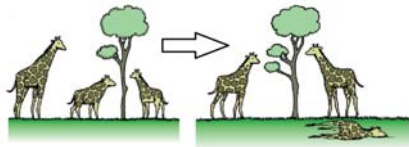


# Y8 - Knowledge organiser 8.6 – Evolution & Inheritance



## Natural Selection 1

- Theory explaining how species evolve and why extinction happens.
- Process by which species change over time in response to environmental changes and competition for resources.



Natural Selection in action

## Competition 2

- When two or more living things struggle against each other to get the same resource.
- Can lead to extinction of species if they cannot adapt.

## Extinction 3

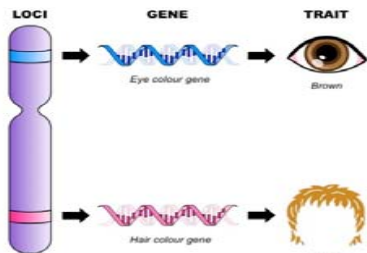
- **Population:** group of organisms of the same kind living in the same place.
- **Extinction:** when no more individuals of a species remain.

## Biodiversity 4

- The variety of living things.
- Measured by the number of different species in an ecosystem.
- Vital to maintaining populations.
- Variation help against environmental changes, avoiding extinction.

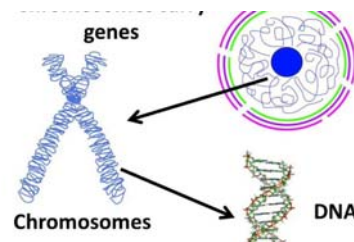
## Inherited characteristics 5

- Results from genetic information being transferred during reproduction.
- **Gene:** a section of DNA that determines a characteristic.



## DNA & Chromosomes 6

- **Chromosome:** thread-like structures containing tightly coiled DNA.
- **DNA:** a molecule found in the nucleus of cells containing genetic information.



## Mutations 7

- Sometimes DNA changes when genes are replicated.
- Known as a mutation.
- These **mutations** can be beneficial, harmful or ineffective for organisms.

## Genetic modification 8

- Humans can modify the complete genetic material of an organism in a lab.
- This often has beneficial effects for humanity.
- People may be against this research however.