

LO: To understand how humans have evolved over time.



# REVIEW



- In what environment is the cacti found?
- Name 4 ways it is adapted to this environment.
- What do you think would happen to the species if the environment suddenly changed and became extremely cold?





## How Are Cacti Adapted To A Desert Environment?

Spines instead of leaves - minimise surface area and so reduce water lost by evaporation

Spines protect cacti from animals that might eat them

Stems that can store water

Widespread root systems that collect water from a large area

If the environment suddenly changed and became extremely cold, the likely result could be:

- Most of the cacti would die out.
- They could start to evolve and develop characteristics that would enable them adapt to the new environment such as thick hairs.
- The plants could all go extinct if they are unable to adapt quickly enough.

# TODAY YOU WILL LEARN

- How and why Homo Sapiens (the species that you belong to) evolved
- The differences and similarities between Homo Sapiens and other living things

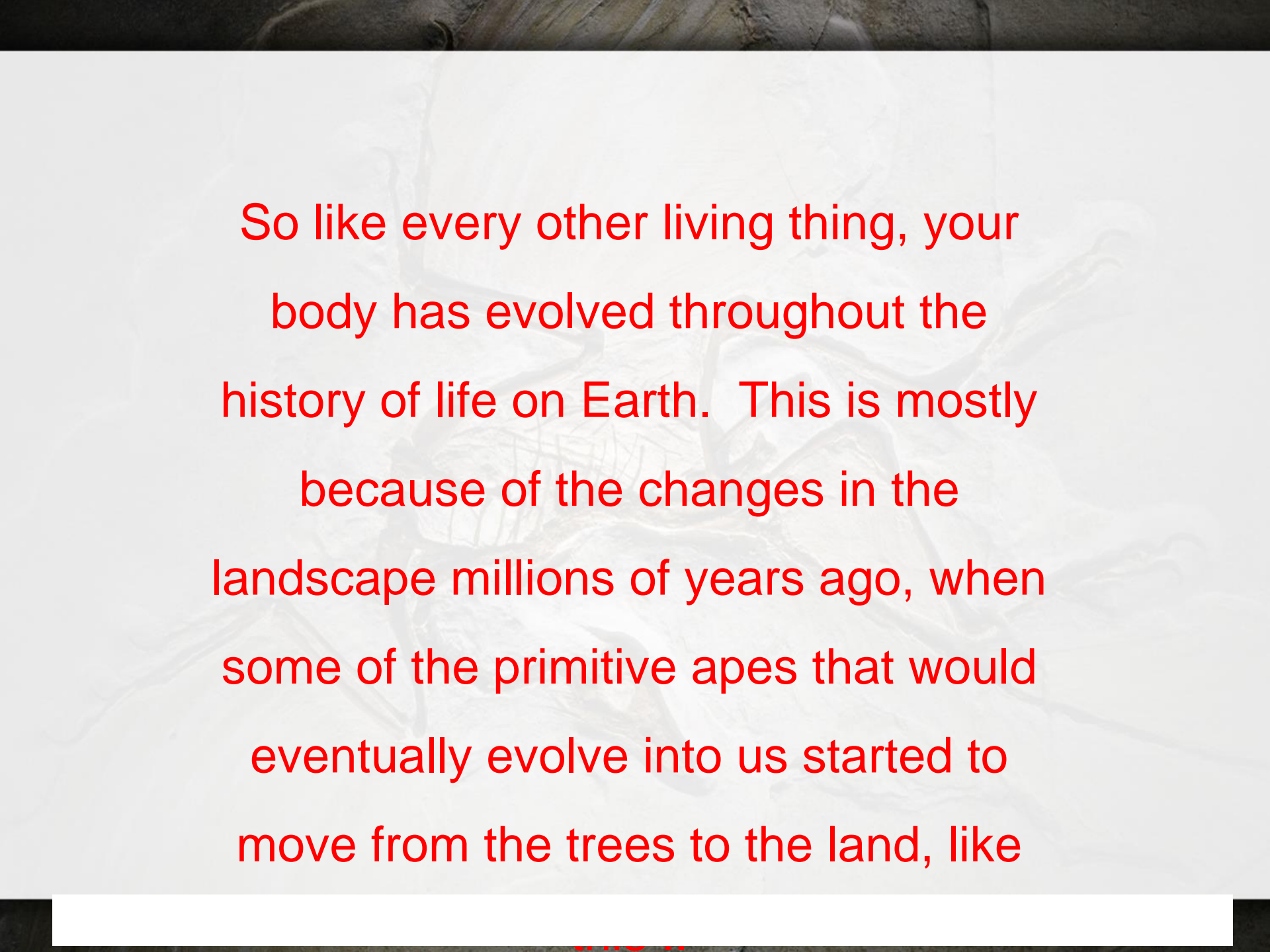


STARTER QUESTION:

What makes your body  
different to the bodies of  
other animals and why?

Discuss with your  
partner.



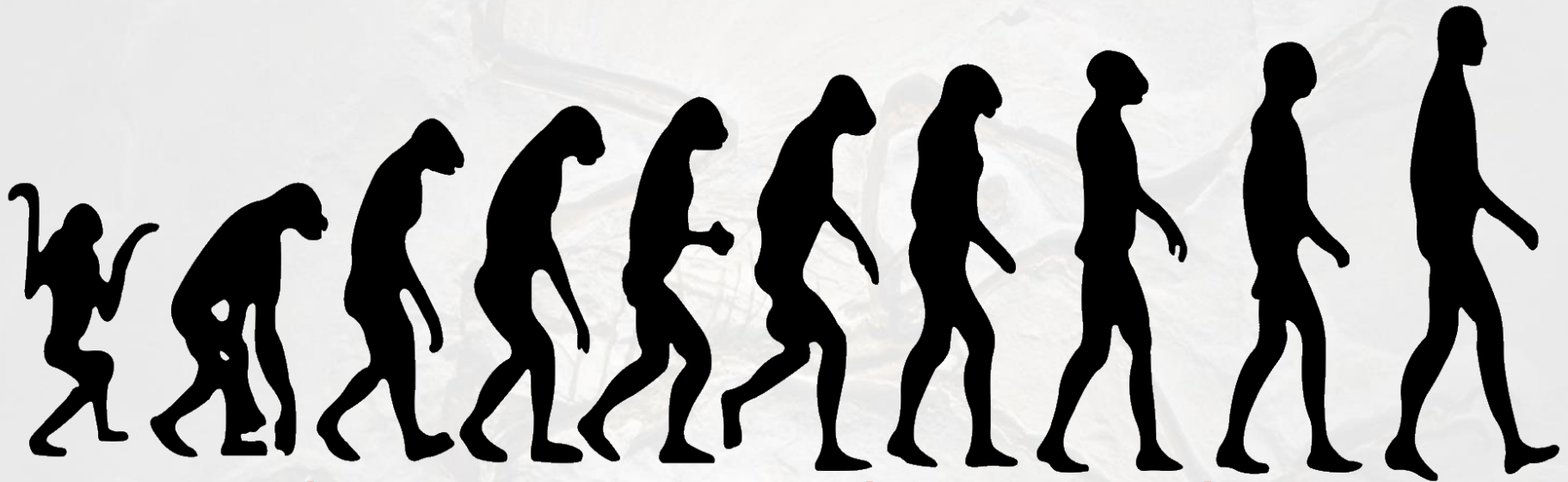


So like every other living thing, your body has evolved throughout the history of life on Earth. This is mostly because of the changes in the landscape millions of years ago, when some of the primitive apes that would eventually evolve into us started to move from the trees to the land, like

# WATCH

<https://study.com/academy/lesson/human-evolution-lesson-for-kids-timeline-stages.html>

# HUMAN EVOLUTION



**Hominidae**  
15m yrs



**Homo Habilis & others**  
2.8m yrs



**Homo Erectus**  
1.8m yrs

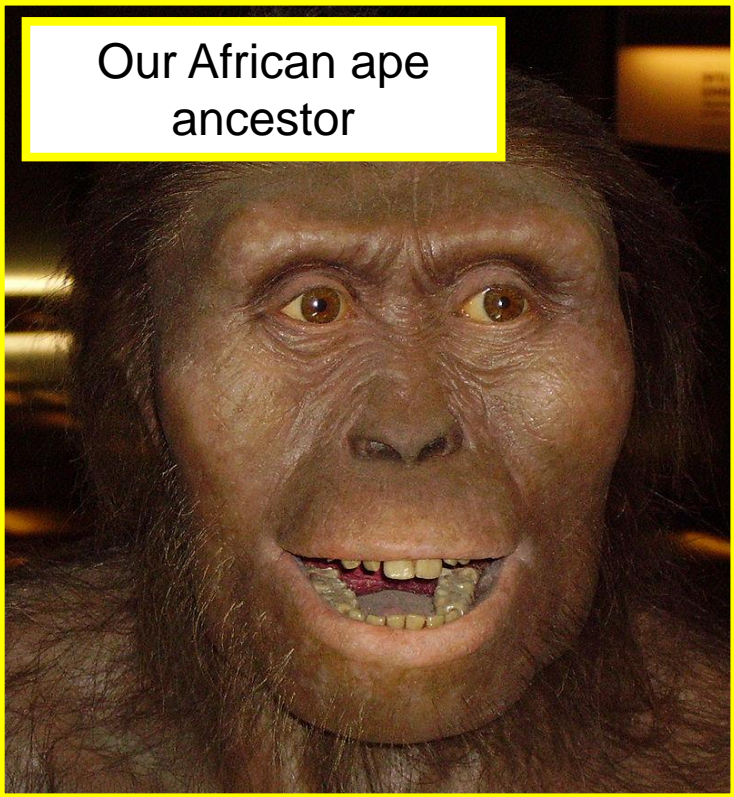


**Homo Sapiens**  
160,000 yrs

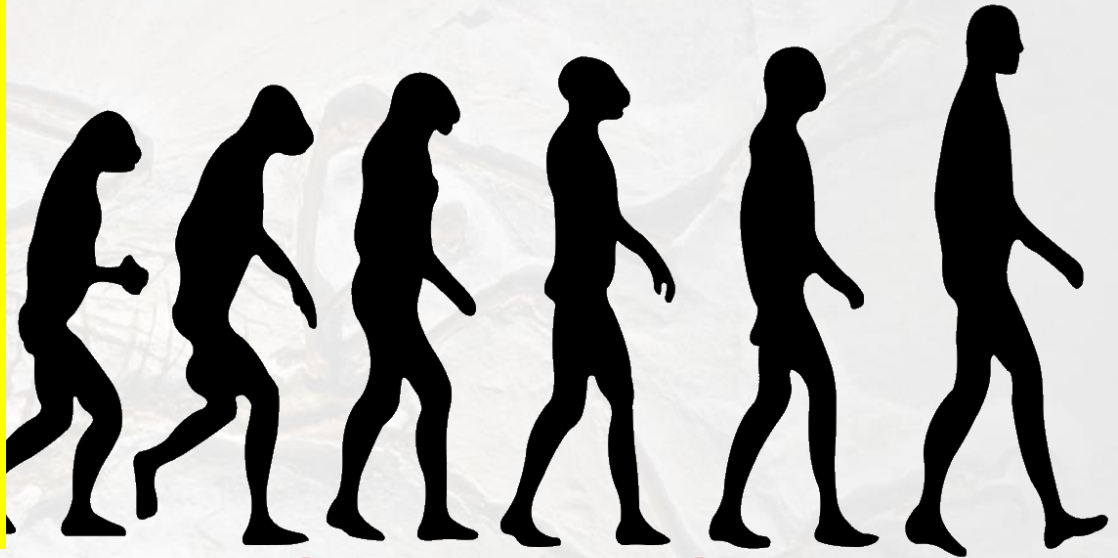




Our African ape  
ancestor



# N EVOLUTION



**Hominidae**  
15m yrs



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**Homo  
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**Homo  
Sapiens**  
160,000 yrs



# EVOLUTION



Moving from the trees to the land

**Hominidae**  
15m yrs



**Homo Habilis & others**  
2.8m yrs



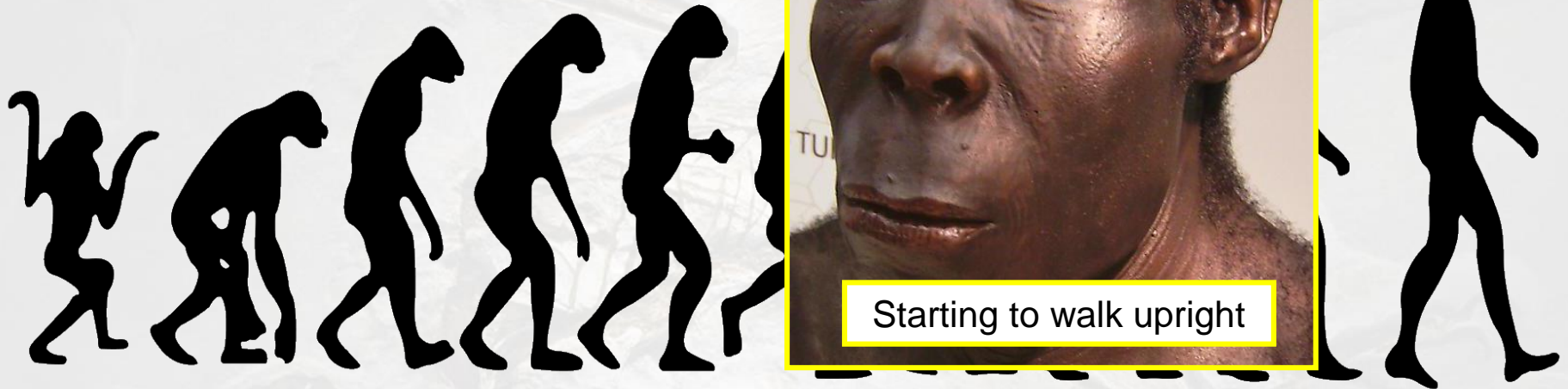
**Homo Erectus**  
1.8m yrs



**Homo Sapiens**  
160,000 yrs



# HUMAN EV



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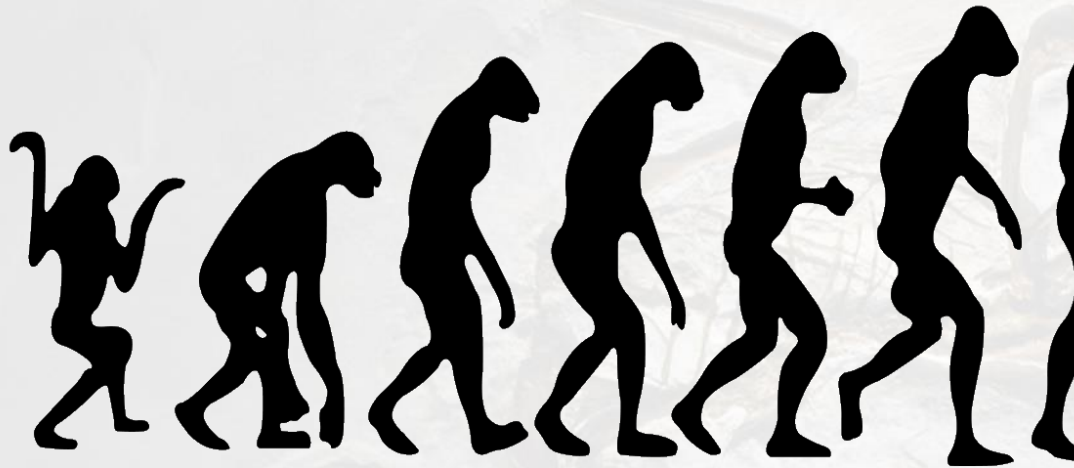


**Homo Sapiens**  
160,000 yrs





# HUMAN EVOL



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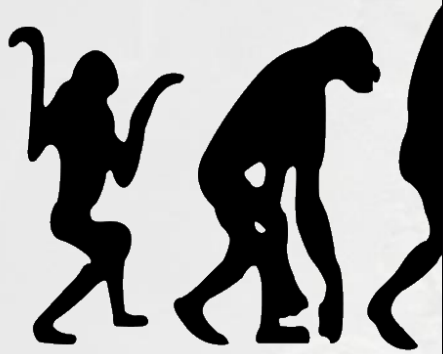


**Homo Sapiens**  
160,000 yrs

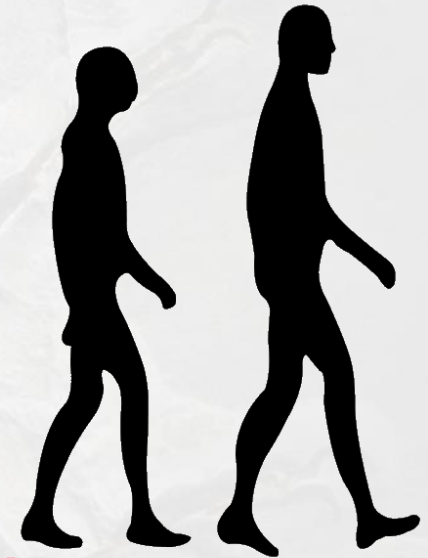


Modern intelligent human beings

# HUMAN EVOLUTION



**Hominidae**  
15m yrs



**Homo Sapiens**  
160,000 yrs



# HOW THE HUMAN BODY HAS EVOLVED: **THE BRAIN**

- Uses 20% of your oxygen and blood
- Uses the 2<sup>nd</sup> highest calories after your digestive system
- An adult brain weighs 1.3kg



## Brain Size

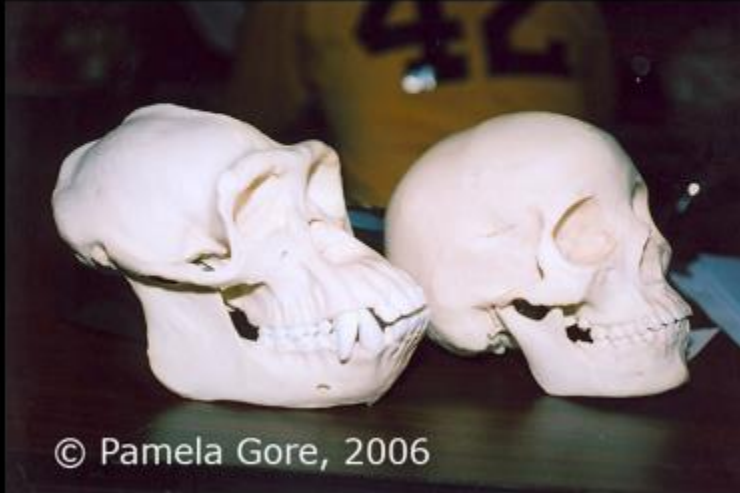
- Human brains are much bigger than our ancestors'
- Our brain size is about 1400cm<sup>3</sup>
- Our earliest ancestors had brains that were only about 400cm<sup>3</sup>





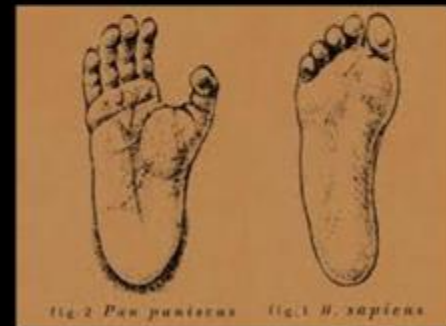
## Teeth

What can teeth tell us?



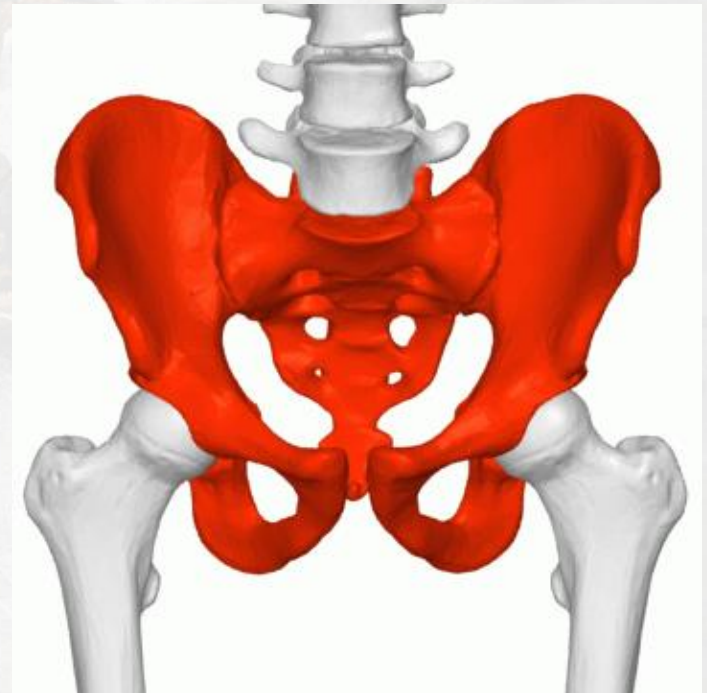
## Skeleton

- Upright (bipedal) or Knuckle walkers or Tree Swingers?
- We can tell from the leg, arm and hip bones



# HOW THE HUMAN BODY HAS EVOLVED: **THE PELVIS**

- Faces more forward than apes to allow forward, upright movement
- Thicker and wider to support an upright body



# HOW THE HUMAN BODY HAS EVOLVED: **THE HAND**

- Has longer thumbs (called **OPPOSABLE THUMBS**) than apes so that we can grip
- Our fingers are straight while apes are curved, which allows a wider grip





# HOW THE HUMAN BODY HAS EVOLVED: **THE FOOT**

- Humans have a larger, stronger ankle than apes
- We have a foot arch that allows us to spring when we walk, run or jump



# TASKS

1. All humans alive today are members of the species \_\_\_\_.

- ☐ *Australopithecus afarensis*
- ☐ *Homo erectus*
- ☐ *Homo sapiens*
- ☐ *Homo neanderthalensis*

2. As humans evolved what happened to the size of their brains?

- ☐ they stayed the same size
- ☐ they got smaller, then larger over time
- ☐ they got larger over time
- ☐ they got smaller over time

3. What is true about humans and apes?

- ☐ Humans and apes are genetically very different
- ☐ Humans and apes share a common ancestor
- ☐ Humans descended or evolved from apes
- ☐ Humans and apes are not related at all

4. Which of the following correctly lists human ancestors in order from oldest to most recent?

- ☐ *Homo sapiens*, *Homo erectus*, *Australopithecines*
- ☐ *Homo erectus*, *Homo sapiens*, *australopithecines*
- ☐ *australopithecines*, *Homo sapiens*, *Homo erectus*
- ☐ *Australopithecines*, *Homo erectus*, *Homo sapiens*

5. *Australopithecines* were different from their ape ancestors because they \_\_\_\_.

- ☐ had very large brains
- ☐ walked upright
- ☐ lived in Africa
- ☐ could speak

**The origins of man.** *Cross out the incorrect word in each case.*

Humans belong to a group of animals called hominids. Millions of years ago, hominids started to **develop/ grow** in different ways. Some of them **ended/started** walking on two feet (bipedalism). Their hands were now **occupied/ free** to use tools and .....  
Over time, these hominids evolved into Homo Sapiens (or modern humans).

Separately, other hominids evolved into chimpanzees, gorillas and orangutans, so these are our **parents/ relatives**. We have the same **relations/ ancestors** as they do.

# LEARNING CHECK:

Tell the person next to you ..

- How the human body has evolved over time
- Why these changes have happened