Elephants: Giant Mammals

A Reading A–Z Level Y Leveled Book
Word Count: 1,479

Connections

Writing

Should elephants be kept in zoos? Why or why not? Write a persuasive essay for or against keeping elephants in zoos. Use the information from the book to support your argument.

Math

Research another mammal. Compare its size to the elephant. Then, draw a picture to scale that depicts the size difference.

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Elephants: Giant Mammals

Written by Lauren Mahon

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Glossary

adapt *(v.)* to change to fit a new or specific situation or environment (p. 7)

allomothers *(n.)* humans or other animals that help care for young that are not their own (p. 10)

entwine *(v.)* to twist together or wrap around (p. 6)

habitats *(n.)* the natural environments of a plant or animal (p. 5)

herbivores *(n.)* animals that only eat plants (p. 11)

intelligence *(n.)* the ability to learn and understand (p. 4)

ivory *(n.)* the white material that makes up the tusks of elephants and other tusked animals (p. 13)

manipulate *(v.)* to move, handle, or operate with the hands or other appendages (p. 8)

matriarch *(n.)* the female in charge of a family group (p. 9)

migrates *(v.)* moves from one habitat or region to another at a certain time each year (p. 11)

poaching *(n.)* the act of killing a wild animal illegally (p. 13)

social *(adj.)* naturally tending to live in groups (p. 9)

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Focus Question

What characteristics allow elephants to survive in many different climates?

Words to Know

adapt
allomothers
entwine
habitats
herbivores
intelligence
ivory
manipulate
matriarch
migrates
poaching
social

Front and back cover: A family herd of African Elephants walking along a road

Title page: An Indian Elephant enjoying a cooling splash in a river

Page 3: An African elephant displaying its huge tusks

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Elephants: Giant Mammals
Giants of the Animal World
Level Y Leveled Book
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Correlation

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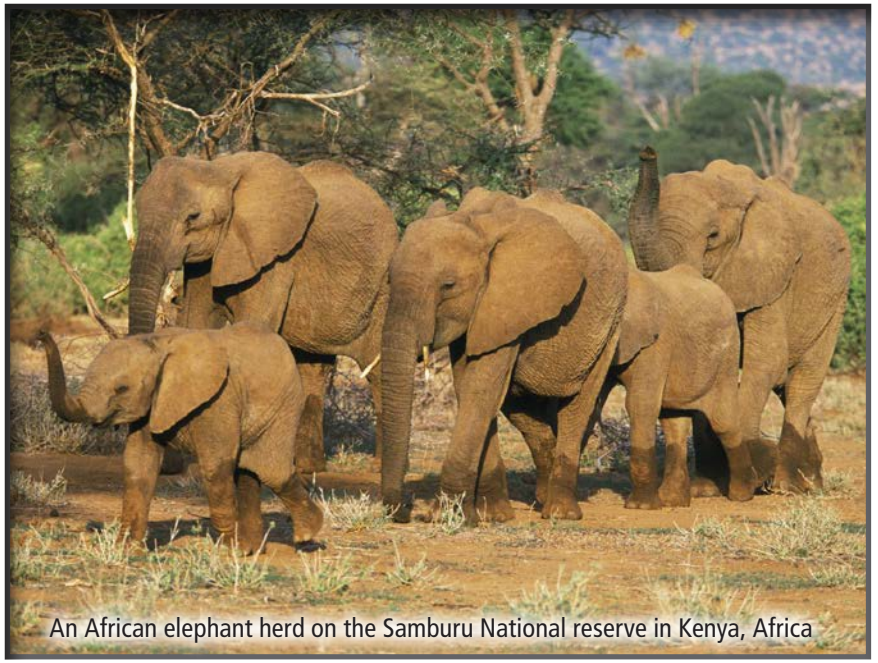


An African elephant herd on the Samburu National reserve in Kenya, Africa

Living Large

With their imposing presence, elephants have drawn humans' attention for centuries. Today, we know many fascinating things about these super-sized beasts. Scientists are learning more and more about just how intelligent elephants are, as well as how complex their relationships are.

We have many things still to learn about elephants, so it's a good thing that dedicated wildlife groups are striving to protect them and their habitats. If we protect elephants and respect their habitats, they will be roaming the Earth for many years to come.

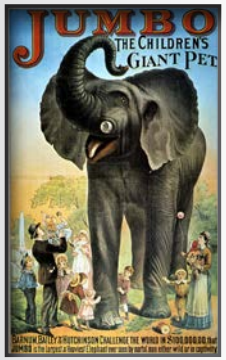
Humans and elephants have a long history together. Some studies report that ancient armies used elephants in battle. Asian elephants have been used to move trees and other heavy objects throughout history.

Elephants have been kept and studied in zoos for hundreds of years. However, today many experts argue that zoo environments rarely meet elephants' needs. Their natural family structures are not supported and due to their high intelligence, elephants are likely to be bored and stressed in captivity. Animal welfare activists fight to have zoo elephants moved to sanctuaries where they can live a more natural existence.

Humans and Elephants over Time

- In ancient Rome, audiences watched elephants fight soldiers and other wild animals in the arena.

- Elephants have performed in circuses for at least two hundred years. Jumbo (1861-1885) was the most famous circus elephant in the world.



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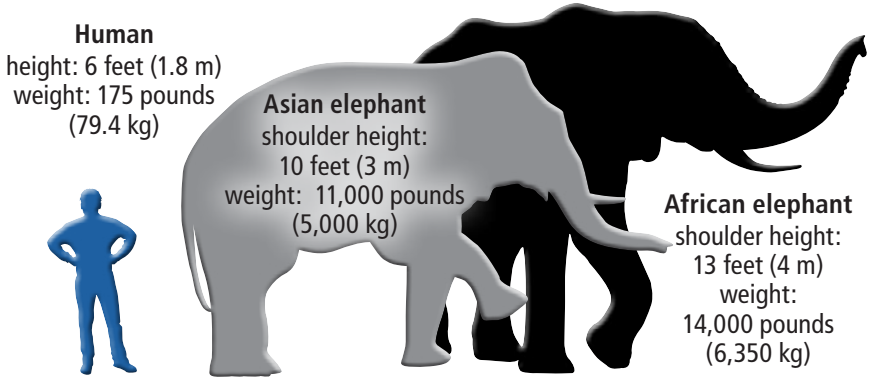
Big Bodies, Big Brains

If you don't think elephants are gigantic, think again. They are the most enormous land animals anywhere on Earth. To find bigger animals, you would have to look in the depths of the ocean, where blue whales and a few other whales are larger. On land, though, elephants reign supreme.

Elephants have impressive **intelligence** as well. Scientists consider elephants to be among the brightest animals. This is evident in the way they cleverly create and use tools to scratch themselves, and collaborate to solve problems. They also work together to protect their calves. They can remember locations of faraway places to find food and water. Some experiments have even discovered that elephants can recognize their own reflections, which only the most advanced animals can do.

How Big Are They?



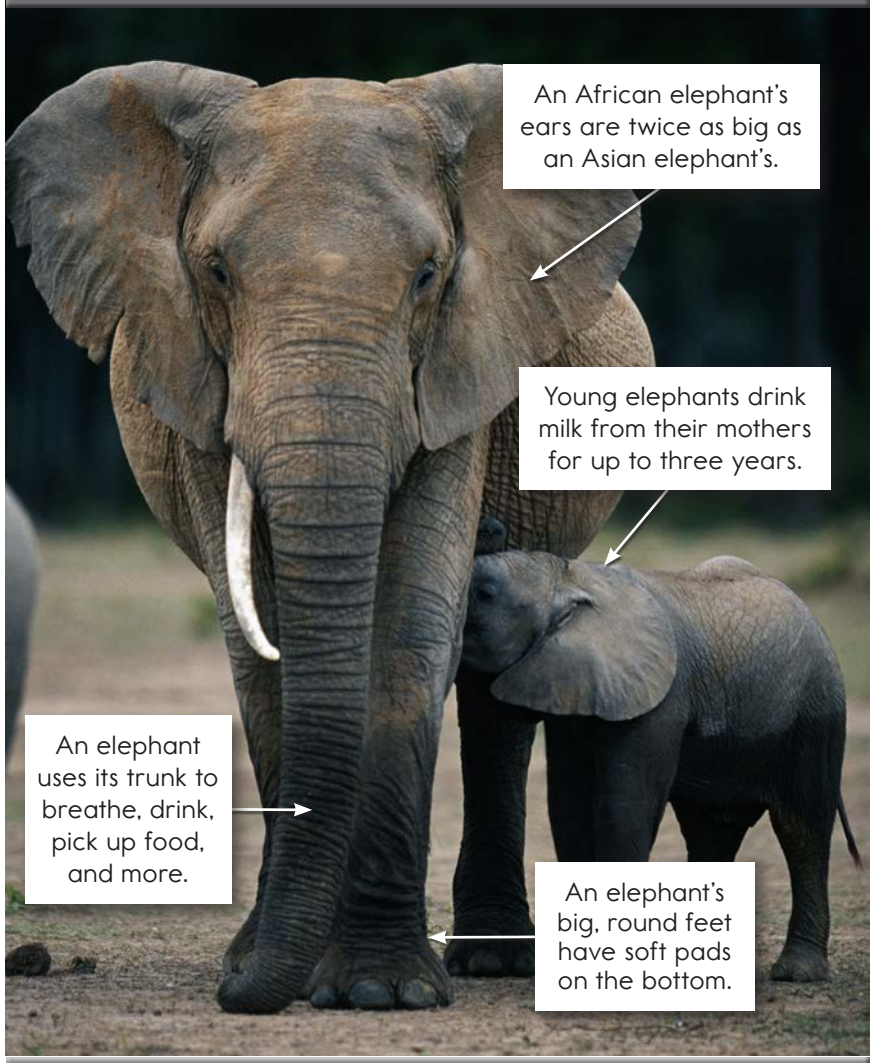

In 2014, a Kenyan police officer stacks seized elephant tusks.

Humans: Friends or Foes?

Adult elephants are too hefty and powerful to be threatened by other wild animals. But humans are increasingly encroaching into elephant habitats. Humans build roads, plant crops, cut down trees, and construct houses in territories where elephants once roamed freely. At one time, elephants lived in nearly every part of Africa and across South Asia. Today, they are restricted to a small fraction of that territory.

Poaching is another challenge. Even though many countries have laws protecting elephants, hunters continue to slaughter them for their **ivory** tusks. Ivory is especially popular in China, where it's carved into art. Some people believe ivory objects bring good luck, even though methods for getting ivory are tragic for the elephant.

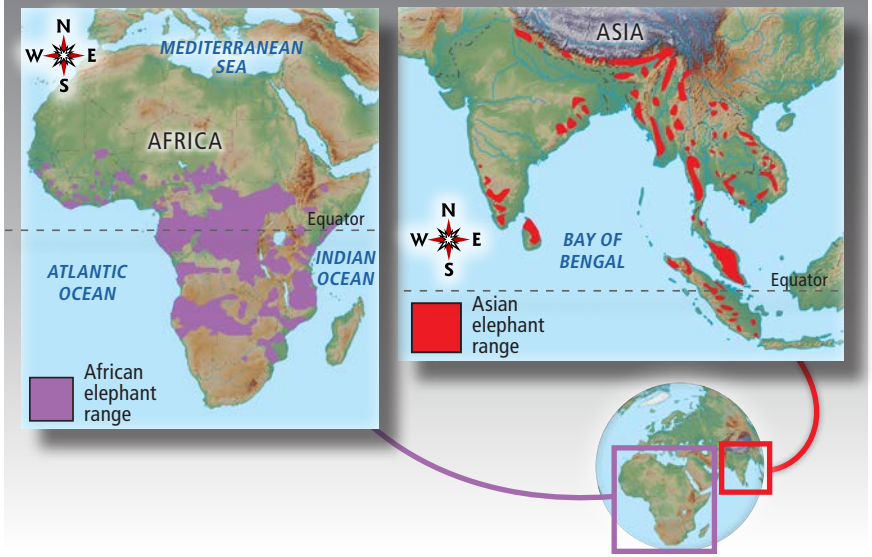
What Makes an Elephant a Mammal?



All mammals

- have a backbone
- have hair on their bodies at some time in their lives
- are warm-blooded
- produce milk to feed their babies

Where Elephants Live



Home, Sweet Home

When it comes to their habitat, elephants are more flexible than many other animals. As long as these colossal, brainy beasts can find enough food and water, they can thrive in a variety of environments.

In Africa, elephants live in hot, dry grasslands, rainforests, and even deserts. They can live at varying elevations, from sea level to high in the mountains. In Asia, most elephants live in tropical forests—some that have lengthy rainy seasons called *monsoons* and others that have long periods of drought. They also live in swamps and other **habitats** that provide the shade they need.

The Incredible Elephant Trunk

With their hulking bodies, legs like massive columns, and thick, wrinkly gray or brown skin, elephants don't resemble any other animals alive today. Most unusual of all are elephants' long, flexible trunks, which function as their nose and upper lip combined.

Elephants use their massive trunks for multiple purposes. They breathe through them, use them to grasp food and other objects, and make blaring trumpetlike noises by blowing air through them. An African elephant can suck up 2 gallons (7.5 L) of water with its trunk and swoosh the water into its mouth for a drink or spray it across its body for a cooling shower. Afterward, it can pick up dust and blast it over its wet skin for protection from pesky insects and the Sun.

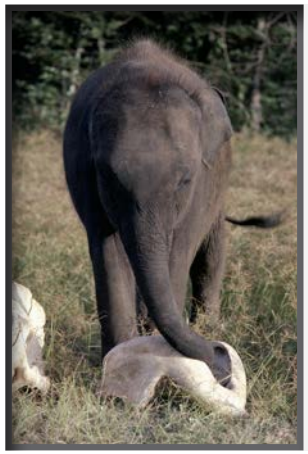
Trunks are also important for elephant communication. Scientists study how elephants use infrasound—sound that is too low for humans to hear—to communicate. Friends and relatives **entwine** their trunks together to say hello, and young elephants use them to wrestle and play. A mother elephant is extremely affectionate with her youngster, and might stroke her calf with her trunk to comfort it—but she can also use her trunk to give the calf a slap if it's misbehaving!

Elephants don't sleep much. This Indian elephant will spend much of its day roaming and foraging for food to sustain its huge body.

Dining Elephant-Style

As **herbivores**, elephants eat plants—a lot of them. They spend 80 to 90 percent of their time eating, with each elephant consuming up to 300 pounds (136 kg) of food a day. However, much of it passes right through them. Elephants only digest about 44 percent of the grass, leaves, branches, tree bark, seeds, and fruit that they eat.

African elephants regularly travel tremendous distances to find food and water. One group of African elephants in the country of Mali **migrates** across an area of more than 7,500 square miles (20,000 sq km) each year!



Do You Know?

Elephants seem to know when they see elephant bones. In one experiment, elephants were shown three large animal skulls. They spent twice as long touching the elephant skull as they did touching either of the other skulls.

Elephants can live for sixty to seventy years, so it makes sense that they have extra-long childhoods. Calves nurse from their mothers for up to three years and spend several more years learning survival skills from the herd.

As female calves grow up, they prepare for their own offspring by helping care for younger calves. Studies show that these **allomothers** increase the chances that young elephants will survive.

Adult male elephants have different social needs than female elephants. At around ten to fifteen years old, the mature males leave the herd to wander alone or form a so-called bachelor herd with other male elephants, only visiting female herds when they want to mate. Females stay with their mother's herd for the rest of their lives and may eventually become matriarchs themselves.

Two of a Kind

Fossils found in rock sediments from millions of years ago can teach us a lot about life on Earth. According to the fossils of elephant remains, the two main species of elephants—African and Asian—both originated in Africa. After Asian elephants migrated out of Africa, they evolved to **adapt** to their new environment.

In a side-by-side comparison, it's evident that African elephants are the larger of the two species. Some adult males measure 13 feet (4 m) tall at the shoulder and weigh up to 14,000 pounds (6,350 kg). Females are shorter and lighter, at around 9 feet (2.7 m) tall and up to 10,000 pounds (4,540 kg).

Asian elephants are enormous, but they are significantly smaller than their African relatives. Male Asian elephants can grow up to 10 feet (3 m) tall and weigh 11,000 pounds (5,000 kg) and females can grow to a height of 8 feet (2.4 m).

African elephant skin is more wrinkled than Asian elephant skin. The wrinkles trap moisture and help cool them.

An obvious clue to identifying an elephant is its ears. African elephants' ears are much bigger than those of Asian elephants—often twice as large. Scientists think this is because African elephants live in hotter climates and flap their ears to cool themselves. The blood vessels throughout the ears are close to the surface, so flapping them cools the blood and lowers body temperature.

African elephants have another identifying feature: two "fingers" at the tip of their trunk. These sensitive extensions help the elephant grab large items as well as objects as small as a blade of grass. Asian elephants have only one finger at their trunk tip to use to **manipulate** objects.

Unlike African elephants, Asian elephants have big, round bumps on the tops of their heads that are often the tallest points on their bodies. Their backs are flat or have a slight arch, while African elephant shoulders and hips are equally tall, often with a clear dip between them.

Elephants use their tusks for digging, fighting, and moving things. During times of drought, African elephants dig water holes in dry riverbeds. Asian elephants can find water fairly easily year-round, so with less need to dig for water Asian elephant tusks are less important. Female Asian elephants have pint-sized tusks or none at all.

Life In—and Out—of the Herd

Scientists have learned that female elephants are **social** animals that form close relationships with others of their herd. In the wild, female elephants spend their entire lives in the company of related females and their young. Each herd is an extended family group led by a **matriarch**—usually the oldest female elephant with the most experience surviving in the wild. The entire herd might descend from the matriarch, including her adult daughters and their calves.

An elephant is born weighing around 250 pounds (110 kg) and while able to stand, it doesn't walk very well. Right away, the herd is ready to help the mother care for her calf and protect it from predators such as lions and tigers. These predators won't attack an adult elephant, but they are a more serious match for a young calf. The adults cooperate to defend the young calf, driving away any animals that pose a danger.

Wowser!

- While you might think a rhino or hippo would be related to an elephant, the hyrax—a small, furry animal that looks a little like an otter—is one of the elephant's closest living relatives.