

Fold in half at the line ----->

Glue on this side

# Wonders of the Natural World

1	I can describe ways in which organisms can be classified.
2	I know some features of vertebrates and invertebrates.
3	I know that sperm and egg cells are called gametes and that gametes fuse to form a zygote
4	I can state and explain the advantages and disadvantages of different types of reproduction
5	I can describe the lifecycle of an insect.
6	I can identify examples of innate and learned behaviours.

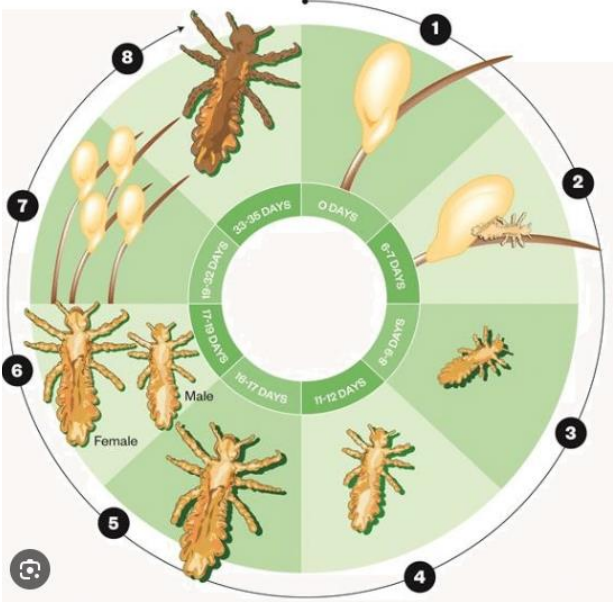
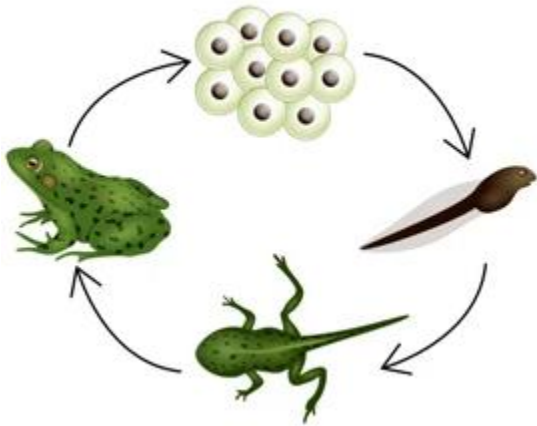
	Keyword	Definition
1	Adaptations	Organisms have features that enable them to survive in the conditions in which they normally live. These may be structural, behavioural or functional.
2	Asexual reproduction	The process of mitosis to create the identical copies (clones) of the parent cell.
3	Classification	Linnaeus classified living things into kingdom, phylum, class, order, family, genus and species.
4	Complete metamorphosis	Insect development that includes egg, larva, pupal and adult stages which differ greatly in morphology
5	Diffusion	Movement of particles move from an area of high concentration to an area of lower concentration
6	Fertilisation	Fusion of male and female gamete, e.g. When a sperm fuses with an egg
7	Gamete	Sex cell, in animals it is sperm and egg and in plants- pollen and egg
8	Incomplete metamorphosis	insect hatches from an egg and then goes through several nymphal stages. Each nymphal stage looks like a small version of the adult but getting slightly bigger with age.
9	Innate behaviour	Behaviour that the animal is born with
10	Invertebrate	Animal without a backbone

Prior Knowledge From KS2:  
From KS2 you know that the life cycle of plants and animals include growth, development and reproduction. Humans and other animals have skeletons. Animals have a skeleton for support and protection.  
Earlier in KS3 animal adaptation and human and plant reproduction have been covered.

Careers:  
*Degree in natural history*  
*Environmentalist*  
*Biologist*  
*Zoologist*

Future Learning:  
The GCSE topic of biodiversity and reproduction in Biology will look at some of these themes further.

Why?  
Not all students spend their weekends and holidays in natural history museums, helping grandparents with their allotments and watching the back catalogue of David Attenborough. This topic was designed by our very experienced, head of Biology to ensure that our students have understanding of the natural world beyond the national curriculum and to foster a deep love of Biology. Lessons in this unit include reproductive strategies, unusual adaptations, family groups, gorilla family groups and animal behaviour and learning.  
This topic in our opinion will help increase student’s cultural capital in natural history and is a precursor to the GCSE in Natural History recently launched by OCR.

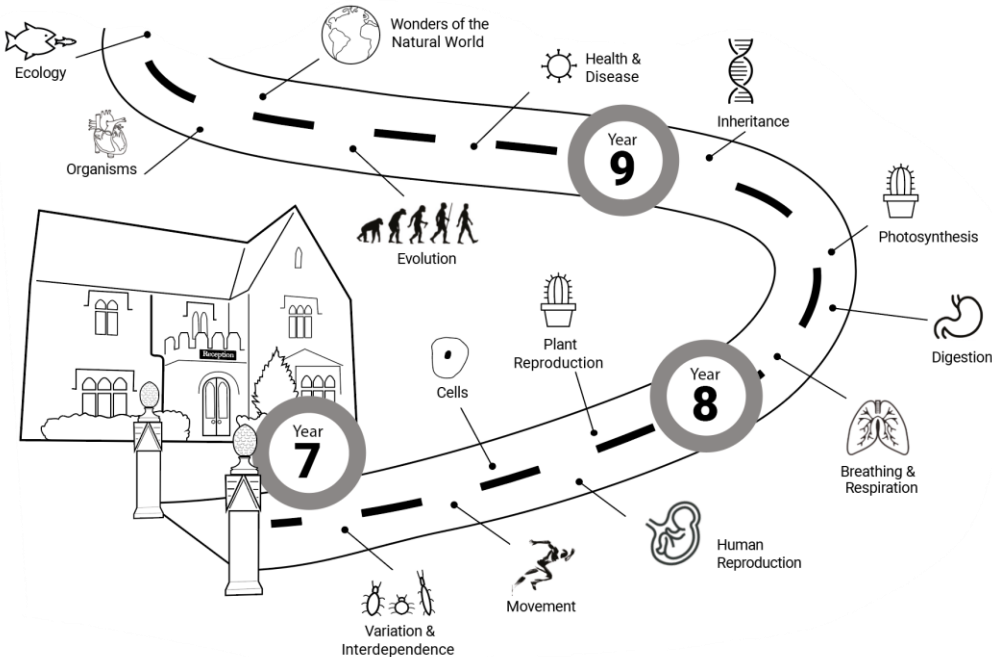


Social Structure

Gorillas are non-territorial and live in groups called **troops** that generally consist of 1 to 4 adult males (called silverbacks), some juvenile males (called black backs), several adult females and young.



Homework Menu Grid



Topic	1 point	2 point	4 point	6 points	10 points
Vertebrates and Invertebrates 	List 3 vertebrates and 3 invertebrates.	State the difference between vertebrates and invertebrates.	Go into your garden or local park and find 2 invertebrates and take their picture.	Make a dressing up costume to represent your favourite invertebrate. Take pictures of yourself wearing it or bring it in to class.	Carry out a research project on an invertebrate and an invertebrate. Make sure you include lots of pictures and facts.
Sexual and Asexual reproduction 	Copy and complete: In sexual reproduction there is ____ parent. In asexual reproduction there are ____ parents.	Write a list of 5 organisms that carry out asexual reproduction.	Draw a spider plant. If you don't have one at home look it up on the internet. Make sure you include the offspring.	Plant a potato in a pot. In a couple of weeks look at it. Take some photos doing the task and stick them into your book.	Research plants that carry out sexual and asexual reproduction and discuss the benefit of both.
Life cycle of an insect 	Read the very hungry caterpillar.	Find on the internet pictures of an adult headlouse and a young headlouse.	Draw and annotate a life cycle of a frog.	Write an extract of a diary. Starting as an egg and ending up as a butterfly.	Create a modern dance to represent complete metamorphosis. Film and send to Miss Collins.
Mimicry 	Copy someone at home.	Write the biological definition of mimicry.	<a href="https://youtu.be/AyzsbsJyRKs">https://youtu.be/AyzsbsJyRKs</a>  Watch this video write a list of several animals that carry out mimicry.	<a href="https://youtu.be/AyzsbsJyRKs">https://youtu.be/AyzsbsJyRKs</a>  Watch this video and produce a short report to summarise the mains points.	Dress in camouflage, don't forget your face paint and get someone to take pictures of you hiding in your environment.
Animal Behaviour 	Watch an animal (from a distance) what do they do differently to us?	Watch 1 episodes of a David Attenborough.	Watch 2 episodes of a David Attenborough.	Watch 1 episode of a David Attenborough and write a short report on it.	Watch 2 episodes of a David Attenborough and write a short report on each.