

Elephant Earth Adventures...

What an amazing creature the elephant is...long trunk, floppy ears, wispy tail, and mighty huge, yet its wrinkly skin seems almost too big for its lumbering frame! These animals have been considered sacred, feared, used as workers, killed for their ivory tusks, trained as performers, and been the focus of legends. Now, Miss Maggie travels to Africa to learn more about the amazing elephant and how humans can help this magnificent creature.

You probably know that there are two species of elephants – the larger African elephant and the smaller Asian elephant. Because Miss Maggie and Dude are looking at African elephants, let's find out more about that branch of the elephant family tree.

Before we start, show what you already know about elephants.

Thinking and Picturing...

Use the box to complete one of the following two activities.

- Write 5 sentences that describe an elephant
- Draw a sketch of an elephant



Extraordinary Elephants

You likely already know a lot about the way an elephant looks. But did you know that an elephant can be either right tusked or left tusked? You may not have realized that elephant ears are like fingerprints – you can identify an individual elephant by the pattern the veins make in its ears. Did you also know that an elephant has a big heart? Yes, we know elephants are loveable, but we mean its heart weighs a lot – almost as much as a five year old child! These are just a few of the amazing facts about these intelligent creatures.

Extra Large

An elephant comes by its name honestly. In Latin *ele* means arch and *phant* means huge. We all know an elephant is indeed huge. You may have seen the stuffed elephant in the Museum of Natural History in Washington D.C. This elephant was found in Angola in 1955. It is estimated that this elephant weighed 12 tons and was 12 feet 6 inches tall. It was shot, preserved, and put on display in the museum.

This is a really big elephant. But what are the dimensions of the average African elephant? A male is 11 feet tall at the shoulder and weighs about 5 tons. Females are approximately 9 feet tall. This is still mighty big!

Elephant Profiles

Look at a shadow of an African elephant and you'll see that its rounded head with enormous trunk and large ears is held a bit lower than its shoulders. It has a dip in its back rising to a hump just before its tail. Some people think that an African elephant's ears are shaped like its home continent! Both male and female

African elephants have tusks. It is these tusks that have caused so much trouble for elephants over the years. People want the ivory tusks and kill elephants to get them!

Expensive Tools

An elephant uses its tusks as tools. It is one of the few animals to use tools. A tusk can be used for moving something or for digging. Elephants often use their tusks to dig for salt or water. An elephant favors one tusk over another one much like we use either our left hand or our right hand. Because of this, the one tusk that an elephant prefers to use may become more worn than the other tusk.

Tusks are made of the same material as our teeth – dentine. What makes an elephants' tusks unique is the diamond-like pattern of the dentine. Even though many countries have outlawed trade in ivory, poachers still can make a lot of money by illegally selling elephant tusks. Too many people are willing to take the risk of killing elephants despite the severe penalties.

Ears Are For Everything!

Elephant ears are really quite extraordinary. These big ears can hear sounds up to 5 miles away. But elephant ears are more than just sound receptacles. Researchers can use the vein patterns of an elephant's ear to tell one elephant from another elephant.

Elephants also need their ears to help regulate their body temperature. An elephant's skin doesn't have a lot of sweat glands. By flapping its ears, an elephant has a "built-in fan!"

An elephant with its ears spread out is a menacing sight! Elephants use their big ears to ward off threats and to signal other elephants that danger is near.

Exquisite Trunk

An elephant's trunk is a very unusual and versatile feature. It doesn't have any bones in it, but it does have more than 100,000 muscles. That's a lot of power! Elephants can lift big logs or heavy tree trunks with their muscular trunks. The trunk is another natural tool that the elephant possesses. It can serve as a snorkel, a hose, or a water bottle.

An elephant uses its trunk to communicate and even to let people know if it is really going to charge at them! When an elephant races toward you with its trunk held out, this is a signal that it is likely bluffing. But, if it comes at you with its trunk down – watch out. This elephant means it, and you better get out of the way!

Elephants can use their trunks the way people use their arms. They show affection for each other by slapping each other with their trunks the way people shake hands or pat each other on the back. Elephants seem to feel great care for each other.

Besides being so useful, an elephant's trunk is very sensitive. In fact, the trunk is the most sensitive part of an elephant's body. Don't hit an elephant on the trunk – ouch, that hurts!

Extremely Wrinkly and Sensitive, Too!

The elephant also needs to be careful with its skin. If it stays out in the hot sun too long, it gets a bad sunburn. This is one reason why elephants like to throw dust on their backs. The dust is an elephant's natural sunscreen. You might wonder why an elephant in the wild doesn't appear gray. It's because it has taken too many "dust showers" with red dirt and mud!

Mother elephants protect their baby's sensitive skin from the sun. They stand over their babies for long periods of time. This provides shade for their children. At an elephant orphanage in Kenya, keepers must put sunscreen on the ears of motherless babies.

Elephants On Parade!

You may have seen pictures of an elephant in a circus or parade holding onto the tail of the elephant in front of it. Did you ever wonder how these animals are trained for this "elephant chorus line?" The answer is simple – they aren't trained! Even in the wild, elephants often march along in a row holding the tail of the animal in front. This can also happen when elephants are in the water. This is a safety precaution. Baby elephants hold onto a lead elephant's tail so they will not be washed away.

Slow and steady wins the race is a good maxim for an elephant. You might think an elephant would be clumsy and noisy when it walks, but actually it is able to move quite silently. This is because an elephant has a fatty pad inside each of its feet. The pad cushions the weight of the elephant as it walks. In fact, an elephant sometimes moves so silently that it could sneak right up on you! It is a slow mover, though. Usually an elephant moves at 4 to 5 miles an hour, but if angered or frightened an elephant can run short distances at about 25 miles an hour. But, it can't jump! In fact, the elephant is the only mammal that doesn't leap.

It may not be a track or basketball star, but an elephant is a surprisingly good swimmer. It can even swim underwater! Water play seems to be great fun for elephant family groups. It is not unusual to see elephants squirting each other, wrestling in the water, or rolling in the mud.

Eating Isn't Easy!

Elephants need a lot of room and a lot of food. They may eat over 300 pounds of food a day. To satisfy the needs of their vegetarian diet, elephants sometimes eat shrubs and branches along with grass. Elephants have even been known to push over trees in search of food.

It isn't easy to chew and digest all of this food. Less than half of the food an elephant eats is actually used by an elephant's system. Chewing up all this green stuff is tough on an elephant's teeth, too. Elephants have six sets of molars, but after the last set wears out, there are no more. An elephant is in danger of starvation then because it can't chew its food!

All of this eating and foraging for food wasn't a problem when elephants had large areas in which to roam. In fact, their habits actually help the ecology of an area. Because of their large herbivorous diet, elephants are sometimes called the architects of the savannah. They keep the bush from taking over grasslands. This makes animals like zebras and wildebeests happy!

An elephant is a good community member in other ways, too. The dung of an elephant provides food for insects and birds. It also helps to scatter seeds. Sometimes elephants must dig into dry riverbeds to reach water. This helps other species that also need water. Even the paths that elephants make are environmentally friendly. They can become rainwater conduits or act as fire barriers.

Unfortunately, elephants do not have the freedom they once did. Many elephants are confined to game reserves and parks. Each area can support only a certain number of elephants. Too many elephants living in a small space means trouble for the elephants and the natural habitat.

Extended Elephant Families

A family is very important to an elephant. Female elephants and their young live in strong family groups that are led by an older female. The other members of the group depend on her experience to keep the family group safe. She leads the others from place to place and acts as a role model to show the younger elephants how to behave.

Males stay with the family group until they reach their “teenage” years. At about 12 to 16 years of age, the young bulls leave the safety of their family. For a while, they often follow older males to learn about proper bull behavior. Then they tend to live in groups of 2 or 3 bulls, or they become loners as adults.

Researchers have found that it is very important for young elephants to have these role models. They need the support of a family and grown ups to become good elephant adults.

Elephants do have a strong sense of family, They are loyal to each other. Herds will slow down and wait for an older family member. Elephants have been observed comforting dying elephants. They often stay with the body of a loved one for many days.

It is said that elephants never forget. Sometimes orphaned elephants are raised by keepers and then released into the wild. When these elephants become mothers, they may bring a new baby back to “show” the keepers.

Today many groups are actively helping elephants. You will learn about some of these groups as you explore www.missmaggie.org. Take a look at the movie section. Read other articles on the site, and, of course, watch Miss Maggie’s *Herd of Elephants?* adventure.

Use What You Know!

1. Time Out For Math.....

A.

Convert:

The height and weight of the stuffed elephant in the Natural History museum to the metric scale.

12 tons = _____ kilograms

12 feet 6 inches = _____ meters

What would the average height of a male and female African elephant be using the metric scale?

Male - _____

Female - _____

B.

The article says that elephants may eat 300 pounds of food a day. Name some other things that weigh about 300 pounds. Convert 300 pounds to kilograms.

1.

2.

3.

300 pounds = _____ kilograms

2. Match the object to the way an elephant uses its trunk

A. Snorkel

_____ An elephant holds water in its trunk and quenches its thirst with the water by putting it into its mouth.

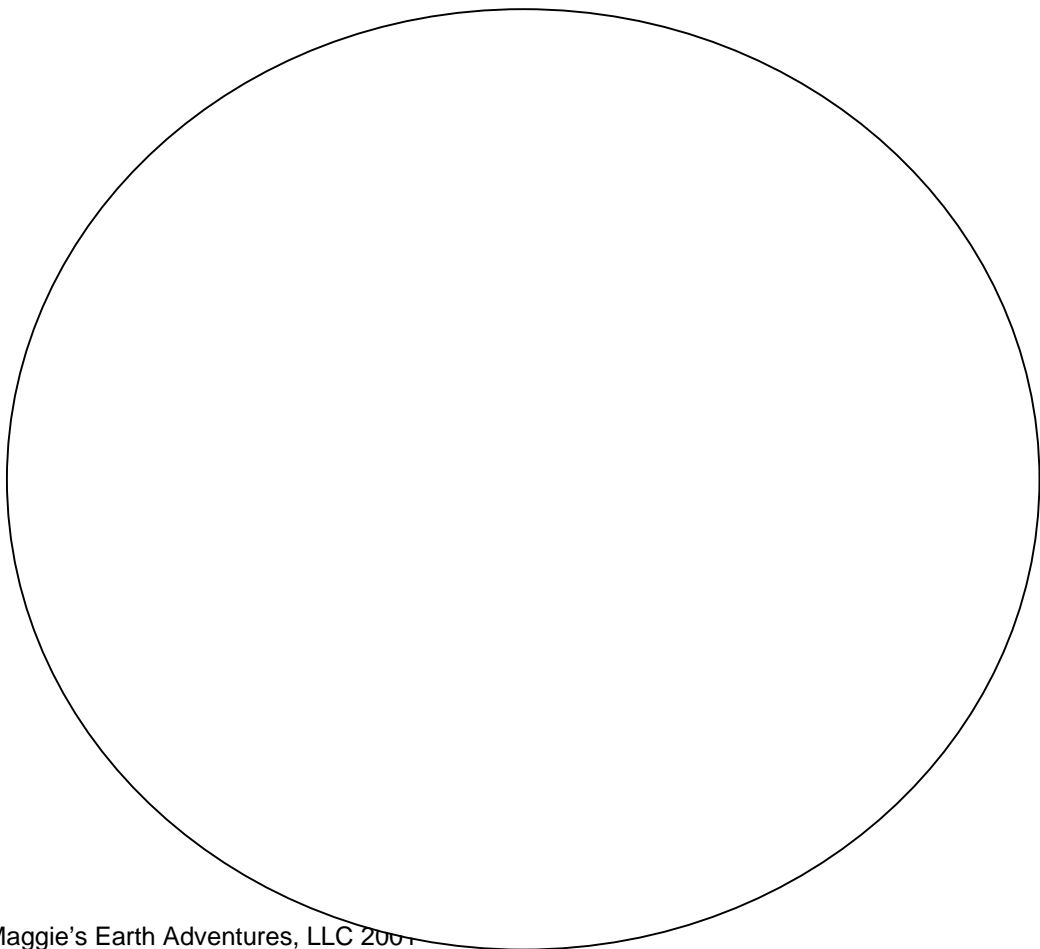
B. Hose

_____ An elephant sprays water or dust over its back to take an “elephant shower.”

C. Water Bottle

_____ An elephant can put its trunk above water and breathe

3. Draw the shadow of an African elephant



4. Think and Do

Pick one of the following elephant features:

- Skin
- Trunk
- Tusks
- Ears

Write a short paragraph telling about this feature from the point of view of a tiny insect that is inspecting it up close. What do you see, hear, smell, taste, and feel? As a tiny insect, do you have a guess what this creature might be?

5. Tell a short story

Imagine that you are a baby elephant. Tell about your family and what you like to do. Was there ever a time when you were frightened? What happened?

6. What do YOU think? Choose one of the topics and write a short paragraph about it.

- In Miss Maggie's African adventure, the baby elephant and Dude are separated from the rest of the group. Explain why this is not a good situation for the baby elephant.
- Professor Wouter van Hoven is involved in moving elephants to a game reserve in Angola. He knows that when moving elephants to their new home, he must be sure to move family groups. Explain why this is so important.

6. *You Can Make A Difference...Design a poster*

What is something YOU can do to help elephants?