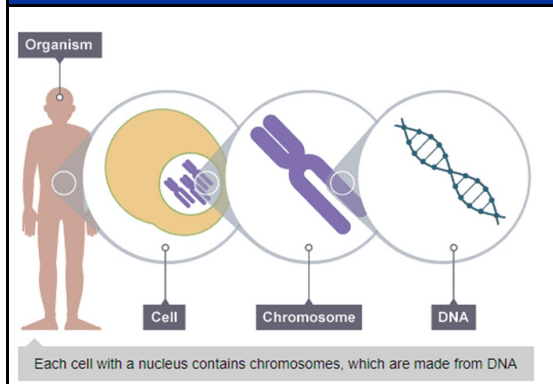




## 1. Natural selection and evolution

Biodiversity	The total different number of species in an ecosystem. More biodiversity is a good thing.
Natural selection	“The survival of the fittest” The organisms that is best adapted will survive longer and pass on their genes to the next generation
Evolution	Natural selection over long periods of time leads to permanent adaptations
Fossils	Provide evidence of evolution
Extinction	When every single organism of a species dies. Often cause by environmental disaster, disease or predator.

## 2. The organisation of DNA in humans



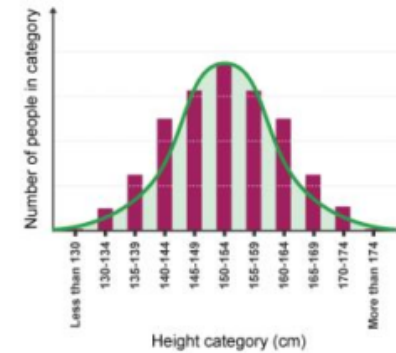
<b>Gene</b>	The basic unit of genetic material inherited from our parents. A gene is a section of DNA which controls part of a cells chemistry.
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## 3. Variation

<b>Variation</b>	Difference between individuals.
<b>Continuous Variation</b>	Variation that shows a wide range of intermediate values between two extremes. They can be measured. E.g. Hand Span
<b>Discontinuous Variation</b>	Differences between individuals in a characteristic that can only be put into different categories E.g. Eye colour
<b>Environmental Variation</b>	Differences between individuals of a species due to factors in their surroundings

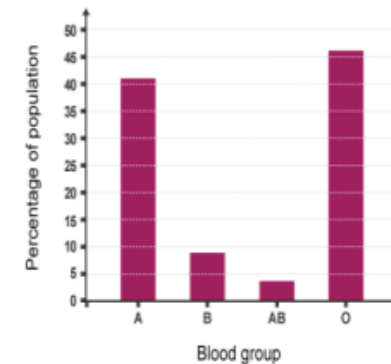
### Continuous Variation

Human height is an example. It ranges from the smallest person on Earth to the tallest. Continuous variation shows characteristics that change gradually over time.



### Discontinuous Variation

A characteristic of any species with only a limited number of possible values. Eye colour and blood group are examples.



## 4. Natural Selection leading to evolution

### Evolution

Change in the inherited characteristics of a population over time through a process of natural selection, which may result in the formation of a new species.

The theory of evolution by natural selection states that all species of living things have evolved from simple life forms that first developed more than three billion years ago.

Natural selection of variants that give rise to phenotypes best suited to their environment.

- Variation (mutation)
- Adaptation
- Survival & Reproduction

