

Edexcel Biology GCSE

Topic 4.7 - Classification

Flashcards

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What is classification?



What is classification?

The organisation of organisms into groups



What is taxonomy?



What is taxonomy?

The classification of organisms into taxa: kingdom, phylum, class, order, family, genus, species.



Name the five kingdoms



Name the five kingdoms

Animals, plants, fungi, protists,
prokaryotes



What happens to the number of organisms in each taxon as you move down the hierarchy?



What happens to the number of organisms in each taxon as you move down the hierarchy?

The number of organisms in each taxon group decreases



Traditionally, organisms were grouped based on similarities and differences in their anatomy and behaviour. What is the problem with this?



Traditionally, organisms were grouped based on similarities and differences in their anatomy and behaviour. What is the problem with this?

- Organisms that are not closely related may look alike and behave similarly if they live in the same environment e.g. sharks and dolphins
- Some closely related species may look very different if they live in different habitats e.g. queen ants, worker ants



What advancements in science have led scientists to reconsider the five kingdoms classification system?



What advancements in science have led scientists to reconsider the five kingdoms classification system?

- Microscopes
- Biochemistry
- DNA and RNA analysis



Describe the three domains system of classification



Describe the three domains system of classification

- Organisms are initially divided into an extra three groups: **Archaea, Bacteria, Eukarya**
- **domain**, kingdom, phylum, class, order, family, genus, species.



Which domain do eukaryotic organisms belong to?



Which domain do eukaryotic organisms belong to?

Eukarya



Which domains do prokaryotic organisms belong to?



Which domains do prokaryotic organisms belong to?

Archaea and Bacteria



Describe the domain Bacteria



Describe the domain Bacteria

Consists of **true** bacteria e.g. *E.coli*



Describe the domain Archaea



Describe the domain Archaea

- Consists of **primitive** microorganisms
- Contains extremophiles - adapted to live in extreme conditions e.g. hot springs

