

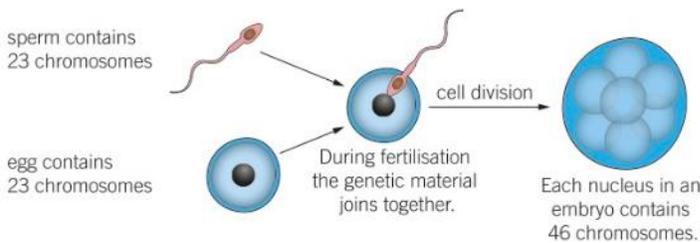
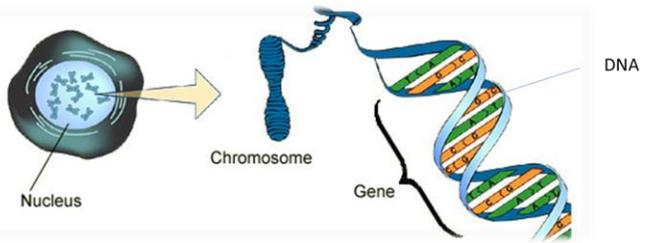
Section 1- Competition

| | |
|---|--|
| Animals compete for: <ul style="list-style-type: none"> • Food • Water • Space • Mates | Plants compete for: <ul style="list-style-type: none"> • Light • Water • Space • Minerals |
|---|--|

Surviving in the desert:

| Oryx | Cactus |
|-------------------------------------|--|
| Does not sweat – reduces water loss | Leaves rolled as spines – reduces water loss |
| Wide feet – does not sink into sand | Widespread roots – collect water from large area |

Section 4 - Inheritance



▲ You get half of your genetic material from your mother, and half from your father.

Section 2- Adaptations

Adaptation = a characteristic that helps an organism survive in its environment. E.g. camouflage
 Interdependence = when a change in one population directly affects another. E.g. predator-prey relationships

Adapting to seasons:

| Animals | Plants |
|-------------|------------------------|
| Hibernation | Grow fast in spring |
| Migration | Drops leaves in winter |

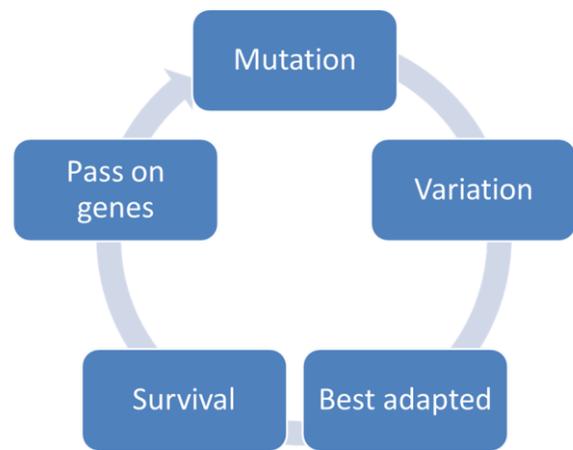
Section 5 - Natural Selection

Natural selection = survival of the fittest. Over time this leads to a process called evolution. The theory of evolution was created by Charles Darwin. It shows that all organisms evolved from unicellular organisms.

If a species is unable to adapt they will become extinct. Extinction = when no members of a species remain in existence.

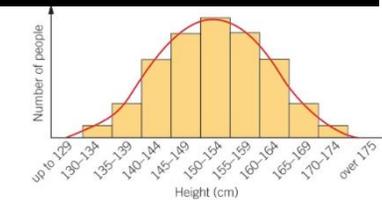
Causes of extinction:

- Changes to environment (e.g. temperature)
- Destruction of habitat (e.g. deforestation)
- Outbreak of a new disease
- Introduction of a new predator

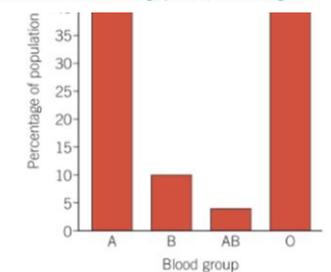


Section 3 - Variation

- Variation is due to inherited genetic factors (e.g. eye colour) and the environment (e.g. tattoos).
- Characteristics caused by multiple genes produce data within a range this is an example of continuous variation.
- Characteristics caused by one gene produce categoric data, this is an example of discontinuous variation.



▲ Continuous data is always plotted on a histogram.



▲ Discontinuous data is always plotted on a bar chart.

Section 6 - Discovery of DNA



- 1) Franklin and Wilkins used X ray techniques to produce images of DNA.
- 2) Franklin produced an image that showed the helical shape of DNA
- 3) Watson and Crick used this image to make a model of DNA and realised it had a double helix structure.
- 4) Watson and Crick won the Nobel prize for their discovery of DNA's structure.