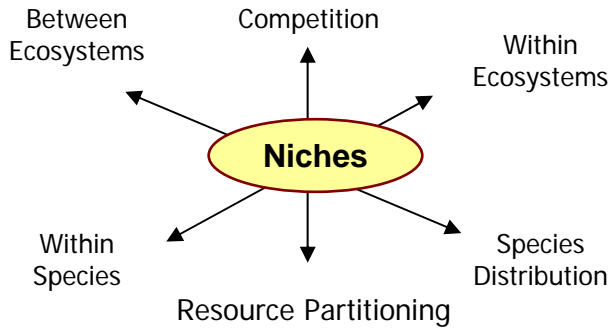


Grade 9 - Unit 1 – Biological Diversity Concepts



Selection

Natural
Occurs when the environment 'selects' which individuals within a species will survive to reproduce

Artificial
Occurs when humans intervene using biotechnologies to select desirable characteristics

Biotechnology
Cloning
Artificial insemination
In vitro fertilization
Genetic engineering

Interdependence (Symbiosis)

Commensalism
One Benefits, the other is not affected

Mutualism
Both benefit

Parasitism
One benefits, the other is harmed

Variation

Heritable
Discrete
Continuous

Non-heritable

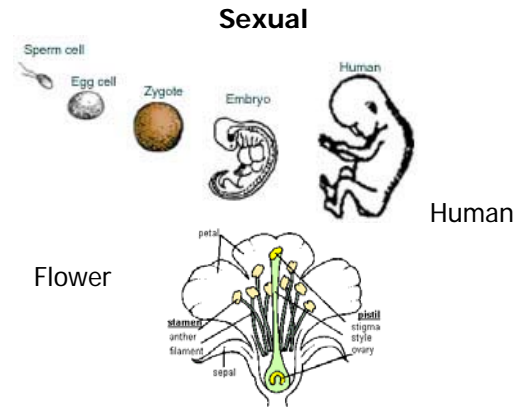
Classification System

Kingdom
Phylum
Class
Order
Family
Genus
Species

Asexual
Binary Fission
Budding
Spore Production

Vegetative Reproduction
- cutting
- tuber
- runner
- sucker

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Science of Genetics is the study of how heritable characteristics are passed on from generation to generation.

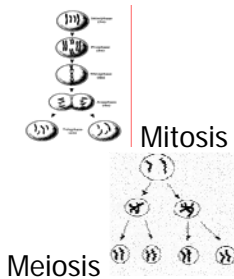
DNA



Genetic Code

Chromosomes
(46 in humans)

Genes
(alleles)

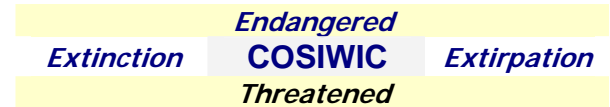


Traits

Dominant Always show when they are present	Recessive Show only when dominant traits are not present
Incomplete dominance Offspring unlike either parent	
Environmental Factors	

Impacts on Biodiversity

Natural causes
(earthquakes, volcanoes, floods, fires, lack of food, disease, overspecialization)



Human causes
(habitat destruction, introduced species, over-hunting, pollution)

Biodiversity Conservation Strategies

- Protected Areas
- Restoration Programs
- Regulations and Restrictions
- Controlling Exotic Species
- Genetic Resources Conservation