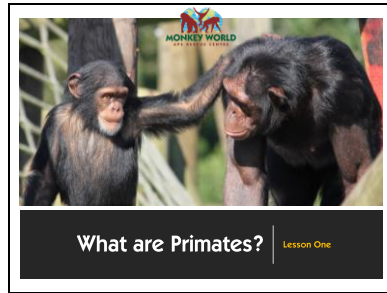


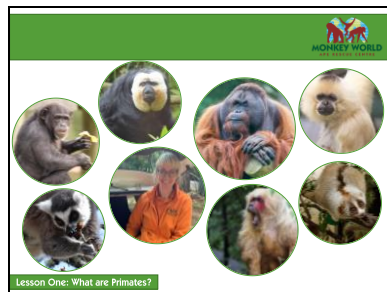
## Lesson 1: What are Primates? Slides and Notes

### Slide 1



In our first lesson, we will be learning what primates are.

### Slide 2

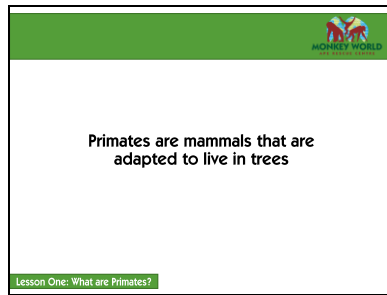


There are over 235 species of primates found across the world, ranging from tiny dwarf mouse lemurs (approx. 30g) to big, powerful gorillas (175kg). All of these animals are primates that live (or work!) at Monkey World. Species of primate include humans, chimpanzees, orang-utans, gibbons, macaques, spider monkeys and ring-tailed lemurs. *Do you know any of the species shown here?*

At Monkey World, we rescue primates from cruelty and neglect, and rehabilitate them into large, natural family groups at the park. The word “primate” is used a lot at Monkey World, but not everybody knows what it means. In this lesson, we will explore what makes primates so unique.

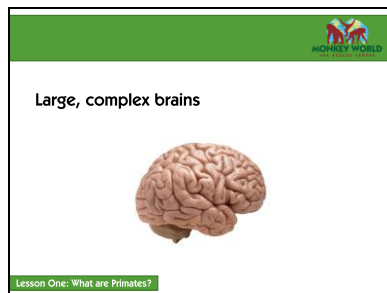
## Lesson 1: What are Primates? Slides and Notes

### Slide 3



All primates are mammals. Mammals are warm-blooded animals that have a backbone, and produce milk to feed their babies. The primate family are generally well-suited or *adapted* to living in the trees. This is also known as an *arboreal lifestyle*. Although not every species of primate spends all of their time in the trees, all primates have physical adaptations that make them better climbers than other animals.

### Slide 4

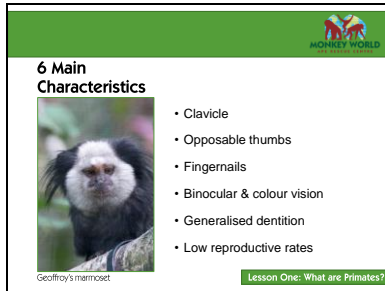


Animals are grouped together based on what they have in common. So for example, you might already know that a domestic tabby cat and a Bengal tiger both belong to the cat/feline family. They don't look exactly the same, but they share some key characteristics.

The one thing that every single primate in the world has in common is a big brain. It is bigger than other animals' brains (relative to their body size), and more complex. The parts of the brain that control memory, sight, and movement of limbs are bigger compared to other mammals. This is what makes primates so intelligent, and able to live across a wide range of habitats, and eat a wide range of diets.

## Lesson 1: What are Primates? Slides and Notes

### Slide 5



**6 Main Characteristics**

- Clavicle
- Opposable thumbs
- Fingernails
- Binocular & colour vision
- Generalised dentition
- Low reproductive rates

Geoffroy's marmoset

Lesson One: What are Primates?

Every single primate has a bigger brain in comparison to other animals. Every member of the primate family will also have at least one of these other 6 main characteristics. Some might only have one, but others might have all 6. They are:

- A clavicle
- Opposable thumbs
- Fingernails
- Binocular & colour vision
- Generalised dentition
- Low reproductive rates

Let's have a look at all of them in more detail and find out what they mean.

### Slide 6



**Clavicle**

Lesson One: What are Primates?

Chimpanzee, Rodders, hanging out!

The clavicle is a bone (shown here in red) that allows greater movement in the shoulders. It allows primates to hold their arms above their heads and climb for long periods of time. You are a primate too, and you have a collarbone.

*If you are able to, raise your arms above your head. How long can you hold them there for?*

Not every animal has a collarbone. Dogs for example, do not have a clavicle and so can only move their legs back and forth.

*Look at the picture of Rodders the chimpanzee. What is he doing? His clavicle makes him able to climb, swing, and play in the trees! Can you think of any non-primates might be able to do this?*

Lesson 1: What are Primates? Slides and Notes

Slide 7



Most primates have hands with four fingers and an opposable thumb. An opposable thumb can be moved around so it can touch the tips of each of the fingers on the same hand. It makes primates able to grip objects precisely – for example, picking a fig from a branch, carefully grooming another primate, or even squeezing spots like Gordon the orang-utan!

Look at the handprint belonging to Busta, one of the chimpanzees at Monkey World. If you look closely, you can see his fingerprints. These sensitive touch pads on the tips of our fingers allow us greater control over the objects that we manipulate.

Lesson 1: What are Primates? Slides and Notes

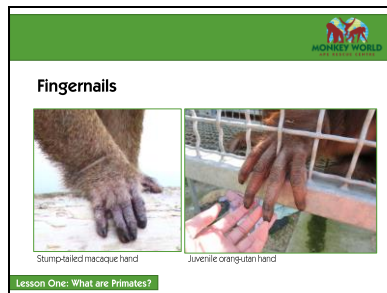
Slide 8



Most primates also have feet with an opposable big toe! This means that their feet are a second pair of hands that can grip and hold onto objects. *Can you think of any primates that don't have an opposable big toe? Hint: don't forget that you are a primate!*

**Activity idea:** Make handprints and footprints with the members of your household and compare them to Busta's. How are your fingers and toes different? Can you turn your footprint into a chimpanzee footprint?

Slide 9



Primates have fingernails and toenails, rather than claws. Although there are some primates, like ring-tailed lemurs, have a combination of nails and claws. At Monkey World, some of our primates require "primate pedicures" from the Primate Care Staff if their nails get too long. The Primate Care Staff use operant conditioning (also called clicker training) to safely ask the primates to present their hands for nail-filing.

Lesson 1: What are Primates? Slides and Notes

Slide 10



Generally, primates rely more on their sense of vision than their sense of smell. Primates' eyes face forwards and sit in bony sockets at the front of their skulls – not on the sides like in dogs and cats. When an animal's eyes are forward-facing, this is called **binocular vision**. The view seen by each eye overlaps and makes a clear, 3D image. This allows for good depth and distance perception, which is extremely important for safely travelling through the trees, without missing a branch.

Slide 11

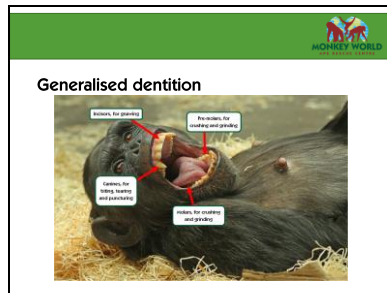


Primates also see in colour, so they see a whole spectrum of colours – they do not just see in black and white. Colour vision helps primates to find their food, pick between ripe and unripe fruit, and spot predators. Colour vision also allows primates to understand visual signals, such as recognising a baby chimpanzee by their pale skin, and knowing to treat them with more care than an adult.

**Activity idea:** *When is colour vision important for humans? Brainstorm all of the things you are able to do because you can see a spectrum of colours, i.e. using traffic lights to safely cross the road.*

## Lesson 1: What are Primates? Slides and Notes

### Slide 12



Primates eat a wide range of food, ranging from leaves to meat, so their teeth are not specialised to eat one particular type of food. All primates have a combination of the main four tooth types on both their upper and lower jaw (shown on Eddi):

- **Incisors** for gnawing
- **Canines** for biting, tearing and puncturing
- **Pre-molars** for crushing and grinding
- **Molars** for crushing and grinding

Although their teeth are generalised across the primate family, there are differences between the species depending on what they eat. For example, marmosets eat the gum/sap from inside trees and have very sharp incisors that help them shave bark off of trees, whereas squirrel monkeys mostly live on insects, so they have sharp cusps on their teeth to break through insects' exoskeletons.

We will explore food, feeding and teeth further in another lesson.

## Lesson 1: What are Primates? Slides and Notes

### Slide 13

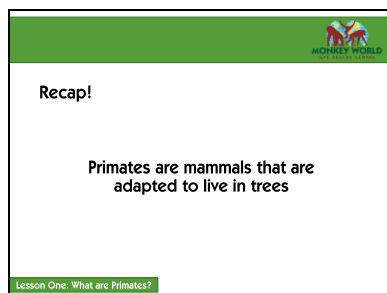


Primates generally give birth to one baby at a time. Their babies are born mostly helpless, and can take a lot of time, care and attention before they are independent and mature enough to leave their mother.

Primates have long childhoods compared to other mammals, though the length of time varies between species. For example, orang-utans have the longest childhoods of any primate other than humans. The youngsters stay with their mother until they are around 9 years old.

Some primates, like ring-tailed lemurs and common marmosets, are more likely to give birth to twins, triplets (or even quadruplets!), but most primates give birth to a single baby at a time.

### Slide 14

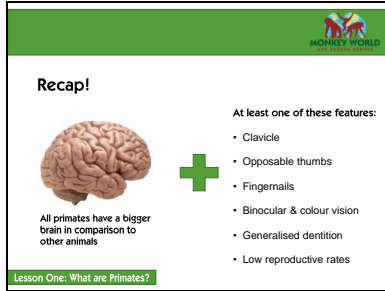


To recap today's lesson... primates are mammals that are adapted to a tree-dwelling, or *arboreal*, lifestyle.



## Lesson 1: What are Primates? Slides and Notes

### Slide 15



**Recap!**

All primates have a bigger brain in comparison to other animals

At least one of these features:

- Clavicle
- Opposable thumbs
- Fingernails
- Binocular & colour vision
- Generalised dentition
- Low reproductive rates

Lesson One: What are Primates?

All primates have a bigger brain compared to other animals, and will have at least one of the other 6 defining characteristics:

- A clavicle (collarbone)
- Opposable thumbs
- Fingernails
- Binocular & colour vision
- Generalised dentition
- Low reproductive rates

### Slide 16



This course has been designed alongside our fantastic Education Pack and accompanying workbooks (KS1-3), which are available from [our online Gift Shop!](#)

These lessons have been designed alongside our Education Pack which is full of comprehensive information on primate classification, habitats, family groups, diets and more. It is perfect for learning more about primates at home! It is available from our online Gift Shop, along with curriculum-linked workbooks available in Keystages 1, 2 and 3!