

Classification

Grade 4

Standard V: Objective 3, a-b

Classification is the act of putting things into groups based on shared characteristics such as structure or appearance. For example, flowering plants are classified as angiosperms, primitive plants with naked seeds are classified as gymnosperms.

Generally scientists employ the classification system developed by the Swedish botanist Charles Linnaeus in the 18th century. Linnaeus chose Latin as the language of taxonomy (the laws of classification) because of its international recognition and the likelihood that, being a “dead” language, it would not evolve as other languages do. He chose to use categories to rank organisms from broad groupings to narrow groupings. These categories are employed for the classification of plants, animals and all other known organisms.

The categories or taxa of plants that are used in this classification system are:

Kingdom: consisting of many divisions

Division: consisting of many classes

Class: consisting of many orders

Order: consisting of many families

Family: consisting of many genera

Genus: consisting of many species

Specific Epithet: consisting of many related individuals
(species is Genus and Specific Epithet)

Additional categories and sub or super categories have been created to classify the vast number of organisms that have been discovered since the time of Linnaeus.

Linnaean classification of a Fremont cottonwood:

Kingdom: Plantae (plants)

Division: Magnoliophyta (flowering plants)

Class: Magnoliopsida (dicots)

Order: Malpighiales (ex. Violets, spurge, cottonwood)

Family: Salicaceae (willow family)

Genus: Populus (poplar, cottonwood, aspen)

Specific Epithet: fremontii (Fremont cottonwood)

(species is *Populus fremontii*)
