lingoda

The theory of evolution

READING

LEVEL Intermediate

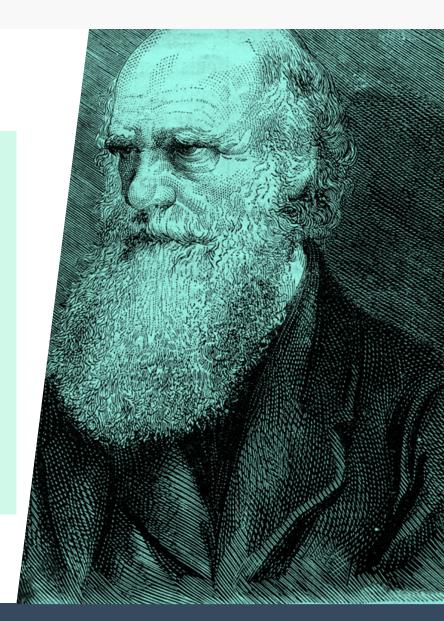
NUMBER B2_1036R_EN LANGUAGE English

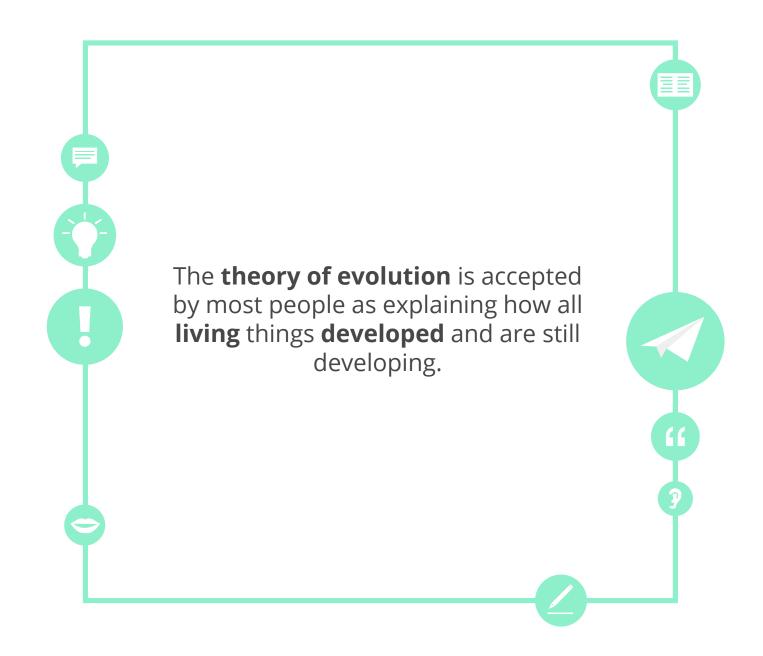




Goals

- Can read and understand the main points of a text about the theory of evolution.
- Can discuss and express my opinions on evolution, in greater depth and detail.







evolution

variation

natural selection

bipedal



organism

ancestor

coexist

adapt

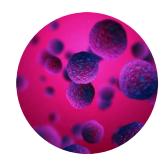




Evolution is the way things change over a long period of time.

There is huge variation within a species.





Bacteria are single-celled organisms.

Natural selection can also be called survival of the fittest.







Our ancestors are the people or species that came before us.

Mammals which are bipedal walk on two legs.





Many different species coexist peacefully on Earth.

Different species adapt over time, keeping their best characteristics.





Charles Darwin's **theory of evolution** is currently the most widely accepted explanation of how life on Earth came to be.

Charles Darwin was an English naturalist who lived during the nineteenth century and is considered to be **the father of evolution**. He travelled across the globe to study **variation** in plant and animal species. What he discovered led him to write a book explaining his theory of evolution. There are two main **elements** to his theory.













The first is that all life is connected, and **evolved** from simple **organisms**. The second is that this **evolution occurred** due to **natural selection**, or the passing of **advantageous traits** from one generation to the next, making all living things better **adapted** to their environment. His theory explained that those species with more useful **characteristics**, such as excellent **vision**, were more likely to survive and have **offspring**, while those without these characteristics would die out.





Fill in the gaps

Fill in the gaps with the vocabulary from the text.

advantageous traits

variation

characteristics

the father of evolution

offspring

- Darwin originally set out to look at _____ in plant and animal life.
- _____ inherit their parents' genes. 2.
- 3. Offspring usually inherit and pass on the most _____, which allow them to compete best with other species.
- Inherited _____ which give us an 4. advantage are most likely to be passed on.
- 5. Darwin has been called .







Thinking about the animal kingdom, which animals do you know of which are uniquely well adapted for their environment?





What is evolution?

Use the vocabulary below to write your own definition of evolution.

natural selection	advantageous traits	
Charles Darwin	organisms	
characteristics	offspring	



Something that Darwin never claimed was that humans are directly **descended from** apes. This explanation of how humans came to exist as we do is far too **simplistic**. The story of human **evolution** is long, and goes much further back than any **primates** which we see on our planet now. Scientists agree that humans and apes have a common **ancestor** which lived between 6 and 8 million years ago. The modern human species, **Homo sapiens**, have a huge amount in common with the great apes of Africa, the chimpanzees and the gorillas, despite the species having **diverged** so long ago.













The earliest humans evolved in Africa around 6 million years ago, when **primates** started to become **bipedal**. Scientists currently recognise around 15 to 20 different species of human which came before us, though they disagree about how these humans are related and how they died out. We only have evidence for some of our most recent ancestors.





Match the words on the left with their definitions on the right

1. descend from

A person related to you who lived long ago.

2. primate

Walking on two legs.

3. ancestor

To become different.

4. diverge

To develop from something or someone in the past.

5. bipedal

 A member of a group of mammals which includes humans and apes.



Humans and their closest relatives

Humans and chimpanzees share over 95% of their DNA. Which characteristics do humans and chimps share?







Competing theories

Do you know of any theories which compete with evolution to explain how life on Earth came to be?





Do you think we will ever find fossil evidence of our common ancestor with apes?

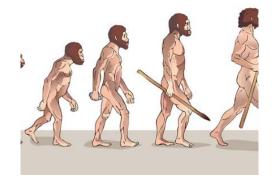
On you think it is important to keep

Do you think it is important to keep looking for it?



The longest-lived human species is **Homo erectus** which survived for almost 2 million years,
much longer than present-day Homo sapiens
have been around. Homo erectus was the first
human species to control fire and to eat a lot of
meat. They were also probably the first species in
our **genus** to care for their old and sick. Homo
erectus were also the first of our ancestors who
looked more like we do now, with shorter arms
and longer legs. This species is known to have
lived in Africa and parts of Asia.















Another important ancestor was **Homo heidelbergensis**, a species which **coexisted** with Homo erectus for a time. As the first human species to live in colder climates, in Europe for example, their shorter, wider bodies were **adapted** for the weather and they were the first species to **hunt** large animals for food. They were also the first species to build **shelters**.





Perhaps our best-known ancestor is **Homo neanderthalensis**, more commonly known as the **Neanderthal**. They mainly lived in Europe and parts of Asia and were adapted for the cold weather with large noses and **stocky** bodies. Their brains were the same size or larger than ours and they were the most **sophisticated** species up to that point; they buried their dead, made and wore clothing, and occasionally made **symbolic** objects.

Homo sapiens, yes, that's us finally, and Neanderthals coexisted for around 100,000 years, though Homo sapiens developed in Africa, while Neanderthals were in Europe. When Homo sapiens moved into Europe, they caused the **gradual extinction** of the Neanderthals over a period of around 5000 years as they **competed** for survival. However, some **interbreeding** did occur and it is estimated that modern humans who are not of African descent have around 2% Neanderthal DNA.



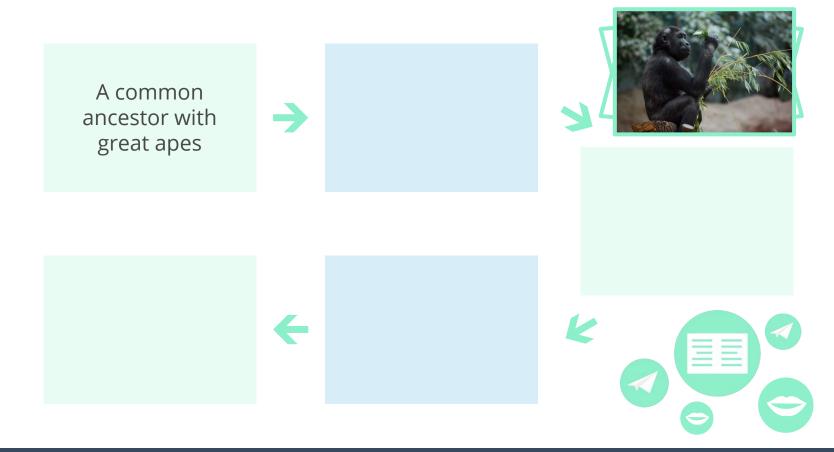
Talk with your teacher about what these words mean and why they were mentioned in the text





A timeline of evolution

Use the information on the reading slides to create a timeline of human evolution.





Write a description

Write a short description of the timeline on the previous page. Use your own words, though use the ideas from the reading slides.

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Answer the questions below with your teacher.

EVOLUTION OF HUMAN





Sahelanthropus tchadensis









pithecus africanus



Homo erectus

o neanderthalensis

Homo sapiens



Which of the species of humans had you heard of before? Do you know any others which were not mentioned?



How well adapted do you think Homo sapiens are to live in our world?

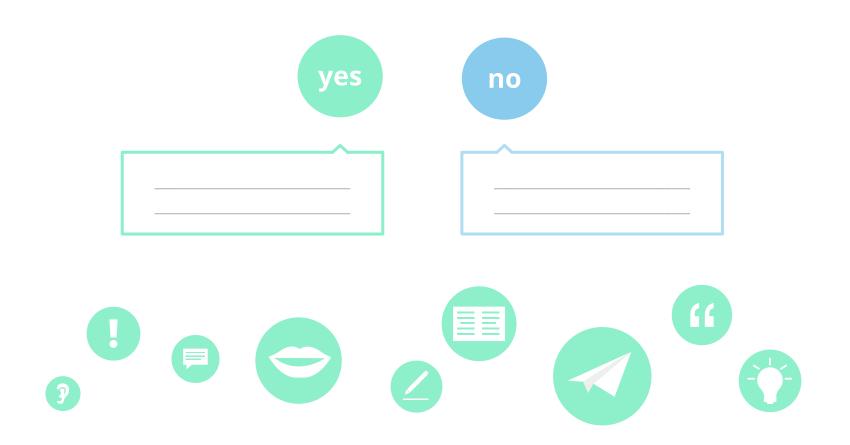


Are you surprised that you might have some Neanderthal DNA? What do you think it means for Homo sapiens?



Reflect on the goals

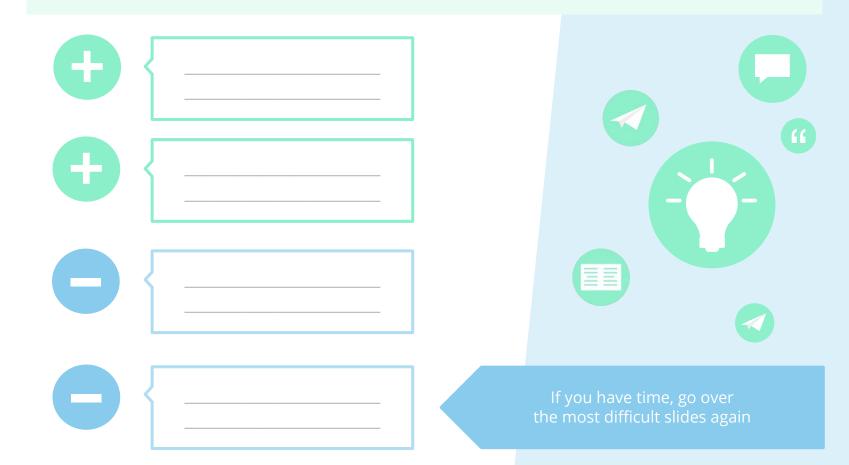
Go back to the second slide of the lesson and check if you have achieved all the goals of the lesson.





Reflect on this lesson

Think about everything you have seen in this lesson. What were the most difficult activities or words? The easiest?





Answer key

Exercise p. 9

1. variation, 2. offspring, 3. advantageous traits, 4. characteristics, 5. the father of

evolution

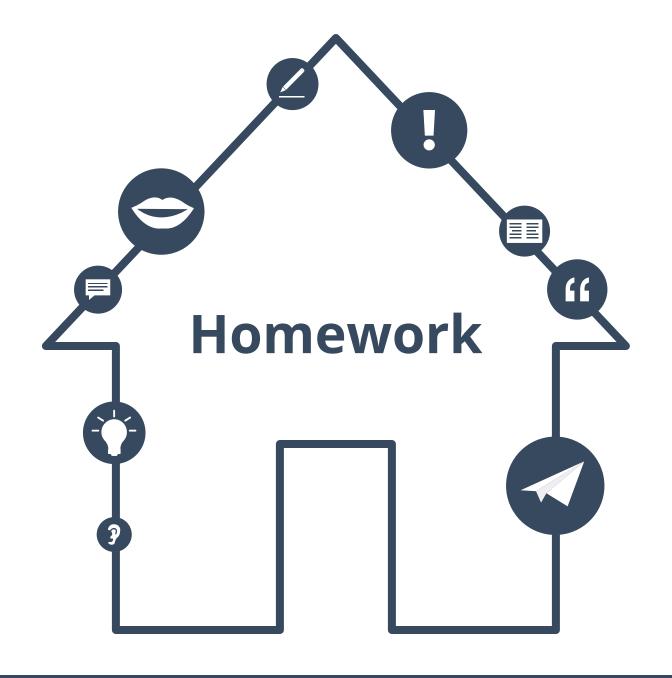
Exercise p. 14

person related to you who lived long ago, 4. diverge: To become different, 5. member of a group of mammals which includes humans and apes, 3. ancestor: A 1. **Descend from**: To develop from something or someone in the past, 2. **primate**: A

bipedal: walking on two legs

Exercise p. 22

neanderthalensis -coexisted with - 4. Homo sapiens 1. Homo erectus - coexisted with - 2. Homo heidelbergensis - 3. Homo





Complete the sentences

Complete the sentences in your own words.

- 1. Charles Darwin originally decided to travel around the globe because...
- 2. Natural selection means...
- 3. Humans and apes share...
- 4. The longest living species of human was _____, who...
- 5. Homo sapiens and Neanderthals...



Do some research about the evolution of an animal or bird which interests you and write a short text about how it evolved.

Suggestions for interesting subjects are: the whale or the quagga.



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