

# Activity Pack: Exploring Colchester Zoo

This pack is designed to provide teachers with information and activities to help you lead a trip to Colchester Zoo for KS3 students.



# How to Use this Pack:

This Tour Guide Pack was designed to help your students learn about the animals and prepare for a trip to Colchester Zoo.

The pack starts with suggested animals to visit at Colchester Zoo including a map of where to see them and which encounters/feeds to attend. The next section contains fact sheets about these animals. This includes general information about the type of animal (e.g. what their adaptations are, where they live, what they eat) and specific information about individuals at Colchester Zoo (e.g. their names, how to tell them apart). This information will help you plan your day, and your route around the Zoo to see some of the animals. We recommend all teachers read through this, and give copies to adult helpers attending your school trip.

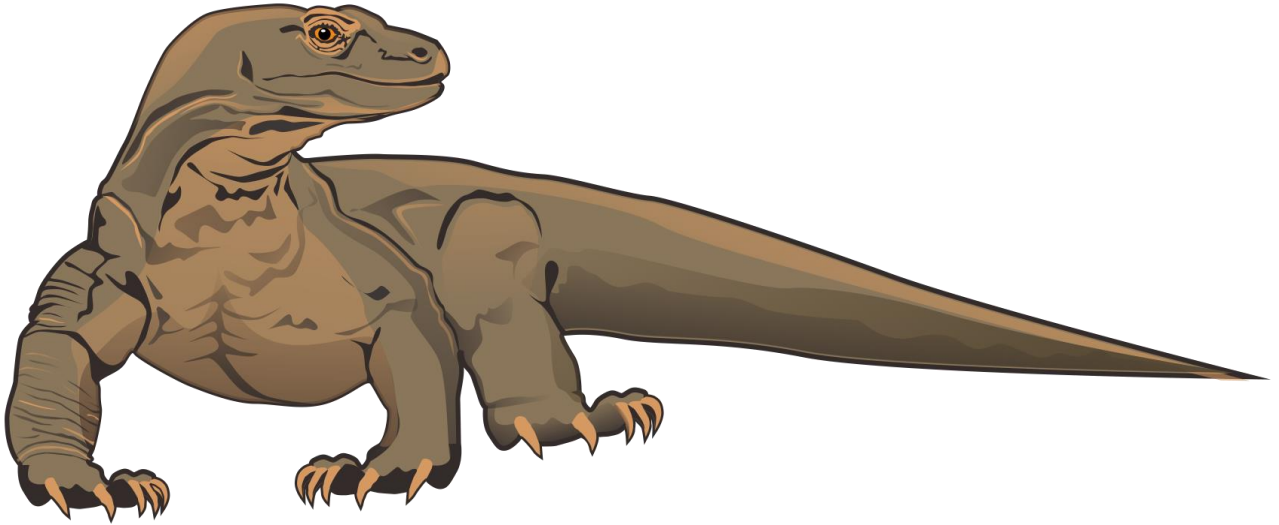
The rest of the pack is broken into: at the zoo and post-trip. Each of these sections start with ideas to help teachers think of ways to relate animals to other topics. Then there are a variety of pre-made activities and worksheets. Activities are typically hands on 'games' that introduce and reinforce concepts. Worksheets are typically paper hand-outs teachers can photocopy and have pupils complete independently.

Teachers can pick and choose which they want to use since all the activities/worksheets can be used independently (you can just use one worksheet if you wish; you don't need to complete the others).

The activities and worksheets included in this pack are for KS3 students. Feel free to use the activities and worksheets for students of all ages.

The at the zoo activities/worksheets typically require information your pupils can gather while they are at Colchester Zoo and are designed for completion during your school trip. The post-trip ideas are designed to be used after your visit to help consolidate learning and build on information gathered during your school trip. Within these sections, the activities/worksheets can be used in any order.

If you would like any more guidance, or have any questions about any of the information contained within this pack, please contact our education department at [education@colchesterzoo.org](mailto:education@colchesterzoo.org)

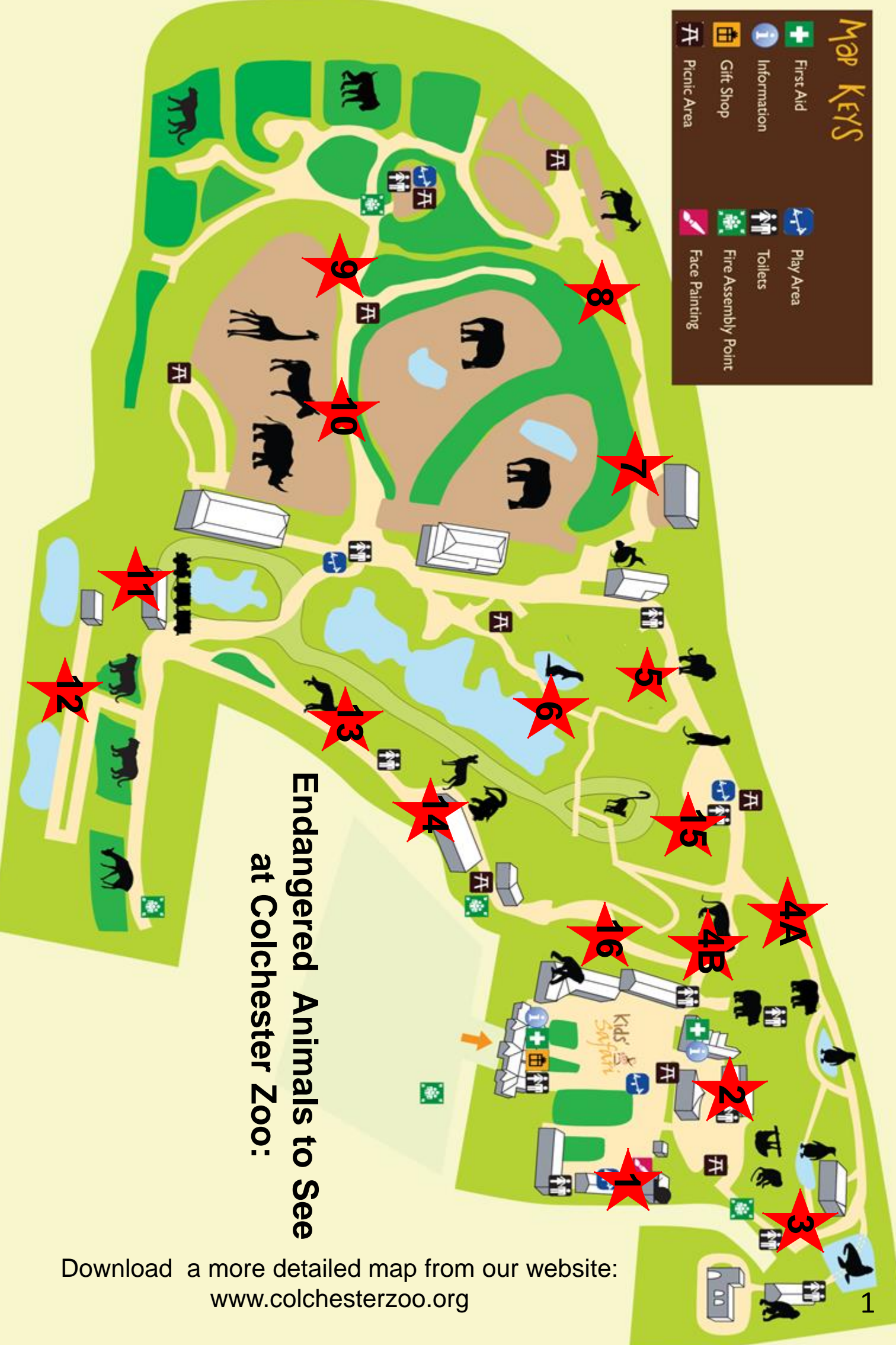


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# Map KEYS

-  First Aid
-  Information
-  Gift Shop
-  Picnic Area
-  Play Area
-  Toilets
-  Fire Assembly Point
-  Face Painting



Endangered Animals to See  
at Colchester Zoo:

Download a more detailed map from our website:  
[www.colchesterzoo.org](http://www.colchesterzoo.org)

# Places to Go

- ★ 1. Head to the **Discovery Centre** to see some of our smaller animals, as well as get the chance to handle an invertebrate.
- ★ 2. Worlds Apart: visit the **sloths**. At the exit, continue towards the orangutans and stop at Penguin Shores or Inca Trail to see the **Humboldt penguins**.
- ★ 3. Walk through the **sea lion** tunnel and visit the **orangutans**.
- ★ 4. **4A** is the lower viewing area for the **sun bears** and **4B** is the upper viewing area.
- ★ 5. Viewing for the **meerkats** and the **gelada baboons**. Also the
- ★ 6. Location of the **Flamingo Standing Challenge** on the bridge overlooking the flock of flamingos.
- ★ 7. Past Koi Niwa is **Sensation Station**, where at set times a reptile, mammal or invertebrate will be out to meet and possible handle.
- ★ 8. Location of the **Speed Test Challenge**
- ★ 9. Location of **Test Your Strength Challenge**

# Places To Go Continued

- ★ 10. Africa paddocks; **elephants** and **giraffes**.
- ★ 11. Station for the **Lost Madagascar Express**. Need to get to the **Lemur Walkthrough**.
- ★ 12. Entrance to our **Nature Area** is through the viewing tunnel for the **Amur Tigers**.
- ★ 13. Location of the **Wing Flap Test**, past the wolves into World of Wings opposite the **great grey owls**.
- ★ 14. Opposite the exit of World of Wings is the **Action for the Wild** room. Also viewing for the **Komodo dragons** is here.
- ★ 15. Location of the Jump Challenge (viewing balcony opposite the Amur leopards).
- ★ 16. Near the Zoo exit is **Chimpanzee Lookout**. In the entrance, there are **several brain teasers** to try.

# Feeds and Talks to Attend:

**Penguin Encounter** (2 on map) watch the penguins being fed.

**Sea Lion Presentation** (3 on map) watch the sea lions show off some of their amazing trained behaviour!

**Bear Encounter** (4A, 4B on map) a keeper will explain all about these endangered bears, and you might get the chance to see training or feeding.

**Orangutan Encounter** (3 on map) a keeper will explain all about these great apes.

**Meerkat Encounter** (5 on map) meet the keeper and see what the meerkats have to enjoy today.

Visit [www.colchesterzoo.org](http://www.colchesterzoo.org) to see the 'Daily Timetable' for a full list of all talks, feeds, and shows and their times.

# White Rhinoceros

**Habitat:** Savannah

**Distribution:** South and northeast Africa

**Diet:** Grazes on grasses and other vegetation

**Longevity:** 45 years in the wild, longer in captivity

**Status:** Near Threatened

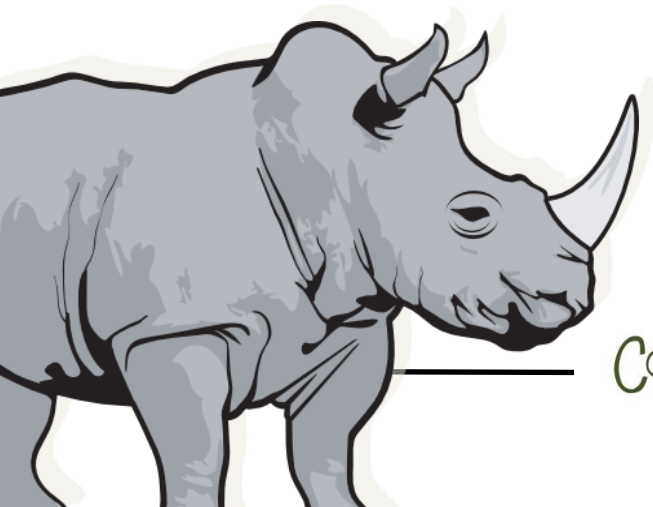
There are five species of rhino: white rhino, Indian rhino, black rhino, Sumatran rhino, and Javan rhino. Indian rhinos are vulnerable. Black, Sumatran, and Javan are all listed as critically endangered. The northern subspecies of white rhino is listed as extinct in the wild. Southern white rhinos are the least endangered.

Southern white rhinos are considered near threatened. They have experienced escalating poaching in recent years due to increase demand in the illegal trade of rhino horn. As other rhino species numbers decrease, more poaching effort is focusing on the white rhino. It is predicted, that once other species are extinct, the rate of poaching white rhino will increase dramatically and their population will quickly decline.

Current protection efforts have helped limit poaching. Without strong conservation measures, within five years white rhinos will meet the criteria to be listed as endangered if poaching levels continue at the current rates. If poaching increases, this will happen a lot faster.

Rhino poaching is primarily for their horns. Rhino horns are made of keratin fibres. Keratin is the same material in human hair and fingernails. The horns are seen as a sign of wealth and sometimes used to make trinkets and dagger handles. However, the most common use for rhino horn is in traditional medicine. Scientific evidence has proven there is no medicinal benefit to rhino horn. However, many people believe it can cure a wide range of illnesses, including flu and cancer, so they are will to spend a lot of money to acquire it illegally.

Colchester Zoo's rhinos are part of an international breeding programme and there have been several calves born since 2009.





# African Bush Elephant

**Habitat:** Savannahs bush elephant

**Distribution:** Africa south of the Sahara, mainly in reserves

**Diet:** Grass, leaves, woody plants, shrubs, bark, flowers and fruits.

**Longevity:** Up to 60 years, longer in captivity

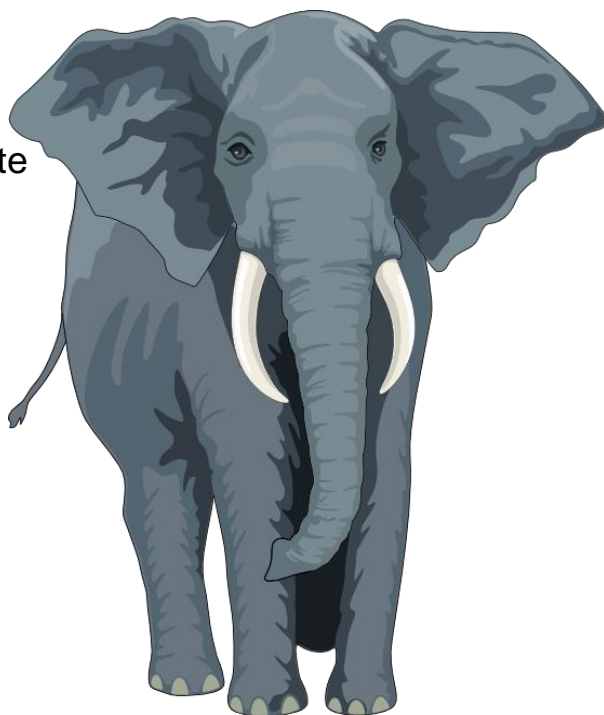
**Status:** Vulnerable

Elephants are the largest land mammal on Earth. They weigh up to 6 metric tons, are up to 7.5m long and over 3m high. Males are larger than females. Their tusks are made of ivory and are modified front teeth. Elephants use their tusks to dig in the ground, knock bark off trees, and scare away predators. An elephant's trunk is a modified nose and upper lip. Elephants use their trunks for many purposes including drinking, squirting water, picking things up, breathing, and making noise (trumpeting). Because the trunk is their nose, they do not have any bones or teeth in it, but it does have 40,000 muscles!

Elephants live in complex social herds. Females form groups of closely related individuals led by the dominant female, called the matriarch. Males are sometimes solitary, or form groups with other males. Living in groups helps the elephants avoid predators. The only predator of adult elephants is humans, but baby elephants may be hunted by other predators, such as lions.

Elephants are vulnerable, with very few living outside of protected areas. One of the major threats elephants face is poaching and hunting for the ivory trade. Humans kill elephants and carve the tusks into statues, bracelets, and other souvenirs and trinkets.

Colchester Zoo's elephants have two paddocks. One paddock can be viewed from the Elephant Bush walk path and the second paddock is opposite The giraffe paddock.



# Humboldt Penguin

**Habitat:** warm coastal waters and sandy/scrubby shorelines

**Distribution:** Peru, Chiles and islands off the west of South America

**Diet:** Crustaceans, krill, squid, and fish

**Longevity:** 30 years

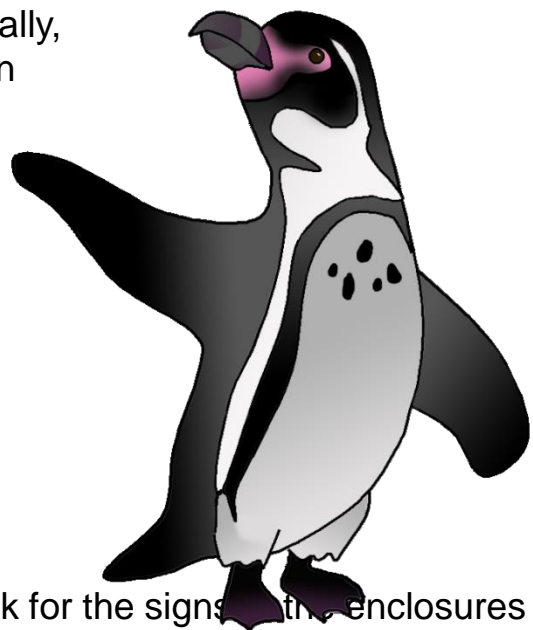
**Status:** Vulnerable

Humboldt penguins are a medium sized penguin, about 65cm tall and weight about 4.2kg. The feathers are black on the upper parts, light on the lower section and have a black stripe across their chest. Like all penguins they are flightless, since their wings have lost the flexibility at the elbows and become more like flippers. These 'flippers' allow them to swim up to 25 kph 'flying' underwater, essential for catching fish and escaping predators. The Humboldt penguins live in a warmer climate than most other penguins but they retain the layer of insulating fat to protect them from the cold when swimming. This gives them problems when trying to keep cool on a warm day. Humboldt penguins do however have shorter plumage than other penguin species.

Humboldt penguins excavate burrows to nest in, usually about 3 metres in length. At the end is a small chamber which they line with sticks, mosses and lichen. Incubation of the two eggs shared between both sexes, they often pair for life and stay with their mate.

The primary threats for this species is accidental capture in fishing nets (resulting in drowning), illegal hunting for food and illegal capture for the pet trade. Historically, populations declined due to over-exploitation of guano (which the penguins require for their nests). It is still harvested in some parts of their range, but no longer a major threat.

There are lots of Humboldt penguins at Colchester Zoo living in two separate breeding colonies. At Penguin Shores get an underwater view of them swimming, or at Inca Trail view the penguins from above. The penguins all have unique markings of black spots on their bellies. Look for the signs at the enclosures and see if you can identify the names of all the penguins!



# Lions

**Habitat:** Desert, savannahs and grasslands

**Distribution:** Africa, southern Sahara to South Africa

**Diet:** Variety of animals including birds and mammals

**Longevity:** About 15 years in the wild, up to 24 in captivity

**Status:** Vulnerable (IUCN Red List)

Lions are the largest mammalian predators in Africa. They hunt large, ungulate prey such as Wildebeest, and zebra live in family groups, known as prides. In these groups, the lionesses do most of the hunting together as a team. The males role is to defend the territory and the pride from other males, hence their larger size. Despite being a large predator, lions spend most of their day sleeping and would rather scavenge and steal food rather than hunt for it. They mainly look for food at night.

Due to the increasing human population, lions are considered problem animals and people shoot wild lions. Because of this persecution, lions are rare in Africa except in protected game reserves and national parks.

Male and female lion are easy to tell apart, the males having large amounts of fur around the head and neck called a mane, whereas the females don't have a mane. The lions mane makes him look bigger, which can help scare away other males who may want to take over the pride. Also the mane helps to protect the males neck during fights with other males.

However, having this mane does make it difficult for the males to hunt as it can get caught in the bushes, as well as making it difficult to hide and sneak up on prey as it doesn't camouflage very well.



Our lions are only fed 6 days each week and will have one starve day. This starve day mimics natural feeding patterns in the wild where lions would not eat every day. It also allows their digestive system to deal with indigestible bones etc. The keepers hide the lions' food, or hang it on the feeding pole so the lions need to work to get their food.

# Meerkats

**Habitat:** Desert and savannahs

**Distribution:** Southern Africa, including Namibia, and South Africa

**Diet:** Varied include insects, scorpions, small mammals, eggs and lizards

**Longevity:** About 10 years in wild, up to 17 in captivity

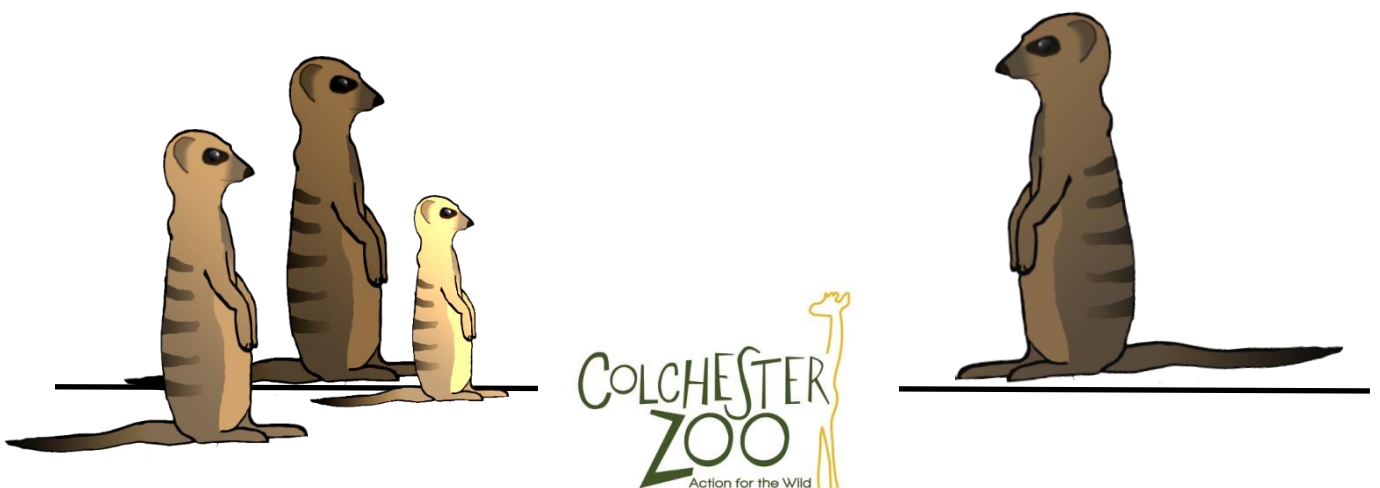
**Status:** Not threatened (IUCN Red List)

Meerkats are mainly tan colour to help them camouflage. They also have broken dark brown stripes across their back and sides, and a black tip to their tail. Their black eye rings help them reduce glare and see further when they are watching for predators. When fully grown they are about 50cm long from nose to tail tip and weigh only 0.9kg.

Meerkats are a type of mongoose. Meerkats live in social groups called mobs of up to 20 members. Living in mobs helps them survive in their harsh desert and savannah habitats. Each individual has clearly defined jobs (e.g. sentry, baby-sitter, hunter, or teacher). Sentries stand upright, usually at the highest point (look on top of the logs in their enclosure), and watch the skies and all around for danger. If danger threatens, they let out a loud warning bark and the whole group disappears to hide in their burrows underground.

Colchester Zoo has one mob of Meerkats. The number of individuals change as new pups are born and older pups are moved to other zoos. Meerkats live in a female dominated society and the alpha female is in charge over the whole mob. She is the only female that is allowed to breed; she also chooses who the dominate male will be, and these two are they only ones to breed.

The Meerkats are fed mealworms (and other insects), fish, raw eggs, fruit and vegetables. These items are scattered around the enclosures and hidden in crevices, or under stones, so the meerkats have to search for them to encourage their natural foraging behaviour.





# Giraffes

**Habitat:** Savannah

**Distribution:** Eastern Africa, including Tanzania, Kenya, and Botswana

**Diet:** Feeds on leaves and shoots of trees and shrubs

**Longevity:** 25 years in the wild, longer in captivity

**Status:** Vulnerable (IUCN Red List)

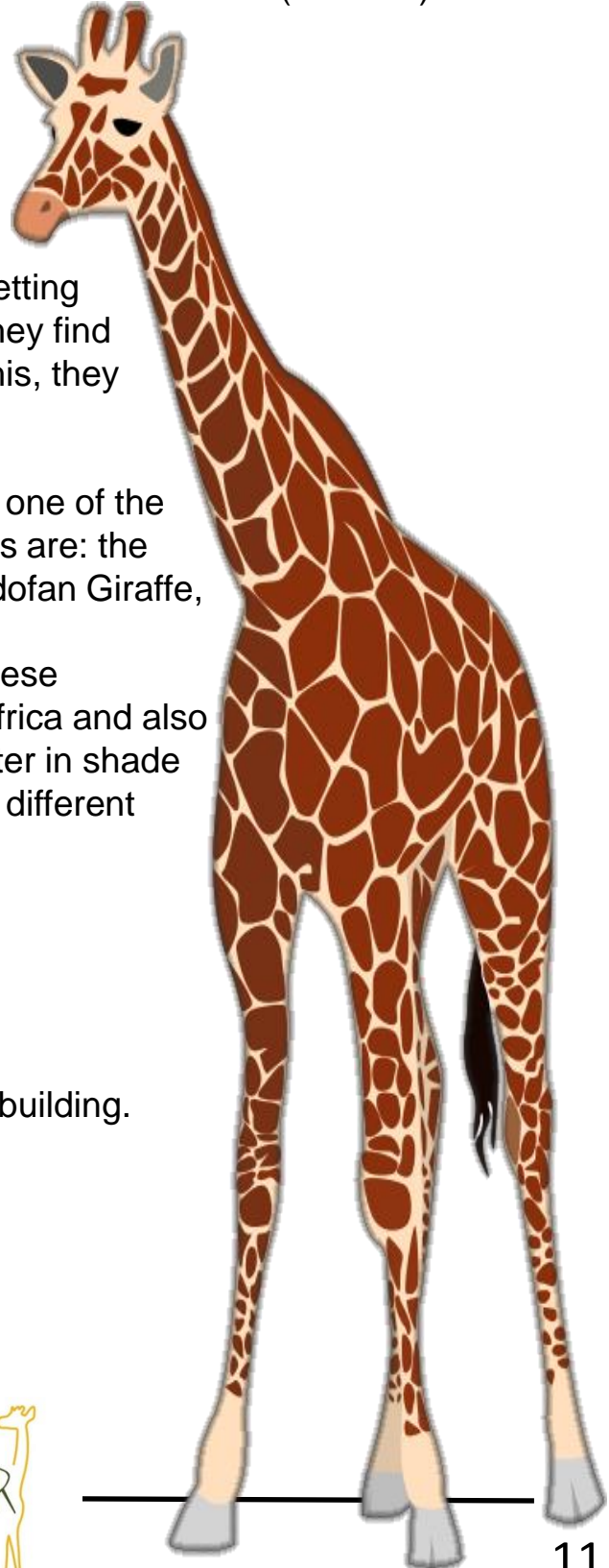
Giraffes are the tallest animals in the world, up to 5.3m tall!

Giraffes have the same number of bones in their necks as humans (7 bones).

The bones in the giraffe's neck are extra long, which is what makes their necks so long. Their long necks, and their 40cm long tongues are adaptations to help the giraffes reach food high up in trees that other animals can't reach. Their tongues are purple-black in colour ; this acts as a natural sunblock and prevents the giraffes from getting a sunburnt tongue. Because giraffes are so tall, they find it hard to lie down and stand up quickly. Due to this, they only sleep for about 20 minutes a day.

Colchester Zoo have reticulated giraffes, which is one of the eight sub-species of giraffe. The other sub-species are: the Rothschild's Giraffe, the Angolan Giraffe, the Kordofan Giraffe, the Nubian Giraffe, the West African Giraffe, the Thornicroft's Giraffe and the Masai Giraffe. These sub-species are often found in different parts of Africa and also have different coat patterns, with some being lighter in shade whereas other are much darker as well as having different sized patches.

In dry weather the giraffes are often outside in the mixed paddock where they live with the rhino, zebra, kudu and ostrich. If it's too slippery and muddy they can be seen in their house. To see them in their stalls go up the ramp and inside the building.





# Spotted Hyenas

**Habitat:** Grassland and flat, open savannahs

**Distribution:** Africa south of the Sahara, except the Congo basin

**Diet:** Mainly large, hoofed mammals either hunted or scavenged

**Longevity:** Up to 25 years in the wild, 40 in captivity

**Status:** Least Concern (IUCN Red List)

Hyenas have large muzzles, big ears and powerful jaws for crunching bones. Females are larger and heavier than the males. Hyenas often live in large groups called clans, although some hyenas are solitary.

They hunt in groups and working together. They are true scavengers and hunters, eating almost everything they find, including bones and tendons that other animals won't eat. Hyenas in groups have a very complex social structure led by the dominant female. They communicate with complex vocalisation including many sounds such as: whoops, fast whoops, grunts, groans, low giggles, yells, growls, soft grunt-laughs, loud grunt-laughs, whines and soft squeals. They also communicate with scent marking and body language .

Although, not currently endangered, hyenas are often killed and persecuted because of their negative reputation. The IUCN has identified the hyena's negative reputation as a threat to the species survival.



# Ring-Tailed Lemurs

**Habitat:** Deciduous forests and rainforests on Madagascar

**Distribution:** Southwest Madagascar

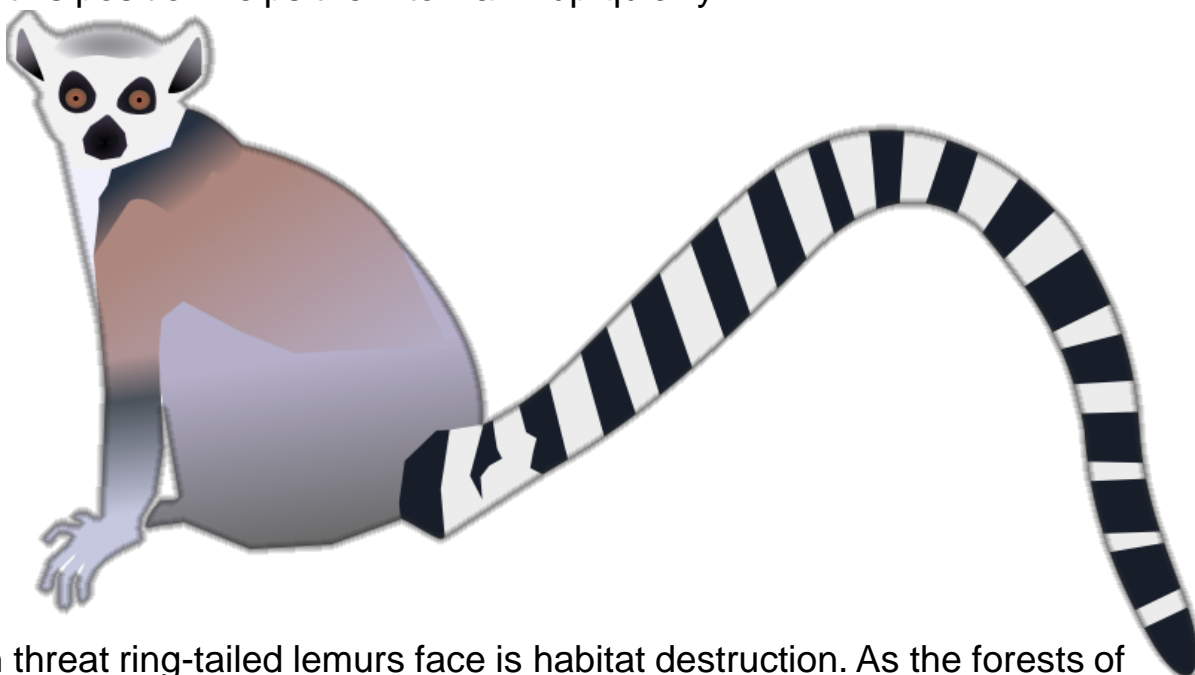
**Diet:** Mainly fruit, flowers and leaves (sometimes insects)

**Longevity:** 16-19 years in the wild, up to 27 in captivity

**Status:** Endangered (IUCN Red List)

Ring-tailed lemurs are the most easily recognised species of lemur due to their distinctive black and white ringed tail. Lemurs have small arms and longer legs with soft leathery skin to provide better grip. Other than their hands and feet, the ring-tailed lemur is covered in soft fur, which is grey on the back, and white underneath.

Ring-tailed lemurs are active during the day. They move around in trees but spend most their time on the ground looking for food or resting. Ring-tailed lemurs have a very characteristic sunbathing position, where they sit up and expose their underside to the sun. The fur on the underside is thinner, and they have very dark skin, and this position helps them to warm up quickly.



The main threat ring-tailed lemurs face is habitat destruction. As the forests of Madagascar are cleared for farming, this lemur (like other species of lemur) has nowhere left to live. Lemurs are also hunted for food (bush meat) and caught as pets.

Colchester Zoo has two troops of ring-tailed lemurs. One troop is found in our Lost Madagascar walkthrough enclosure.

To get to Lost Madagascar, start your journey on the ranger guided road train. After riding the train you get a chance to walk in the enclosure with the lemurs! After visiting, ride the train back to the start, or exit next to the lions. All pupils, of any age, must be accompanied on the train.

# Chimpanzees

**Habitat:** Tropical rainforest and savannah

**Distribution:** Guinea and Ghana in West Africa, across to Tanzania

**Diet:** fruit, flowers, insects, and meat

**Longevity:** 40 - 45 years

**Status:** Endangered (IUCN red list)

Chimpanzees are human's close living animal relative. Their hind feet are adapted to climbing trees with a big toe just like a thumb. Like humans, chimps are omnivores. They eat a lot of fruit, and forage for this in small parties of 3-6 individuals. Chimps are very intelligent and use tools to extract insects from nests. Chimps also hunt in groups when going after larger prey such as young monkeys, wild pigs and antelopes.

Chimps are apes, not monkeys. One easy way to tell the difference is that apes do not have tails, but monkeys have tails.

Chimpanzees have many threats. The rainforests where they live are destroyed for logging and to make room for agriculture. Chimps are hunted by poachers for bush meat. Because they are related to humans, chimpanzees can also get sick and die from many of the same illnesses and disease that infect humans.

Colchester Zoo has a family troop. Male and female chimps are easy to tell apart because females have very large bottoms. Each individual has different facial features and behaviours, with some being more playful, or confident whereas others are more serious.



# Patagonian (Southern) Sea Lion

**Habitat:** Costal offshore rocks and islands

**Distribution:** South American coastline

**Diet:** Fish, squid, lobsters, krill and crustaceans

**Longevity:** Up to 25 years

Like many mammals the male sea lions are larger than the females reaching weights of 340kg and lengths of 2½m. The females may reach 144kg and 2m in length. The males compete over territory on the beaches where multiple females lives.

Sea lions are agile hunters, feeding on fish, crustaceans and squid. They also hunt penguins in the wild. The main predators of sea lions are large sharks such as the great white and killer whales. They have many adaptations to help them swim, catch their food, and avoid predators. They are estimated to swim at up to 13.4mph (21.6km/h) but are usually much slower. They can hold their breath for over 10 minutes. They have many adaptations to help them hold their breath, including: slow heart rate, higher blood volume than land animals and higher content of oxygen-binding proteins. Because their water is very cold they have a thick layer of blubber under their skin to keep them warm and streamline their body.

Unlike seals, sea lions use their front and hind flippers for 'walking' on land. Seals rely on only their front flippers to move on land and are often very awkward. In contrast, sea lions are very mobile and can travel kilometres away from the beaches. However, sea lions are mainly found near the shore since it helps them escape predators. If land predators appear they hide in the water, and if water predators appear, they move onto the land.

Colchester Zoo has five female sea lions. They spend a lot of time training and know many commands such as lifting their flippers and being touched all over their body. This allows the keepers to check them for injuries and medication to be given to them.



*Lutrogale perspicillata* and *Amblonyx cinereus*

# Otter

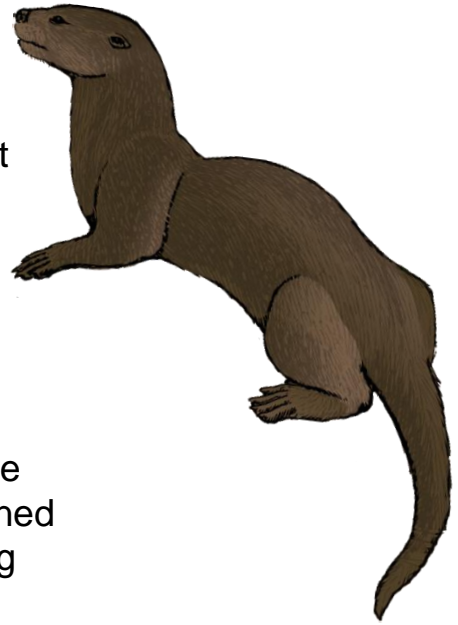
**Habitat:** Shallow wetlands and rivers in rainforests and woodlands

**Distribution:** Southern and Southeast Asia, India and China

**Diet:** Mainly fish, but also frogs, crabs, insects, rats and birds

**Longevity:** Approximately 10 years in the wild, up to 20 in captivity

Otters are excellent divers and swimmers. They can hold their breath for up to 20 minutes when swimming underwater. They close their ears and nostrils when underwater to prevent water going up their nose. They have a third clear eyelid (called a nictitating membranes) which covers their eyes when swimming and prevents dirt getting in (built in goggles). They use their sensitive whiskers to find prey underwater. Otters are very skinny and rely on their fur (instead of a layer of fat) to keep them warm. Their fur has a thick dense bottom layer to keep them warm, and a long waterproof top layer to keep them dry. When swimming slowly, they paddle with their webbed paws. When swimming quickly, the front limbs are kept close to the body while the back legs and their flattened tail propels them forward. Their tails are powerful and long and can make up 60% of their body length!



Otters are very playful and are among the few mammals that play as adults and is an important social activity. They are often seen in large family groups, playing in the water. They live in burrows near the water's edge. Smooth-coated otters are the largest otters in Southeast Asia. They get their name from their shorter, smoother coats which appears velvety and shining. The Asian Short-clawed Otter is the smallest of the 12 species of otter.

Colchester Zoo has two different types of otter. The Asian short-clawed otters live in the same enclosure as the binturongs. The smooth-coated otters are on the other side of the over-head walkway (next to the flamingos).



# Aardvark

**Habitat:** Grassland and deserts

**Distribution:** Southern Egypt to South Africa

**Diet:** Ants and termites primarily; some other fruit and insects

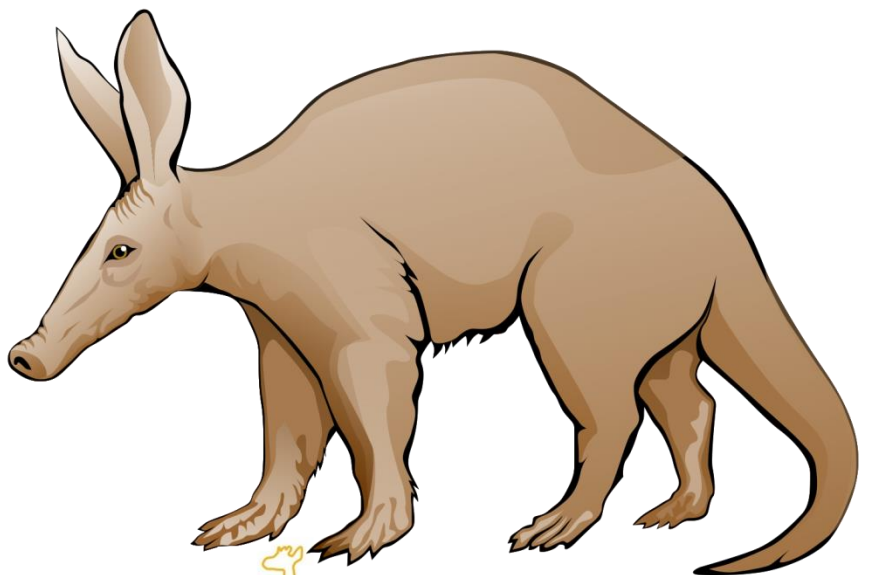
**Longevity:** 10 years in the wild and longer in captivity

**Status:** Least Concern (IUCN red list)

The Aardvark is a unique animal which is only found in Africa. They can grow to body lengths of 150cm and can be 60cm tall at the shoulders. Aardvarks have a muscular body and the back is humped with short, powerful hind limbs. The claws are long and spoon shaped with sharp edges, which are ideally adapted for burrowing into the ground or termite mounds at great speed. The skin is thick, sparsely covered by hairs and varies in colour from brownish grey to pale sandy. The tail of the Aardvark is very thick at the base and tapers gradually. It can be used to defend itself against attack or to support the Aardvark when it is standing upright on its hind quarters. The greatly elongated head is set on a short thick neck and at the extremity of the blunt snout are circular nostrils. While digging or burrowing, hairs on the nostrils combined with folds of skin protect the nose from dirt clogs and insect attack. The mouth is small and tubular and contains a long tongue, which is thin and sticky.

The Aardvark has fully developed grinding teeth and incisors but lacks all other front teeth. The teeth themselves are remarkable in that they continuously grow and yet lack roots! Aardvarks are almost exclusively nocturnal and sleep during the day curled in a tight circle in the burrow.

Visit them in the Aardvark Burrow (underneath the Giraffe House, with an entrance by the lake) where they sleep inside on most days!



# Bennett's Wallaby

**Habitat:** Scrub grassland, woodland, and open grasslands

**Distribution:** Australia including Tasmania

**Diet:** Grasses, leaves and other plants

**Longevity:** Approximately 12 years

**Status:** Not threatened in wild (IUCN red list)

The wallaby's back legs are very muscular and the strong tail is used for balance when leaping, or as a prop when sitting. The wallaby's colouration provides excellent camouflage amongst woodland undergrowth, and it's relatively dense fur gives it the added insulation needed to survive in the cool Tasmanian climate. These same features have enabled escaped wallabies to survive and breed in parts of Britain. Bennett's wallaby's are usually solitary animals, staying together only for the duration of mating.

Gestation (the period when a baby is developing inside the mother's womb) is usually 30 days, but when environmental conditions are unfavourable, or if the female already has a baby in her pouch, this can be delayed – the development of the embryo is halted until the conditions improve. When the baby is born, usually during the rainy season, it closely resembles a baked bean in size and shape! This tiny, barely formed creature, unable to see or hear, hauls itself up its mother's belly, hanging on by its front legs (its back legs are less developed) and makes its way into the pouch. Once inside, it attaches to one of the four teats and remains there for nearly 7 months, venturing out occasionally as it gets bigger. Even after leaving the pouch for the last time, the young wallaby may continue to suckle.

With their taste for eucalyptus trees and other crops, they have long been regarded as pests. Their meat has been used for human and pet food and their skins have also been used for leather and fur in the past. Fortunately, hunting is now regulated and wallaby numbers are high.

They can be found at Familiar Friends in their brand new walk-through enclosure – Wallaby Walkthrough, where you can walk right next to these awesome animals.



# Komodo Dragon

**Habitat:** Dry grasslands, savannahs and (monsoon) rainforests

**Distribution:** Indonesian islands of Komodo, Rinca, Gili Motang, Gili Dasami and Flores.

**Diet:** Deer, wild boar, and snakes, will also eat fish and smaller Komodo dragons

**Longevity:** Up to 50 years in the wild, presumed longer in captivity

**Status:** Vulnerable

Komodo dragons are the world's largest, land-living lizard and can reach lengths of almost 3m. They are a member of the monitor lizard family. Their tail is longer than their body. They have a long, thick neck and flattened body with short legs and sharp claws on the end of their toes. The adults vary in colour from dark red through to grey black.

Komodo dragons use their long yellow tongue and keen sense of smell to find their food, usually rotten, dead animals. They can smell rotten food from almost 10km away. They are mainly scavengers but will also hunt animals such as pigs and water buffalo. They use their serrated teeth to injure their prey. Within their mouths, they have deadly bacteria and a unique venom, all of which are put into the prey through the injury. The komodo will then watch and wait for its prey to slowly die of blood poisoning caused by the bacteria (and helped by the venom).

In the wild, their populations are currently stable but because Komodo dragons are limited to islands they are at risk from natural disasters (e.g. storms), and human activities (e.g. poaching and habitat destruction).

Colchester Zoo was the first zoo in the U.K. to breed Komodo dragons naturally aiding the Komodo dragon European Endangered Species Breeding Programme (EEP)



# Sun Bears

**Habitat:** Dense rainforests

**Distribution:** South-eastern Asia

**Diet:** Termites, bees, other insects, honey, vegetation, fruit, nuts, birds and other small vertebrates

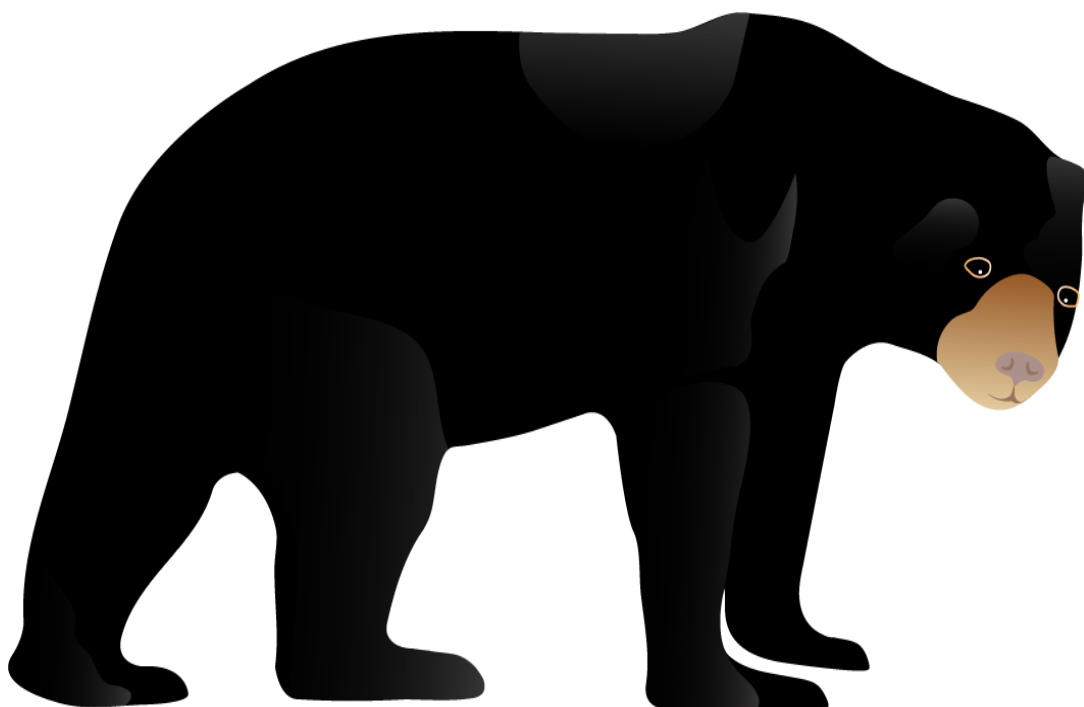
**Longevity:** Up to 25 years

**Status:** Vulnerable

Sun bears are the smallest of all eight bear species. They are called the 'sun bear' due to their white-golden crescent marking on their chest, which in ancient Eastern folklore, represents the sun. Another name for the sun bear is the honey bear, because they love honey (honey comb and bees as well!). The sun bear is excellent at climbing trees. The pads of their feet are smooth and hairless to help them grip, and their long claws help them grab while climbing. Their claws are also good for ripping open termite mounds and tearing apart bee nests to get food. Sun bears are most active at night, and during the day can be found sleeping and sun bathing in tree branches.

Sun bears are classed as vulnerable, and have rapidly declining numbers. Their main threat in the wild is habitat loss. They are a rainforest species, and the forest they live in are cut down for wood products and clearing land for farming. They are also illegally hunted, for use in bear paw soup or traditional medicine (which uses bear gall bladders). Because they are so small, they are also targeted by the illegal pet trade.

Colchester Zoo has two sun bears which are part of an international breeding programme.



# Bornean Orangutan

**Habitat:** Tropical rainforest

**Distribution:** Borneo and Sumatra

**Diet:** Mainly fruit, also leaves, bark, nuts, eggs and small vertebrates

**Longevity:** Up to 35 in the wild, and 50 in captivity

**Status:** Critically Endangered

The name orangutan means 'man of the woods' from the Malay words: orang meaning 'man' and utan meaning 'forest'. Orangutans are very well adapted to life in the rainforest. Their long red-orange fur helps camouflage them (red is hard to see in rainforests, because red light is absorbed by the green leaves). They have long arms (almost twice the length of their legs), perfect for swinging through the forest. Their hands and feet are large and curved, providing them with excellent grip. Adult males have facial flanges and a large throat pouch. These help the males make extra loud noises when they communicate with other orangutans far away in the forest. This communication is usually about territory, since orangutans are usually solitary (unlike the other great apes: chimpanzees, bonobos and gorillas). Orangutans are highly intelligent, using leaves as umbrellas and sticks to catch fish.

Orangutans are critically endangered. Their major threat is habitat loss, which is especially problematic because the only place they live are the islands of Indonesia. The rainforests of Indonesia are being cut down to create palm oil plantations. This is a very high profit crop and it is thought that 10% of all supermarket products contain it. As the rainforest is cut down, orangutans don't have anywhere else to live.





# Amur Tiger

**Habitat:** Tundra, deciduous (woodland) forest, and coniferous forests

**Distribution:** Amur-Ussuri region of eastern Russia

**Diet:** Large herbivores such as wild boar, deer and elk

**Longevity:** 17 years in the wild, longer in captivity

**Status:** Endangered

The Amur Tiger, formally known as the Siberian Tiger is the largest of the five tiger species and the largest of all the big cats. Males weighing around 363 kg and measuring up to 3.4m in length (nose to tail). Females are smaller at only 226 kg.

The Amur Tiger is well adapted to life in the cold. It lives in an environment where temperatures can drop as low as  $-40^{\circ}\text{C}$ .

It has a thick fur coat and layer of fat underneath the skin to insulate it from the winter snow. The tiger's stripes act as camouflage, which helps them blend into their forest environment. This camouflage is essential for stalking animals such as Sika deer and wild boar.

The Amur Tigers is one of the most endangered species of tiger. Their population continues to decrease due to illegal poaching and habitat loss. Poaching is for their thick fur, as well as body parts. Their body parts are used in traditional medicine. Almost every part of the tiger is believed to be a medicinal cure for a range of ailments ranging from fever to skin disease. There is no scientific proof that any of these body parts has any medicinal benefit.

Another major factor which is causing the decline of tigers in Russia, is habitat loss. More and more land is being developed for farmland, human habitations or just logged for timber. This not only a problem for the tigers but also for their prey such as wild boar and deer.



# Amur Leopard

**Habitat:** Deciduous (woodland) forest, and conifer forests

**Distribution:** Far eastern Russia along the Russia-China border

**Diet:** Deer, hares, badgers and other small mammals

**Longevity:** 10-15 years in the wild and up to 20 years in captivity

**Status:** Critically Endangered

The Amur leopard has the most distinctive markings of any of the leopard subspecies. The fur changes from pale cream in the winter to reddish-brown in the summer. The body and sides are covered in widely spaced, large rosettes (open spots) with a thick unbroken border and darkened centres. The head is covered in many small spots, which become larger on the legs and stomach. They are solitary and hunt mostly at night, using a stalk and ambush technique. Amur leopards are strong climbers and may even take their prey up into the trees to eat.

They have large home ranges which will vary in size depending on the availability of their prey, the more prey available, the smaller the range. Amur leopards use a distinctive rasping call for communication rather than the growl of the other cats.

Amur leopards face a number of threats. They are hunted for their fur and for use in traditional medicines. Their habitat is also being destroyed causing depletion in their prey. Their small population size also puts them at risk from catastrophes such as fire, disease and inbreeding problems.

There are two Amur leopards at Colchester Zoo. This male and female pair are house separately in adjoining enclosures to mimic their solitary behaviour in the wild.



# Pre-Trip Classroom Ideas:

These are ideas to help your class prepare for their trip to the Zoo.

1. Students can familiarise themselves with common animal names, habitats and adaptations.
2. Using the downloadable maps from the Colchester Zoo website, students can plan a route around the Zoo.
3. Find the main threats animals face in the wild.
4. Find unique facts about some of the animals at Colchester Zoo
5. There are a number of keeper talks through out the day. Check the Zoo's website to found out times and plan which talks to attend.
6. Make a list of animals the students want to see. When at the animals' enclosure, find 3 interesting/random facts.

# At the Zoo Ideas:

These are ideas to help your class focus during their trip to the zoo. Use these ideas as a starting point with or without the pre-made activities and worksheets on the next pages.

1. Use the worksheets in this pack to help focus your students
2. Encourage students to spend time observing the animals. Some unique animal behaviours can only be seen if they watch very carefully.
3. Have students make a detailed sketch of one or more of the zoo animals.
4. Take photos of the animals around the zoo. When you get back to school make a photo scrapbook of your trip.
5. Attend the feeds or talks and have your students take notes. Often the keepers are available after to answer questions if you want to learn more.
6. Observe how different animals move. Compare how different mammals move compared to other mammals and how birds etc move to different species.
7. Have students keep track of how many of each type of animal they see. (e.g. monkey, mammal, bird, big animal, small animal, etc.). Which type is the most common at the zoo. Why do they think the Zoo has more of that type of animal?
8. Keep track of your route around the Zoo, marking off animals that you have seen on the map.
9. Look at how enclosures differ between animals. Why do you think they are different? Or are some similar and why?
10. Make a social media story featuring five endangered species, highlighting why they are endangered.

# At the Zoo Activities:

## Camera

This activity gets students focusing quietly and independently, and works well when pupils are taking real photos to get them to decide what to take photos of beforehand.

**Time:** 15 minutes or more

**Subjects:** Art, ICT, observational Science skills

**Materials Required:** Cameras (optional), small bits of card (optional), pencils (optional).

Before starting, take time to talk with the pupils to consider what make interesting subjects for good photos. Should they take close up images? Are walls interesting? Is it easier to take photos of an animal that moves a lot or an animal that's resting?

Find an animal that the pupils can stay focused on rather than get over excited when they see the animal. Divide the pupils into pairs. Within each pair one student takes the role of photographer and one takes the role of camera. The child pretending to be the camera keeps their eyes closed while the photographer leads them to an interesting viewpoint.

The photographer chooses when the camera opens their eyes and takes a picture. A good way to do this is to have the photographer gently tap the camera on their shoulder to have them open their eyes. When the camera opens their eyes, their job is to try to remember and visualise everything they see in front of them: Do they see an animal? How many animals? What is the enclosure like? What textures do they see? When taking photos it's best if the camera only has their eyes open for 5-10 seconds, then closes them again. Have the photographer move the camera to a few different locations. Do they see different animals? Is there a slightly different view point? After they've taken a few 'photos' have them switch roles.

**Optional:** If the group has actual cameras, have them all select their favourite photo from their activity and see if they can capture it using their real camera/s.

**Optional:** for an extended activity, hand out small bits of card to each pupil. Explain that they are going to process the photos they took with their eyes. Have them select their favourite image they photographed (real or with just their eyes) and have them draw the picture on the card, just like a photo.



# At the Zoo Activities:


## How do you compare to the animals?

As you explore the Zoo there are several challenges for you to have a go at. Below is a list of these challenges with their location number.


**Time:** 5 minutes or more


**Subjects:** Maths, P.E. Science skills


**Materials Required:** Paper and pens to record the different students' results.

Can you stand on one leg as long as flamingo? You can find out at  6

How fast can you run? See which animals you can out run and which animals can out run you at  8

Can you lift as much as spider monkey or as much as a elephant? Found out who is the strongest at our strength test located at  9

How fast can you flap your arms? Odd question but some birds can flap their wings incredibly fast. Find out if you can keep up at the wing challenge at  13

Can you jump further than a flea or can a flea beat you in a jumping contest? Head to the jumping challenges at  15 to find out!

Once each student has completed the challenge, have them compare their results to the animals. Once back at school, this data can be used to create graphs to show data more clearly.

# At the Zoo: Scavenger Hunt

Draw pictures of the animals when you find them:



# At the Zoo: Animal Close Up



**MY CHOSEN ANIMAL IS** \_\_\_\_\_

List as many of its adaptations as you can: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Is it endangered? If so why?: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# At the Zoo: Action For The Wild House

In here is information on some of the conservation charities Colchester Zoo's charitable arm, Action for the Wild, supports. Choose one of the charities below and gather information on that charity (they can write on the back of this sheet).



After the trip, they can present there information as a poster to the rest of the class.

There are a number of other charities that are supported, which the students can also gather information on.



RED PANDA  
NETWORK



# Post-Trip Classroom Ideas:

These are ideas to help teachers expand on the visit to the Zoo. Use these ideas with or without the pre-made activities and worksheets on the previous pages.

1. This idea is the second part to task 6 in the pre zoo trip classroom ideas. Having chosen their animal and answered their questions, have the students create a poster showing information on the animal.
2. Create a 'zoo guide book' of your school trip to Colchester Zoo. Have students write articles about the animals they saw, and include pictures/sketches they made during the trip.
3. Using their memory, pupils can create a map of the zoo. Include animals that they saw and areas they remember (including food, toilets, play areas, etc.). After drawing from memory, compare their maps to an actual map of the zoo. What's different?
4. Have the students design zoo enclosures for animals they saw.
5. Compare one of the animal enclosures at the zoo to their wild habitat.
6. Play animal charades. Divide the class into teams and each team must act out an animal's movements, based on animals they observed at the zoo.
7. Research the negative impacts humans can have on the environment. Look at why humans may do activities that have a negative impact and look at how humans can help the environment.
8. Debate if zoos have a role to play in the 21st century, using the experience of the zoo trip to aid the discussions.
9. Using the Colchester Zoo website, look at how Colchester Zoo is working to aid global conservation. Is it doing enough? What else can be done?
10. Have students design their own zoo. The teacher can give them a list of animals they would have and remember the visitors need toilets etc.



**We hope you enjoyed your trip  
exploring**

