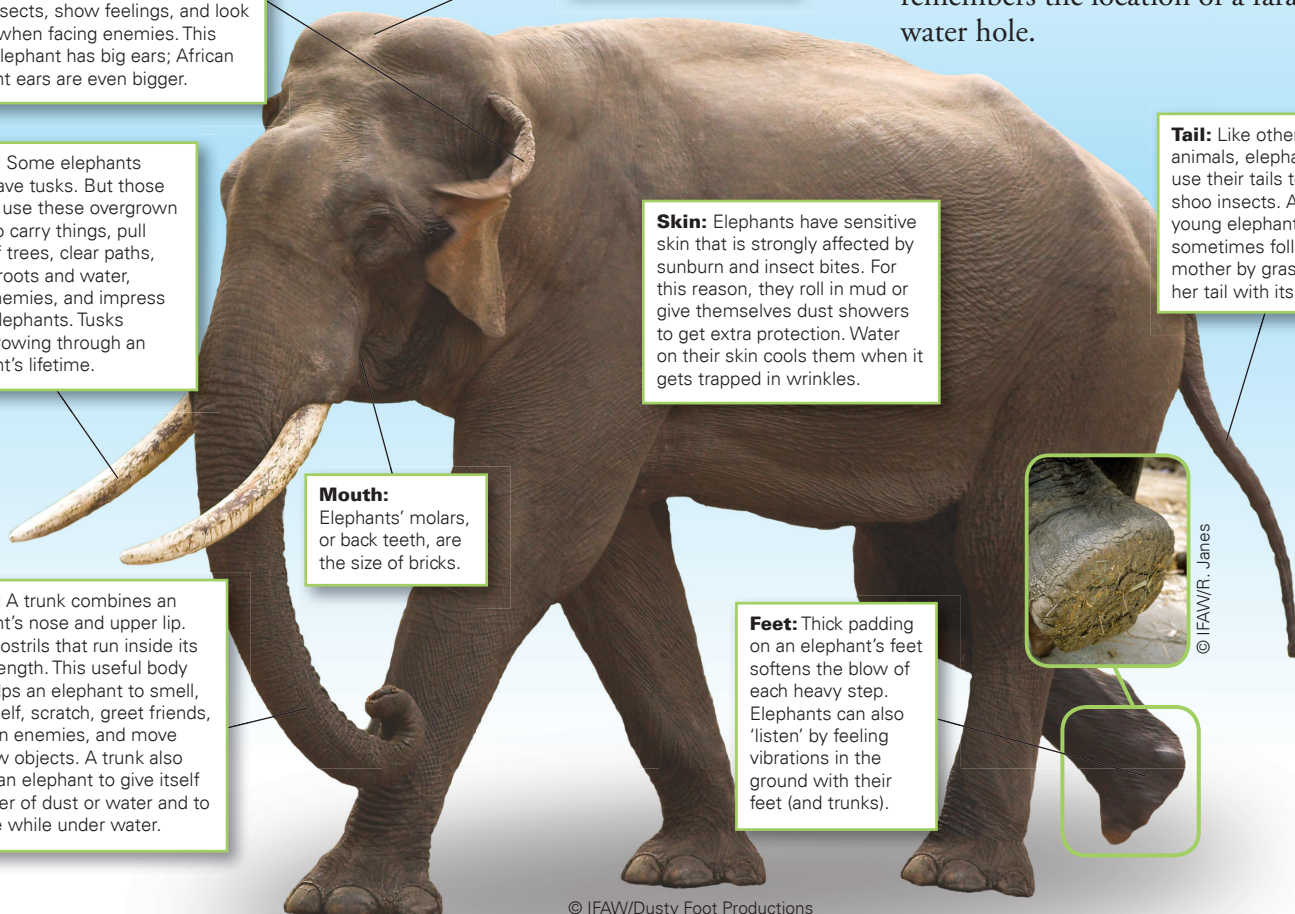
Mouth: Elephants' molars, or back teeth, are the size of bricks.

Trunk: A trunk combines an elephant's nose and upper lip. It has nostrils that run inside its entire length. This useful body part helps an elephant to smell, feed itself, scratch, greet friends, threaten enemies, and move or throw objects. A trunk also allows an elephant to give itself a shower of dust or water and to breathe while under water.

Feet: Thick padding on an elephant's feet softens the blow of each heavy step. Elephants can also 'listen' by feeling vibrations in the ground with their feet (and trunks).



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Elephants have complex emotions, and the females in a group share strong bonds. They appear to celebrate the birth of a calf with trumpeting and rumbling. They may take turns shielding an injured calf from bright sunlight or circle around it when a lion is near. Elephants express affection by kissing or wrapping trunks. They play games, such as throwing around objects, either alone or in groups. Elephants may bury dead relatives with leaves and twigs, and people have seen them visit their bones even years after a death.

Key Roles of Elephants

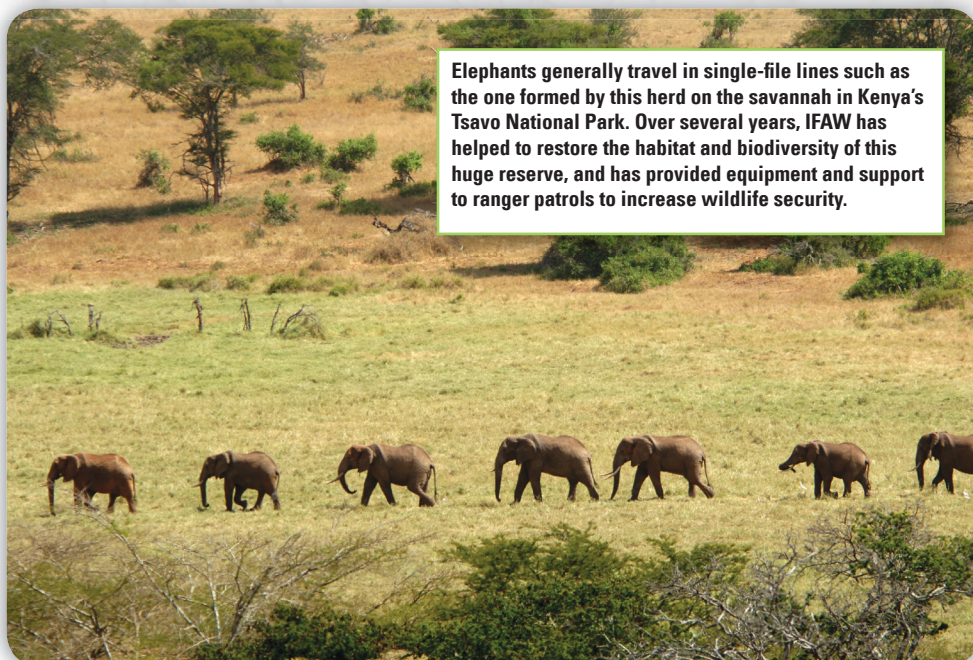
Scientists consider elephants to be **keystone species** because they play important roles in the **ecosystems** in which they live. They help to support the **biodiversity**, or variety of life, in their living areas.

The eating habits of forest elephants (both in Africa and Asia) create gaps in the vegetation. These gaps allow space for new and different plants to grow, and create pathways for other animals to reach remote areas.



The eating habits of elephants help support the biodiversity of their forest habitat. To help elephants move from one patch of protected habitat to another, IFAW recently conserved an ancient migration route in India used by more than 1,000 elephants.

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Elephants generally travel in single-file lines such as the one formed by this herd on the savanna in Kenya's Tsavo National Park. Over several years, IFAW has helped to restore the habitat and biodiversity of this huge reserve, and has provided equipment and support to ranger patrols to increase wildlife security.

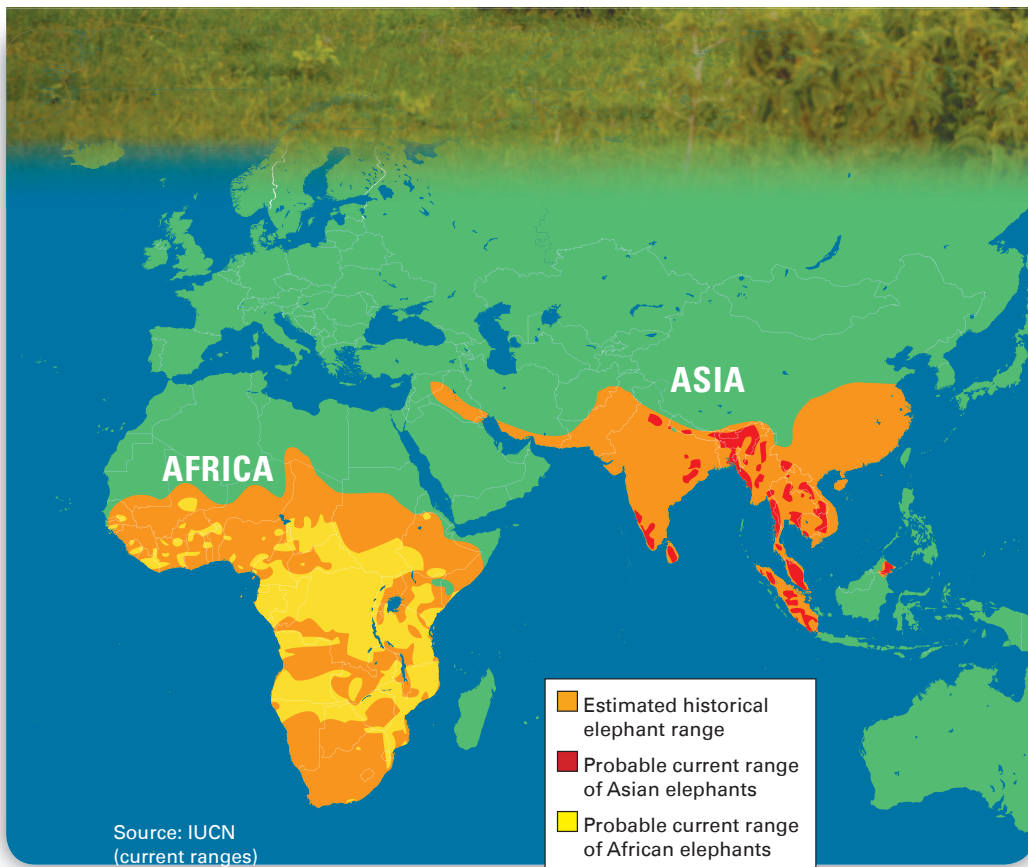
In West Africa, forest elephants are the only animals big enough to eat and spread the seeds of large tree species. Many of these trees would not be able to reproduce without the help of elephants. The seeds pass through the elephants' digestive systems and are dropped in their dung, which fertilises the seeds as they grow into new plants. Scientists predict that at least 30 per cent of these tree species would disappear if elephants disappeared.

Savannah elephants eat the sprouts of woody plants, preventing trees and shrubs from growing out of control. If those woody plants were left alone, their leaves and branches would eventually block sunlight from reaching the grasses, so the grasses would die. Antelopes and other animals that graze on the grasses would disappear without this food source, and so would the **carnivores** that depend on those grazers for food. Also, during the dry season, savannah elephants use their tusks to dig water holes that benefit other animals. These water holes may be the only sources of water in the area.

Long-Distance Communication

Elephants communicate by touch and smell as well as through vocalisations—grunting, whistling, bellowing, rumbling, trumpeting, and more. Some elephant vocalisations are infrasound—sounds too low in pitch for the human ear to sense. Other elephants may hear these sounds from more than 8 km (5 miles) away. This may help separated groups coordinate their movements for weeks at a time without losing communication. Also, female elephants are only ready to breed every few years, so they may use infrasound to let males know when they're available.

Elephants also communicate over long distances by stomping. These sounds may travel 32 km (20 miles) or more through the ground. Researchers believe that elephants may create these vibrations as warnings about faraway dangers.



kept elephants for zoos and circuses. Elephants are worshipped as gods in some religions, celebrated at festivals, and featured in weddings. They have also been mounts for royalty and religious leaders. Safaris use them to carry people and to frighten away predators. And elephants have been trained and used in warfare in China, India, and Thailand, among other places. The ancient general Hannibal reportedly took 37 war elephants when his army crossed the Alps to fight the Roman Republic in 218 BC.



In India and other Asian countries, elephant keepers called mahouts domesticate and train elephants to carry people and other loads. The elephants shown here help patrol for poachers in India's Kaziranga National Park.

Room to Roam

Centuries ago, elephants roamed throughout most of Africa. As increasing human populations use more land for farming and living space, the **range** of elephants has decreased significantly.

In the past century alone, wild elephants have disappeared from at least three African countries where they used to roam. Their range is now limited to savannah, forest, and bush in 37 countries south of the Sahara desert.

The range of Asian elephants has also been greatly reduced due to human activities. Scientists believe they once roamed from Iran to the Indian subcontinent, south-east Asia and China. But wild elephants have been extinct in West Asia, Java, and most of China for many centuries. They now live in small patches of disconnected habitat in 14 Asian countries.

Because of **habitat fragmentation**, elephant **migration** routes get cut off by roads and railways or take herds through new farms and settlements. This can prevent herds from getting to food, water, and other elephant groups.

One of the dangers of separating the groups is that the elephants have a more limited choice of mates. Having a variety of choices for mating is important to the health of a population because **genetic diversity** helps a species resist illness and other health problems.

Conservation groups in both Africa and Asia are working to protect elephant habitat and migration routes. They are also conserving strips of land—or **elephant corridors**—that allow elephants to move from one patch of habitat to another.

Between 2001 and 2004, surveys in India identified 88 elephant corridors in use. More than three-quarters of these are near human settlements and are at risk of being affected by settlement expansion. So conservation groups have stepped up their actions to protect these areas.

Elephants and Us

Elephants have played a significant role in the history, lives, and culture of people for many centuries. Elephants have been employed to do heavy lifting, especially in the logging industry in Asia. People have

Climate Change

Protecting elephant habitat isn't just good for elephants—it's good for the entire planet. When land is cleared, there are no trees to soak up carbon, which contributes to climate change. Therefore, conserving forests for elephants helps protect all the plants and animals that live there and can help reduce climate change impacts.

In Africa, scientists predict that global warming will cause some dry regions to become even drier. This will increase the likelihood of terrible droughts that threaten both elephants and people as water supplies dry up and food becomes scarce. Habitat fragmentation only makes matters worse, preventing elephants from migrating to regions where resources are more plentiful.

In Conflict

In recent years, habitat loss has brought elephants and people into increasing conflict. In Africa, for example, only about 16 per cent of elephant habitat is in protected areas. This puts elephants in competition with people for space, food, and water. Elephants sometimes wander into villages and onto farms to find food. Farmers drive elephants away to protect their farms, often killing or injuring elephants in the process. People may also be killed by elephants during these clashes.

In some areas where disappearing habitat puts elephants in direct contact with humans, people may resort to culling, or selective killing, to control elephant populations.

Culling may target individual elephants or entire families. Given elephants' sensitivity and complex emotions, culling is very disturbing when they witness the slaughters and then survive. 'Cull orphans' may suffer from depression, avoidance of other elephants, and increased aggression.

Jumbo Move

Malawi, in southern Africa, is one of the poorest countries in the world and the site of many human-elephant conflicts. In the summer of 2009, IFAW, in partnership with the Malawi government, relocated 83 elephants—including the young calf and its mother pictured below—to Majete Wildlife Reserve. The elephants now have a safe, secure home, and they're living proof that human-elephant conflicts don't have to end in violence.



To the Rescue

Near India's Kaziranga National Park, a wildlife rescue and **rehabilitation** centre helps Asian elephant calves that have been separated from their herds before they are old enough to survive on their own. The calves may be in need of help due to injury or illness, being orphaned as a result of poaching, being stranded due to floods, or falling into drainage ditches. In addition, some calves have been rescued from illegal wildlife traders. Without rehabilitation, these calves would most likely die or face lives in captivity.

Workers try first to bring a separated calf back to its original herd. When that isn't possible,

orphaned calves are hand-raised at the rehabilitation centre until they are one to two years old. Then they are radio-collared and taken to Manas National Park, where they are released into a protected wildlife reserve. As of January 2011, 13 orphaned elephant calves had been released back to the wild.



One possible solution is to connect existing large protected areas to create what are called 'mega-parks' that would allow elephants to move from place to place without interacting with humans. Although

there are no easy fixes, elephant experts are working to find solutions that will stop human-elephant conflicts *before* they happen rather than reacting to these conflicts as they occur.

China's last rain forest, Xishuangbanna (shee-shuang-bahn-nah), is home to fewer than 300 Asian elephants—the last remaining elephants in China. Elephants in China face challenges due to farming, deforestation, and other human activities. In 2003, working with the local government, IFAW began offering small loans to help local people develop new ways to earn money so they wouldn't need to farm in elephant habitat. IFAW also sponsored an elephant festival in the area to teach local people about elephant conservation.



The Trouble with Tusks

Millions of wild elephants once roamed the continents of Africa and Asia. But elephant populations have declined by more than 50 per cent in the past century. As few as half a million elephants remain in the wild.

One of the biggest reasons for this is the killing of elephants for their ivory tusks. Ivory has been used by people for thousands of years. It is used to make piano keys, billiard balls, fancy chopsticks, Asian stamps, and other luxury trinkets. But the **only** way to get ivory is from a dead elephant.

By the 1980s, scientists believed that the killing of elephants for their ivory was putting the survival of the elephant species at risk. So, the international trade in elephant ivory was banned following an agreement among governments in 1989.

Unfortunately, elephants are still **poached** because of the high demand for ivory, the lack of protected habitat, and weak law enforcement in many poor countries.

During the first few months of 2011, at least 50 elephants were killed just for their ivory in Chad, a country in West Africa. Due to poaching, the number of elephants in Chad has dropped by more than 37% in recent years, from 4,000 in 2006 to 2,500 elephants counted in 2010.

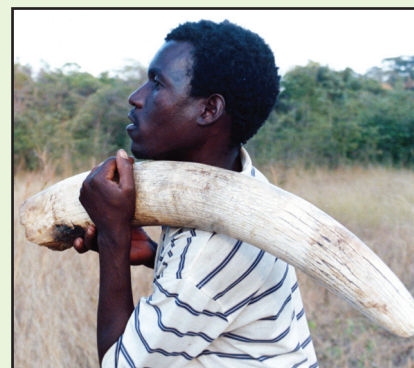
Conservation and animal welfare organisations are working on many fronts to protect elephants from poachers. They work with governments to enforce the ivory trade ban, train and equip anti-poaching rangers, and raise public awareness to reduce demand for ivory products.

Ivory and the Law

In 1989, a treaty called the Convention on International Trade in Endangered Species (CITES) gave all wild elephants the highest level of protection. The buying and selling of ivory and other bodyparts from African and Asian elephants was banned.

But a change in the agreement allowed ivory stockpiles to be sold a few times since then. The sellers said the ivory came from elephants that had died naturally, but many people think that the elephants had been killed.

Conservationists say that if it is legal to sell any ivory, there's always the chance for poachers to smuggle illegal ivory and



© IFAW/R. Sobol

A villager in Africa carries a large tusk of poached elephant ivory on his shoulder.

sell it. And it's impossible for people to tell the difference between legal and illegal ivory.

Many people around the world believe that the ivory trade must be completely stopped for African and Asian elephants to survive.

DNA research is one of the newest weapons in the fight to end elephant poaching. Scientists are now able to examine illegal ivory that has been seized to find out where it is coming from. They compare the ivory with DNA samples from different populations of African elephants to identify areas of high

poaching activity and popular **smuggling** routes. The information makes it possible to focus anti-poaching patrols and money where they're needed most. And the countries where poaching is most common are being pressured to do more to stop the killings.

Internet Trading

The Internet has become an easy place for people to illegally trade wildlife and wildlife products.

IFAW discovered that close to three-quarters of wildlife products offered online in 11 countries

were real elephant ivory. As a result, the Internet auction site eBay banned the sale of ivory at the

start of 2009. People can help save elephants by choosing not to buy ivory on-line or anywhere else.



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Saving Elephants

If the ivory trade is allowed to grow and elephants' habitats continue to shrink, then elephants will continue to be in serious danger. Conservation groups are working hard to save elephants.

Governments, organisations, businesses, and communities must all work together to protect elephants and their habitats.

Elephants are extremely important for conservation. Protecting elephants means that more plants and animals and more ecosystems will also be conserved. The extinction of elephants would be terrible for many other species. And it would be a tragic loss of one of the wisest and most beloved of all animals.

The Ministry of Environment and Forests, Government of India has recently launched a campaign **Haathi Mere Saathi** to save the Asian elephant. Wildlife Trust of India will bring the campaign to you through Gaju, the campaign mascot. Join us to save India's National Heritage animal.



This African elephant mother and calf roam at the foot of Mount Kilimanjaro in Amboseli National Park, Kenya, where IFAW works with renowned elephant scientist Cynthia Moss. Moss has followed these elephants since 1972. Her findings have provided incredible insights into elephant society, intelligence, and ecology. IFAW also supports community conservation projects with local Masai groups and partners with the Kenya Wildlife Service on anti-poaching efforts.





Glossary

biodiversity: biological diversity; a measurement of variation in species, genes, and living communities in an area

carnivores: meat-eating animals

conservation: the protection or careful use of something, such as a species or a natural resource

DNA*: a type of cell material that passes genetic code from parents to children

ecosystems: interacting communities of plants, animals, and the nonliving components of the environments in which these plants and animals live

elephant corridors: pathways that elephants travel between habitat areas

endangered species: species that are in great danger of dying out completely

extinct: no longer living (as in a species that no longer lives on Earth)

genetic diversity*: variety in the code for inherited traits of an entire species

habitat fragmentation: the process of breaking up a habitat into smaller and more disconnected patches

herbivores: animals that eat only plants

holistic*: addressing the whole of something, rather than just a part of it

keystone species: species that strongly affect the structure and function of an ecosystem, as a keystone in an arch affects its strength

matriarch: the female leader of a family group

migration: the movement of animals from one place to another

poached: hunted and killed illegally

range: the entire area where a type of wild animal lives

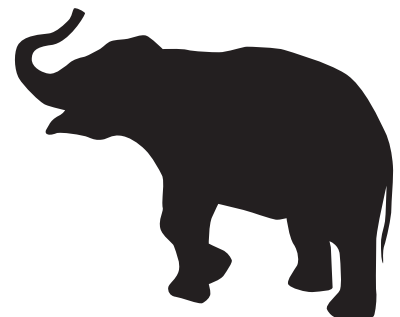
rehabilitation: restoration to a state of health or normal activity after a period of difficulty

savannah: a flat grassland without many trees

smuggling: illegally moving goods into or out of a country

species: a group of living things that are similar and can have babies

stockpiles: large, stored-up supplies





Lesson 1: Building Knowledge - Video and Text

Learning Outcomes: Students will tap into prior knowledge, make connections as they view a video and read an informational text about elephants, understand essential vocabulary related to elephants, and comprehend important information about elephants.

Viewing/Reading: Younger Students

Before/During Viewing the Video

1. Ask pairs of students to discuss things they *know* about elephants. Then ask each pair to share what they know with the group as you record their information on flipchart paper in the *K* column of a **KWL chart**.

K <i>Know</i>	W <i>Wonder</i>	L <i>Learned</i>

2. Next, ask pairs what they *wonder* about elephants. Tell each pair to come up with at least one question and write it on a sticky note. Have the pairs share their question(s) with the class as they stick each one on the chart in the *W* column.
3. Show the **video**.

After Viewing the Video

4. Independently or as a group, have your students take the **Video Quiz**. When they are finished, discuss what students learned about elephants. Use questions such as the following to stimulate discussion.
 - *How does an elephant use its trunk?*
 - *How do elephants talk to each other?*
 - *In what ways are elephants like people?*
 - *What are ways that elephants help other animals?*
 - *How do people both help and create dangers for elephants?*
5. Ask students which questions on the KWL chart have been answered. Remove these sticky notes and have students help you write what they *learned* in the 'L' column.

Before/During Reading the Text

6. Preview the text, images and **glossary** with students. Discuss the meanings of some or all of the words.
7. Read the text aloud or ask students to read independently. Provide **Worksheet 1** as an optional resource or homework.

After Reading the Text

8. Use the question prompts above to discuss the written text.
9. With students, review the questions on the KWL chart to decide whether they have been answered. If any questions remain unanswered, help students think of Internet and print sources they could use to find answers.

Viewing/Reading: Older/Advanced Students

Before/During Viewing the Video

1. Allow students to connect to prior knowledge by discussing in pairs what they know about elephants.
2. Show the **video**.
3. Have students take the **Video Quiz** with partners or independently.
4. Give each student a copy of **Worksheet 1**. Read the terms and explain that they are important to elephants and the problems they face. Ask students to write in the second column how they think each term relates to elephants. (You may provide dictionaries for reference.)

After Viewing the Video

5. Ask partners to discuss their answers to the **Video Quiz** and what they wrote in the second column of **Worksheet 1**. Have students write on their worksheets what they feel is the most important information. They may use the backs of their worksheets if needed.
6. As a group, discuss the video and the students' responses to the **Quiz and Worksheet 1**. Ask students what they thought were the video's most important points and summarise these on a class chart.

Before/During Reading the Text

7. Have students preview the text, images and **glossary** of terms.
8. Have students read the text independently or with partners, pairing strong readers with less-able readers.

After Reading the Text

9. After reading, use these question prompts to help students consolidate understanding:
 - *How do elephants use their trunks?*
 - *In what ways are elephants social animals?*
 - *How do elephants help maintain biodiversity?*
 - *How do elephants' tusks help them survive but also put them in danger?*
 - *How do people both help and harm elephants?*

Have students add the information from the reading to their worksheets and help you add to the class chart.



What's Your View? Extend learning during pre- or post- video viewing and text reading by exploring perspectives with An interactive activity, What's Your View

Bringing It Home: Invite your students to imagine and explore – through colourful artwork, an essay, short story, poem, or another creative project– the topic: A day in a world without elephants. Submit original student artwork to the Animal Action Art Contest. Write to aae@wti.org.in for details.

Worksheet 1: Viewing/Reading Guide

Name _____ Date: _____

Directions: Use the boxes to fill in information about how each word relates to elephants.

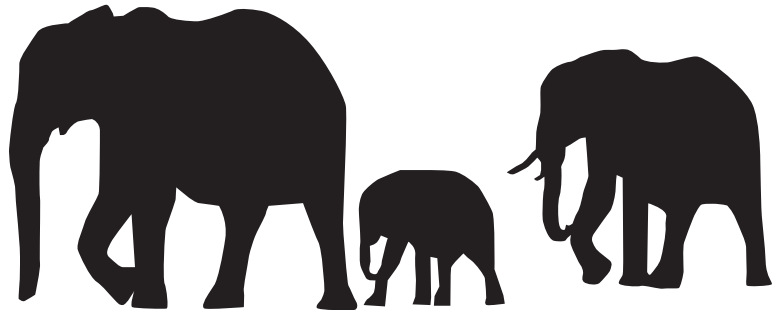
Word	How is the word related to elephants?	What I found out
tusks		
trunk		
communicate		
matriarch		
poaching		
biodiversity		
keystone species		
Most Important Facts		

Video Quiz

Name _____ Date: _____

What have you learned from the film you just watched?

Answer the questions below.



1. Which of the following is NOT related to today's elephants?
☐ a) a pig
☐ b) a manatee
☐ c) a woolly mammoth
2. Which adaptation helps elephants cool off on the African savannah?
☐ a) padded feet
☐ b) large ears
☐ c) long tusks
3. Elephant tusks are teeth.
☐ a) true
☐ b) false
4. How much might an African bull elephant weigh?
☐ a) as much as a young child
☐ b) as much as 6 children
☐ c) as much as 80 people
5. Which of the following is NOT something an elephant could do with its trunk alone?
☐ a) carry a tree trunk
☐ b) pick up a blade of grass
☐ c) drink water
6. Which of the following is a way that elephants help their habitats?
☐ a) Elephants create a huge amount of methane gas that cleans the air.
☐ b) Elephants produce a huge amount of dung that helps spread plants.
☐ c) Elephants make loud vibrations that knock down trees to make room for grass.
7. What best describes how elephants living near people get into conflict?
☐ a) When elephants get bored, they chase people, trample crops, and destroy villages.
☐ b) When elephants run out of plants, they eat other animals that people hunt for food.
☐ c) When elephants run out of space, they move into human areas and both people and elephants can get hurt.
8. What are three ways that elephants have been important to humans in history?

9. What are three threats to elephants today?

10. Why does the author write that it's important we don't forget elephants?

Answers: 1. a; 2. b; 3. a; 4. c; 5. c; 6. b; 7. c; 8. Answers may include: for transportation, heavy lifting, war, and religion; 9. Answers may include: building roads and railways that break up migration routes, destruction of habitat, poaching for the sale of tusks/ivory, climate change effects, and conflicts between people and elephants over living space; 10. It's your decision!



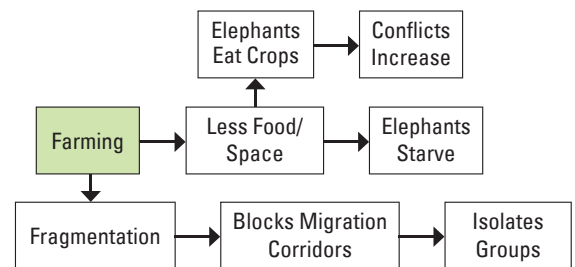
Lesson 2: Understanding Habitat - Simulation & Role Play

Learning Objectives:

Students will be introduced to concepts of habitat loss and fragmentation by taking part in activities that help them empathise with elephants and use skills in persuasive writing and public speaking.

Introducing the Text (all ages/abilities)

1. Read the text sections 'Big Is Just the Beginning,' 'Room to Roam,' and 'Climate Change' aloud.
2. Read the questions below and write them on the board. Ask students to turn and talk to a partner about each question before they discuss it as a group. Model how to find answers in the text and how to infer from text clues.
 - *What reasons does the text give for loss or fragmentation of elephant habitat?* (farming, settlement, climate change, disruptions due to road and railway building)
 - *How does habitat loss create problems for elephants?* (changes access to food and water, increases conflicts with humans, isolates groups, limits mating choices, increases illness)
 - *What are some things people can do to help elephants' habitat issues?* (make elephant corridors, preserve habitat, use less paper so forests aren't cut down, use less energy to limit climate change effects, write to leaders, educate others)
3. Ask students to help you create a shared diagram on flipchart paper that lists/illustrates the effects of habitat loss. One example of how your completed chart may look is pictured at right.



Habitat Loss Simulation

1. Write the following scenario on the board: *A local village has expanded the number of houses and the amount of farmland around it, which has meant a loss of 25 per cent of the elephants' habitat. What does this mean for the elephants?*
2. Ask students to measure the size of the classroom and record the area on the board. Then have students calculate how much area is lost if 25 per cent is removed. Record this.
3. Ask students to create 'habitat islands' that are respectively 50 per cent and 25 per cent of the original total area. Help them mark these spaces on the floor with string or rope.
4. Assign about 75 per cent of the class to the bigger space and 25 per cent to the smaller space. Conduct regular class activities with students sitting in the reduced spaces. Tell them that the two groups cannot communicate.
5. Discuss with students how losing communication and 25 per cent of their classroom space affected them. How did sitting so close make them feel? Was it harder to go about normal activities? How might elephants feel about the loss of 25 per cent of their habitat? What might they do?
6. Mark off paths that students follow to resources such as reference books, lunch bags, or water fountains. Then close off these 'corridors.' Have students attempt to go about their normal activities with their regular classroom "routes" blocked. Make comparisons to elephants cut off from water or a traditional migration route.

Habitat Loss Role-Play

1. Write the following words on flash cards: *mothers, babies, food, water, travelling, health, enemies, and communicating.*
2. Assign partners and tell students they are elephants. Have each pair pick a card. Explain that each pair is going to discuss how the word on their card relates to them, as elephants, living in two different situations. One elephant is living in a wide, open area that has been unaffected by human settlement. The other elephant is living near a village that has been expanding into his/her habitat.
3. For younger/less-able students, you may need to model examples. Say: *I picked the card for water. First, I am an elephant living in a wide, open space. I sometimes need to travel a long distance in search of water. There is a drought and I can't find enough water. . . . Next, I am an elephant living near people. The water is on the other side of the village. My herd tramped through the village to get to the water. The people got angry and killed some of my herd.*
4. After students have discussed the word from the perspective of both elephants, have them create a dialogue, sharing the two elephants' points of view.



Lesson 3: Elephants & Ecosystem Connections

Learning Objective: Students will understand the importance of elephants in their ecosystems, the interrelationships they have with plants and other animals, and the roles they play in maintaining biodiversity.

Ecosystem Connections: Younger Students

1. Read the text section *Key Roles of Elephants* (from the **Young Reader Edition**) aloud to students as they follow along.
2. Help students begin to understand the roles of elephants in their ecosystems. The concepts of biodiversity and keystone species discussed in the text will be difficult for many students, so focus on the concrete ‘jobs of elephants’ (write this phrase on the board). Highlight phrases from the text such as the following and have pairs of students discuss them and draw pictures to represent them.
 - ‘As elephants in a forest eat, they create gaps in the vegetation. These gaps allow new plants to grow and create pathways for other animals.’
 - ‘They spread the seeds from these trees through their dung. The dung fertilises the seeds as they grow into new plants.’
 - ‘During the dry season, savannah elephants use their tusks to dig water holes that other animals can use.’
3. Have the pairs of students share their drawings with the larger group. Discuss as necessary. Then discuss the more complex cause-and-effect series from the text about savannah elephants eating trees and shrubs, encouraging grass growth, and in turn helping grazers and predators that eat grazers. As a group, map this series of relationships on the board. Then expand this cause-effect chain to a web by adding other side effects from grass growth, presence of grazers, and so on.

Ecosystem Connections: Advanced Students

1. Have students reread *Key Roles of Elephants* (from the **Advanced Reader Edition**).
2. Write the question prompts below on the board. Place students in groups to discuss them.
 - *What is biodiversity?* (biological diversity, a measurement of variation in species, genes, and ecological communities)
 - *How do forest elephants help maintain biodiversity in their habitat?* (create gaps in vegetation that allow new plants to grow; spread seeds in dung which germinate and grow)
 - *How do savannah elephants affect grazing animals such as zebras and gazelles? How do they affect predators such as lions? How do they affect smaller animals such as birds and insects?* (maintain grassland, which feeds grazers and in turn provides food for predators such as lions; create water holes for other animals to drink from)
 - *What would happen to animals in forests and grasslands if elephants were to disappear?* (ecosystem would be altered; other species that depend on the ecosystem in its current form would die)
3. Have each group create an ecosystem relationships map on a large sheet of flipchart paper that shows the web of connections and interactions between elephants on one side and another animal that shares their habitat (such as the savannah animals listed above) on the other. You might start by having the groups research one or more of these animals on the Internet or from other sources.
4. Once the maps are complete, call the groups together for a class discussion and ask groups to share their visuals.

Animal Classification and Relationships

1. As a class, brainstorm and list animals and insects that live on the African savannah with elephants. Some are: antelopes, ants, cheetahs, dung beetles, gazelles, hyenas, meerkats, raptors, rhinoceroses, and vultures.
2. Have students suggest ways to organise the animals on the list into categories—for example, by ecological role or niche (producers, herbivores, carnivores, grass eaters, scavengers) or by taxonomic group (birds, insects, mammals).
3. **Optional:** Have each student research one animal and its relationship to elephants. Assign several students to each chosen animal. After they research individually, have students with the same animal discuss findings in small groups before reporting to the class. As a class, discuss why it is important to biodiversity that elephants survive on the grasslands.

Take It Outside: Eco-investigation

Extend classroom learning by taking your students outside to discover animals, biodiversity and ecosystem connections close to home.

IFAW’s *Eco-investigation Lesson and Worksheet* is based on basic fieldwork techniques that introduce students to local biodiversity through visual identification during a guided study of an outside area you have identified, such as the school yard, a nearby park, meadow, or conservation area.

The lesson also helps promote better understanding of the impact of human activities on animals and habitat.

The Eco-investigation Lesson and Worksheet can be found on the DVD



Lesson 4: Responding to a Narrative

Learning Objectives: Students will read about an elephant rescue and choose from a variety of response activities. Students will apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate the text.

Introducing the Text (all ages/abilities)

1. Ask students to read the text on **Worksheet 2** silently. For younger/less-able students, read the text aloud while they follow along.
2. To ensure understanding of the text, use these prompts:
 - *What does the fact that the elephants were at the farm suggest about their habitat?*
 - *What do you know about the way the farmers felt about the elephants?*

- *Why did each baby elephant have its own caretaker?*
 - *Why did the caretakers take the babies on walks together?*
3. Allow students to choose from the list of activities on **Worksheet 2** as a follow-up response to the text. Help less-able readers choose an activity that they can complete. Work with these students to help them complete the activity or have them work in pairs to complete it. Further discussion of the activities is included below.

Rewrite the Story from an Elephant's Perspective

Make sure students understand that the text's point of view is that of an outside observer telling the perspectives of all the participants: the elephants in the herd, the baby, and the workers. To rewrite the text, students need to focus on just the point of view of the baby. Model how they can do this through first-person narrative, allowing them the freedom to change the story at any point if it helps them to write creatively and in character.

First person modeling: Suddenly, I heard loud noises and watched in dismay as the herd ran away. I cried out to tell them to come back and not leave me behind in the hole. I looked up and saw a human peering down at me. *What was going to happen to me, I thought.*

Follow up on the writing exercise with a group discussion about how it felt to write from the perspective of the baby elephant. Ask students how it helped them understand the elephant's situation.

Write a Mock Interview

1. Provide students with a model of an interview or remind them of interviews they may have seen on news programmes with young people as hosts and reporters.
2. Have students think about the role of the carers at the rescue centre and what questions they would like to ask a carer. Ask them to record their questions and answers.
3. Students could then work with a partner to develop a role-play of an interview to present to the class. As an alternative to the role-play, have students write a mock e-mail thread in which one student writes interview questions, the other responds in writing, and then the first asks further questions for clarification.
4. Work with younger/less-able students to brainstorm a list of questions they could ask one of the carers. Write the questions on the board. Then ask students to respond to the questions orally as if they were carers. If necessary, model for students how you would answer one of the questions in the role of a carer.

Stage a Mock Rescue

Have students read the story and then stage a similar story of an animal rescue. You might choose to split the class in half and have each prepare and perform their own interpretation for the other. Encourage them to change details about the story for dramatic effect, and to add the part of a narrator if they wish. If time allows, give them the option of writing a script or planning loosely and then improvising.

For younger or less-able students, help to write a simple script that they can follow as they perform. After the activity, hold a class discussion on how the experience helped them understand the situation of stranded animals and animal rescuers. As an optional variation, have students take on the role of theatre critics or reviewers when they are not performing, encouraging them to take notes and later write up short reviews.

Write a Newspaper Article, Blog Entry, or Graphic Novel

Provide models of newspaper articles or news-oriented blogs for students to use as references. Have students work in pairs (or model for less-able readers) to find the answers to the questions *who/what, where, when, why, and how*. Have students divide a sheet of paper into five sections and write one of the question words at the top of each column. Have them refer to the text about the baby elephant to answer the questions. Then tell readers to assume the role of a foreign reporter or blogger. Have them use their answers to rewrite the story as a news article or blog.

Optional: As variations on the activity, consider having students present the story as a series of text messages or an Internet news feed that is posted as the story unfolds. Or have them recreate the story as a graphic novel. Provide models of whichever text types you have them attempt, and help them recognise the characteristics (such as a limit on number of characters) of the genre.

Worksheet 2: Elephant Rescue

Name _____ Date: _____

Directions: Read the story. Choose a response activity.

The Rescue

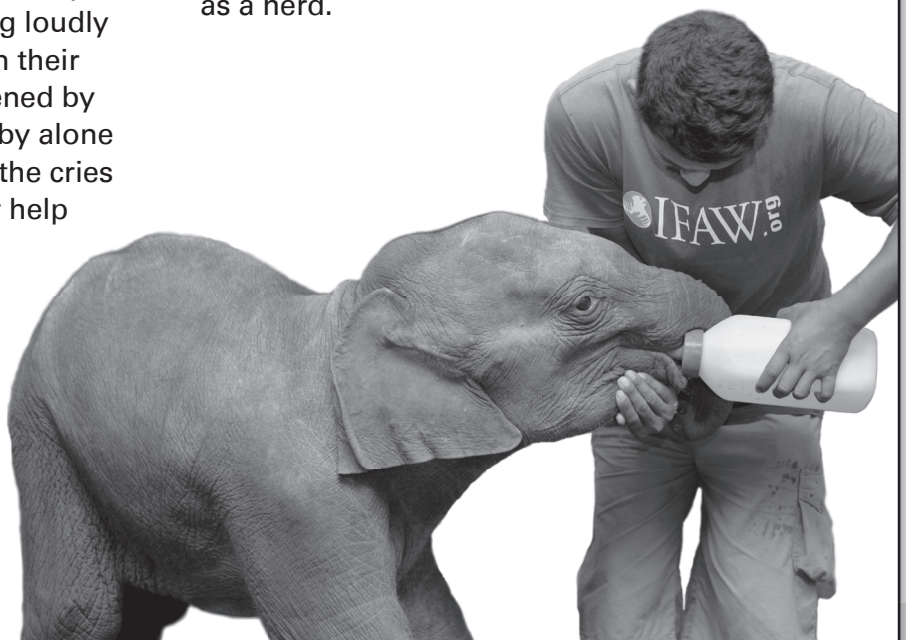
In the middle of the night in India, a herd of elephants wandered out of the forest and into a farm looking for food. The elephants came to a deep, muddy ditch at the edge of the fields. Suddenly, a small baby elephant slid down into the ditch. She tried scrambling up the sides of the ditch to get out, but she wasn't strong enough or big enough to escape. She cried out in fear, calling to the other elephants for help.

Her mother and the other elephants tried to help, but the ditch was too deep for them to reach her with their trunks. There was nothing they could do to help the baby, but they stayed nearby to keep her company.

In the morning, farmers saw the elephants near their fields. They grabbed sticks and pots and rushed at the elephants, banging loudly on the pots to scare them away from their crops. The elephant herd was frightened by the noise and ran off, leaving the baby alone in the ditch. Then the farmers heard the cries of the baby elephant. They called for help from the Forest Department, which arrived with a bulldozer to dig away the dirt around the baby elephant. As the little elephant kicked and struggled, workers from the Forest Department finally were able to pull her out. When a vet checked the baby elephant, he found she was tired and thirsty and scared, but not badly hurt.

The forest workers tried to find the herd and the baby's mother, but they were gone. The workers knew that the baby wouldn't be able to survive in the wild on her own, so they loaded her onto the back of their truck and drove her to the Wildlife Rescue Centre in Assam, India.

At the rescue centre, the baby elephant had a carer who stayed with her all the time, feeding her several times a day. The carer even slept near her! The carers at the rescue centre took the babies they were caring for on walks together so they could learn how to find food and water in the wild. The baby elephant became part of a family of other baby elephants. When these elephants were older, they were all released back into the wild to live together as a herd.



Choose an Activity

- ☐ Rewrite the story from the point of view of the baby elephant, telling what the baby elephant thinks and feels.
- ☐ Find out more about animal rescues and stage a mock rescue.
- ☐ Write an imaginary interview with a carer at the rescue centre. Then work with a partner to role-play the interview for the class.
- ☐ Write a newspaper article, blog entry, or graphic novel about the rescue of the baby elephant.



Lesson 5: Comparing Animals in Danger

Learning Objectives: Students will research threats to various animals in the wild and make comparisons between them. They will gather, evaluate, and synthesise data from a variety of sources to communicate their discoveries in ways that suit their purpose and audience.

Comparing Animal Threats (all ages/abilities)

- Place students in groups or pairs and ask them to list the threats to elephants, along with a short description of how each threat affects elephants and what is being done to protect elephants. Students can use the text to find and list the different problems elephants face. Remind them to also think back to the video. Then have students recall the main threats to elephants as a group.
- Write the following research questions on the board: *What are the most significant threats to _____ [name of animal]? How does the threat affect the animal? What is being done to protect the animal?*
- Choose a set of threatened animals that students will explore in more detail. Like the elephant, the following animals face danger from poaching as well as other threats: tigers, whales, rhinoceroses, leopards, gazelles, leatherback turtles, birds of paradise, and scarlet macaws. Write the animal names on the board and decide how many students will research each. Then put the animal names in a hat and have students choose them until the slots for each animal are filled.
- Ask the groups to consider where they will find information about their animal. Ask them to find information from the IFAW and WTI websites.
- Allow time for groups to research their animals, take notes, and prepare an oral presentation. Ask students to present their information to the class on a chart or overhead transparency in the following format.

Animal: _____ Where animal is found: _____		
Threats	How these affect the animal	What is being done

- Optional:** As a variation on the activity, have students create the chart for display (and comparison), but allow students to make presentations in some non-standard form, such as a dramatic presentation of the threats to their animals.

- After each presentation, discuss how the threats to the particular animal are similar to or different from those facing elephants and how they relate to the other animals presented by the different groups of students. For example, the elephant and the rhinoceros are under threat because of the poaching of the elephant's tusks and the rhino's horns. The leopard, tiger, and gazelle are poached for their skins, and the gazelle, like the rhino, is also poached for its horns. The tiger's body parts are also used in medicines. As a result of habitat destruction, animals like the leopard, tiger, and elephant come into conflict with humans.
- Prompt students to think about the similarities between habitat-loss conflicts in Africa and Asia and issues caused by loss of habitat in other areas—such as habitat loss bringing animals into contact with people in the UK. Also encourage students to think about how climate changes can create both threats and advantages to certain animals (such as increasing temperatures affecting krill food sources for whales or plant foods for grazing animals).
- After students present and discuss the problems various animals face, have each group create a chart that compares the problems their chosen animal has with those of the elephant. A partial example follows.

Threats	Elephants	Tigers	Whales
Poaching	Ivory from their tusks	Hides, body parts for medicine	
Habitat loss	Human activities can crowd out elephants and lead to lack of food, access to traditional water holes. Fragmentation can lead to isolation of groups, less genetic variation, and more health problems.		Drift nets can "block" whale migration through entanglement.
Conflict with humans			
Climate change			



Lesson 6: Who's to Blame?

Objectives: Students will express and explain their own opinions to others through discussions and debates. They will communicate an argument taking account of different viewpoints and drawing upon on what they have learned through research and debate. They will represent the views of others with which they may or may not agree.

1. Discuss with the class the following definition:
The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.
2. Using information from the CITES web site (<http://www.cites.org>) and the “**Trouble with Tusks**” section of the Text guide, explain to the class the role of CITES and how CITES’ decisions have affected elephants.
3. Using the **Glossary**, highlight key vocabulary such as poaching and stockpiling. Discuss the notion of illegal and legal ivory.
4. Handout **Worksheet 3: Fictional Newspaper Article: *Elephant poacher pleads guilty***. Have students read it independently or read it aloud with the class.
5. Ask students for their ideas and reactions to the text. You may want to use some of the following question prompts:
 - *How do they feel about elephants being poached for*

their ivory.

- *Can they imagine what will happen to the calf?*
 - *What are their impressions of Mr Wachiru? What do they know about him? How do they feel about what he has done?*
6. Divide the class into small groups. Assign each group a role from the chart below so they can prepare for the group role-play activity: **Who's to blame?**
 7. Ask each group to spend some time researching and/or imagining the lives of the people on the role play cards.
 8. Have each group make an oral presentation to the class about why the ivory is so important to their role and why elephants should be allowed to be killed for it.
 9. After the role play, ask the class to consider the following questions:
 - *Who is really to blame for the ivory trade?*
 - *What should happen to Mr Wachiru?*
 - *What should CITES do about the ivory trade?*
 10. Ask the class to consider their own solutions to protecting elephants and stopping the ivory trade.

Role	Description
Government minister	The minister wants to sell stockpiled ivory in her country to bring in extra money.
Local wildlife trader	The trader wants to buy ivory from poachers and sell it to dealers in the city to make money to support his family.
Chinese ivory worker	The worker wants to continue her family's centuries-old craft tradition and make money from selling ivory ornaments worldwide.
The poacher	The poacher sells the tusks from the elephants he kills to buy food for his family and to send his children to school.
Wealthy ivory collector in London	She attends auctions of hand-carved ivory ornaments all over the world – she considers ivory carving an important art form and believes the ornaments are an investment.
Secretary General (the Leader of CITES)	He is being lobbied by some African countries who want to sell their stockpiles of ivory. He is expected to be impartial.



IFAW's Animal Action education program provides many different teaching guides, lessons and other materials to help your primary and secondary students achieve science, civics, geography and language arts objectives while building knowledge and understanding about animals and our shared environment.

Go to: www.ifaw.org/education to download FREE education resources on a variety of themes, including:

Born to Be Wild
Saving the Majestic Tiger

Under One Sky
Why Animals Matter

Beneath the Waves
Protecting the Marine Environment

To the Rescue
Emergency Relief for Animals

Making Waves
for Seals

The Daily News

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Elephant poacher pleads guilty

A 23-year-old man who, wildlife authorities say, was caught cutting the tusks from a dead female elephant while her orphaned calf paced up and down in distress nearby, appeared in Joweri District court today.

Officer Fariki Kamau told the court the accused, Ajuma Wachiru, an unemployed father of three children, had earlier offered to sell tusks to an undercover wildlife officer.

Wachiru – who plead guilty – is charged under this country's Wildlife Act with killing an endangered species and for the illegal trade of ivory.

Officer Kamau explained the elephant was one of about 60 killed by poachers in Njogu National Park every year to fuel the illegal trade in ivory.

"More and more local people like Ajuma Wachiru are trying to make money out of poaching elephants and selling the ivory.



Carvings and other trinkets made from elephant ivory on sale at a market in southeastern Africa.

© R. van Aarde

This is most likely because of the 2008 ruling by the Convention on International Trade in Endangered Species (CITES), which may have encouraged increasing demand for elephant ivory in the East," he said.

He explained that the ruling had allowed some countries which had stockpiles of ivory to start selling it again.

"Because there is no way to tell the difference between the 'legal' stockpiled ivory and that from elephants killed illegally, poachers know they have a good chance of making money from unscrupulous buyers."

"The elephant was one of about 60 killed by poachers in Njogu National Park every year to fuel the illegal ivory trade."

— Officer Fariki Kamau

An expert from the International Fund for Animal Welfare, which assists wildlife authorities in protecting elephants, said Njogu's elephant population was under severe threat from the illegal ivory trade.

"The threat to elephants makes the situation for the whole region and its people very grave. Additionally, elephants are a main tourist attraction in the region and therefore, a vital source of revenue for local communities. Everyone in this region would be much worse off without elephants," he said.

Addressing the court, Mr Thiongo Odinga, Wachiru's legal aid counsellor, said Wachiru's dire financial situation had driven him to kill the elephant with the intention of selling its tusks.

"Although it is obviously very wrong to kill an elephant, Mr Wachiru is virtually destitute and unable to support his family.

Most people in Joweri District live on about Sh84 a day - less than \$1 a day - and depend only on what is available in their natural surroundings for survival. It's not surprising that sometimes people break the law to put food on the table and send their children to school," he said.

Wachiru pleaded guilty to the charges and will be sentenced tomorrow. He faces a maximum prison sentence of six months and a fine of between Sh500 and Sh2000 (US\$6.00 – US\$23.00).