

# Why is classification important in biology?

Classification is important because it allows scientists to identify, group, and properly name organisms via a standardized system (Linnaeus Taxonomy); based on similarities found in the organisms DNA/RNA (genetics), Adaptations (Evolution), and Embryonic development (Embryology) to other known organisms to better study and understand the new organism as a whole.

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In order to do this it is very important for scientists to have first agreed upon a standardized system or approach to naming and classifying an organism because without it unknown organism could be classified differently around the world creating confusion.

However, by only using the modern international taxonomic approach (domain, kingdom, phylum, class, order, family, genus, species) first proposed by Linnaeus, all organisms are named and grouped in the same manner making them more easy to study and keep track of.

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It is important to also note that organisms are classified based on a variety of characteristics, not just physical appearances. For example, classifying alligators and crocodiles. They both have similar appearances and vary in looks depending on the region from which they come from.

If we were trying to classify a large unknown reptilian organism with the structural similarities to a gator and tried to classify it down to the genus and [species](#) level based on physical appearances alone we might accidentally classify it as an alligator when it turned out to be a crocodile.

The point is, it is important to not just classify by physical appearances but look at the unknown organisms genetic material, do phylogenetic studies on it to scale back its evolutionary roots, observe the way its babies develop in the womb, etc. The more you understand about the organism the more accurately you can classify it.

Ultimately remember, biologists classify organisms to better understand how all living things are interconnected. We do this already in everyday life. We classify items in a grocery store by food type, we classify sports by the type of balls and techniques they use, we classify things all the time by putting things into groups based on similarities so that we can better organize our lives. The same is true for biologists except what they are trying to organize is living organisms and how life all fits together because biology is the study of life.

Tips and tricks:

Remembering the levels of classification mnemonic: Dear King Philip Cried Out For Good Soup. The first letter of each word represents the first letter of each level of classification; Domain, Kingdom, Phylum, Class, Order, Family, Genus, Species.

