

# Year 6 Science

# Evolution

I can explain how adaptations may lead to evolution.

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**Grammarsaurus**

# Thinking Time!

Can you remember  
what adaptation means  
from last lesson?



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Adaptation is when a plant or animal has changed in some way, usually over a long period of time, to be better suited to the environment in which they live.



# The Peppered Moth



The Peppered Moth can be found all around Britain and Ireland. You may see them in your back gardens, but its amazing story has made it famous all over the world. An incredible scientist named Darwin discovered something amazing about this particular moth, and so it is often referred to as 'Darwin's moth'.

Peppered Moths are normally white with black speckles across the wings, which is why they are called 'peppered moths'. Their pattern means that they are well camouflaged when they rest on lichen-covered tree trunks during the day.



**Question time!**

Why do you think the moths wanted to camouflage themselves?

# The Dark Peppered Moth



However, in the 19th century, there were a lot of factories and coal fires which were causing the air to become 'sooty'. This sooty air was being deposited onto the trees and covering them in a black layer. This meant the light coloured peppered moths were no longer camouflaged on the trees that they liked to sit on.

More and more light coloured moths were being eaten by predators such as birds because they were no longer camouflaged. Because of this, dark coloured moths became more common as they were the ones who could not be seen against the soot covered trees.

**This is called natural selection.**



# Natural Selection and Evolution

**Natural selection** is when organisms that are best suited to their environment survive and pass on their genetic traits. At the same time, organisms that are less likely to survive tend to be eliminated from the ecosystem.

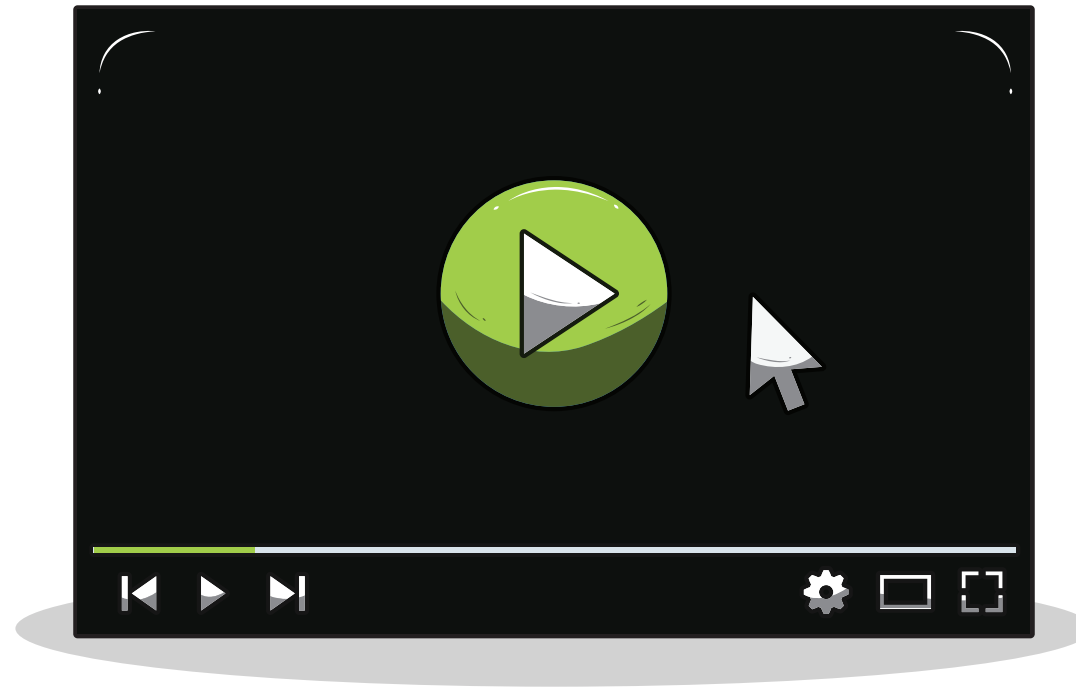
*The fittest, most adapted organisms survive and multiply whilst the least adapted die out.*



This was shown with the moths. The light coloured moths were no longer adapted to their environment so started to die out. Whilst dark coloured moths were adapted to the environment so multiplied. Natural selection is key to explaining evolution. Evolution is a theory that states that all species that exist today developed from previous species. For example, some scientists believe that humans evolved from apes!

Watch this video from BBC bitesize for further explanation of evolution:

<https://www.bbc.com/bitesize/articles/z9qs4qt>



# Task:

- Choose an animal
- Describe the ways in which it has adapted to its environment
- Why it needed to adapt in this way
- What you think would happen if it didn't do this.

## Example

- Giraffe has adapted to its environment by growing a longer neck.
- It needed to do this to reach food higher up on trees in the form of leaves.
- If it didn't do this, it is likely it wouldn't grow due to the food being higher.

Different types of beaks to adapt to its environment and the type of food there. Natural selection has led to different beaks in finches.

