This meant that if organisms looked similar and possessed similar features, we assumed that they would be classified under the same group. Today we more accurately classify organisms based on their DNA base sequences and protein amino acid sequences which are more closely related.

Biologists use the similarity in base sequences to see if a species is closely related to one another (the more similar the more closely related)

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Features of organisms

Every living organisms also contain cytoplasm ,DNA ,Cell membrane ,Ribosomes and Enzymes, The largest taxonomic groups are called Kingdoms, and today biologist use the Whittaker five kingdom scheme therefore we can organize all organisms into Animal ,Plant ,Fungus ,Prokaryote ,Protects. In some situations some organisms don't perfectly fit into these groups.

Within the five kingdoms viruses do not fit into them since they do not perform the characteristics of living organisms, they are only active once inside a host cell and they a very simple and lack ribosomes, cytoplasm and cell membrane

The Plant Kingdom

Organisms in the plant kingdom are made up of many lots of cells (multicellular organisms), their cell well are made up of cellulose and have chloroplasts that contain chlorophyll, They are autotrophs (Which means that they can create their own food from substances such as light, oxygen and carbon dioxide etc)

The Animal Kingdom

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Organisms in the animal kingdom are made up of lots of cells but they lack a cell wall and chloroplasts and are heterotrophs (Which means that they fulfill their nutritional requirements from complex organic substances and ingest and digest internally)

The Fungi Kingdom

The Majority of fungi are made up of hyphae instead of cells and their nuclei are spread out across the cytoplasm .There a lot of types of fungi; puffballs and toadstools grow on tree trunks and mold fungi grow on food ;yeasts are unicellular fungi

The Prokaryote Kingdom

This kingdom contains bacteria and algae and they consists of unicellular organisms that have chromosomes that are not organized in a nucleus. Bacteria tend to be very very small usually around 0.01 mm in length and can only be viewed with machines like microscopes .Unlike plants bacterium's cell walls are not made of cellulose and are made of proteins, lipids and sugars; bacteria can be spherical ,rod shaped and spiral, another feature of bacteria is their flagella which allows them to move around.The cytoplasm of a bacterial cells tends to contain lipids glycogen and other foo reserves

The Protoctista Kingdom

These unicellular organisms have a nucleus enclosed in a nuclear membrane, some of the protoctista photosynthesis using chloroplasts which makes them unicellular 'plants'; they are called 'Protophyta'.Unicellular organisms like Amoeba and Paramecium take in solid food and a very similar to animals when feeding giving them the name 'protozoa', they move by using their cytoplasm and deeds on other microscopic organism and bacteria.

Kingdom	Prokaryote	Protoctista	Fungi	Plant	Animal
Cell type	prokaryotic	Eukaryotic	Eukaryotic	Eukaryotic	Eukaryotic
Unicellular/Multicellular	Unicellular	Unicellular and Multicellular	Unicellular and Multicellular	Multicellular	Multicellular
Mode of Feeding	Autotrophic or Heterotrophic by absorption	Autotrophic or Heterotrophic by ingestion or absorption	Heterotrophs by absorption	Autotrophs	Heterotrophic
Reproduction	Asexual by binary fission	Asexual through binary fission, fragmentation and sporulation	Asexual by binary fission, fragmentation and sporulation	Asexual by fragmentation and sporulation And Sexual	Sexual

The Animal Kingdom

Phylum: Arthropod

Arthropods are animals that possess jointed limbs and hard skeleton (named a cuticle); their bodies are segmented and have flexible joints that allow easy movement. The majority of arthropod's segments are grouped into head, thorax and abdomen

The following are the four classes of arthropods

Crustacean

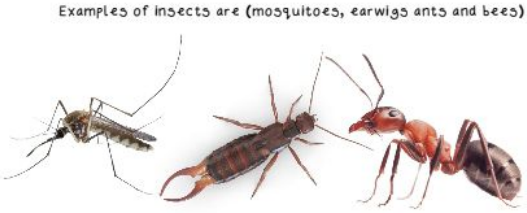
In the class Crustacean the animals posses 5 or more jointed legs and an exoskeleton, they have two pairs of sensitive antennae and one set of compound eyes (which consists numerous lenses with light sensitive cells underneath), Their bodies are divided into a cephalothoraxes (the fused head and thorax) and abdomen (one of the three or two main body parts of arthropods)

Examples of crustacean are (prawns, crabs, shrimps and woodlice)

Insects

The largest class of arthropods are insects they posses three pairs of legs , they have one pair of antennae and one pair of compound eyes (see definition of compound eyes above).They have three sets of jointed legs and tend to have two pairs of wings, their bodies are divided into three parts an obvious head . Thorax (the middle section of an insect that has legs and wings) and abdomen (definition above)

Examples of insects are (mosquitoes, earwigs ants and bees)



Arachnids

The bodies of arachnids are split into two parts the cephalothoraxes (see definition above) and abdomen (definition above), They have quite a few pairs of simple eyes, On their cephalothoraxes they have 4 legs, two chelicerae (a set of

Examples of arachnids (Scorpions, mites and spiders)