

Edexcel Biology GCSE

Topic 4.7 - Classification

Flashcards

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

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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?

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- 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?

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- Microscopes
- Biochemistry
- DNA and RNA analysis

Describe the three domains system of classification

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- 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?

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Eukarya

Which domains do prokaryotic organisms belong to?

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Archaea and Bacteria

Describe the domain Bacteria

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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