# Module 9: Classification – The Basics
## Topic 1 Content: Binomial Nomenclature

**Introduction**



In this interactivity, use the **NEXT** button or the numbered tabs to examine how binomial nomenclature works.
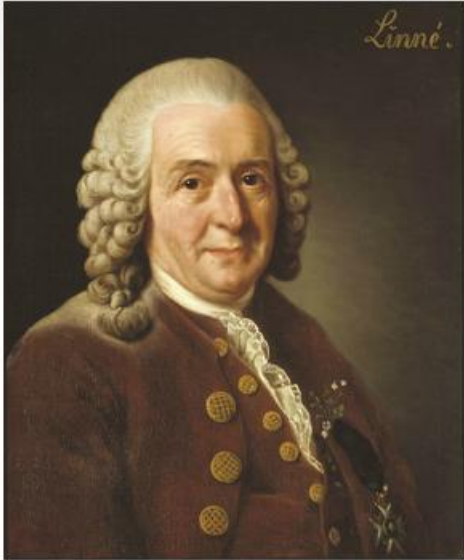
**Linnaeus**

## Binomial Nomenclature

### Linnaeus

The scientist Carolus Linnaeus brought order to the naming of species, giving them a scientific name rather than relying on common names that varied by region. **Binomial nomenclature** is his standard naming system that gives each organism a two-part name based on its genus and species.

In binomial nomenclature, the two-part scientific name of an organism is always italicized or underlined.

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**Genus**



The first word of a scientific name is the genus. It is always capitalized. For example, *Ursus* is a genus that includes numerous species of bear, such as *Ursus americanus*, the American black bear. A **genus** is a group of closely related species.

**Species**



The second word of a scientific name is the species, and it is always lowercase. For example, *americanus* is a specific bear species of the genus *Ursus*, as in *Ursus americanus*. A **species** is a group of organisms that can naturally breed and produce fertile offspring.

**Usage**



**Binomial Nomenclature**

Usage

The species name is never used alone because it can be used to form the scientific name of organisms in different genera. For example, *Ursus americanus* is an American black bear, but *Anaxyrus americanus* is an American toad. Without using the name of the genus with the species name *americanus*, it would not be clear whether you were referring to a bear or a toad.

Ursus americanus | Anaxyrus americanus

`1` `2` `3` `4`

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