

# OCR (A) Biology GCSE

## B5.2 - Natural selection and evolution

### Flashcards



# What is phylogenetics?



# What is phylogenetics?

## The study of evolutionary relationships



Give 3 advancements that have improved classification



Give 3 advancements that have improved classification

- Developments in microscopy
- Developments in biochemistry
- New DNA evidence



# Describe the process of natural selection



# Describe the process of natural selection

- Populations are naturally varied due to random genetic mutations
- Some of these mutations provide a selective advantage
- These organisms survive and reproduce, passing on the successful genes



# Define evolution



## Define evolution

Evolution is a change in the genetic makeup of a population over time due to natural selection



Give 2 pieces of evidence for evolution



# Give 2 pieces of evidence for evolution

- Fossils
- Antibiotic resistance



# Describe how antibiotic resistance arises



## Describe how antibiotic resistance arises

- A random genetic mutation causes a bacterium to become resistant to the antibiotic
- When the antibiotic is used, all the bacteria that do not have the mutation are killed
- The population containing just the resistant bacteria then begins to grow



Describe how two new species develop  
from one species



## Describe how two new species develop from one species

- A population is split where members of the population are isolated
- The environments become different and so natural selection will occur differently
- The two groups will become different enough that they cannot breed to produce fertile offspring anymore



# Why was Darwin's theory only slowly accepted?



## Why was Darwin's theory only slowly accepted?

- Most people still believed God created all the life on earth
- There was insufficient evidence to support his theory

