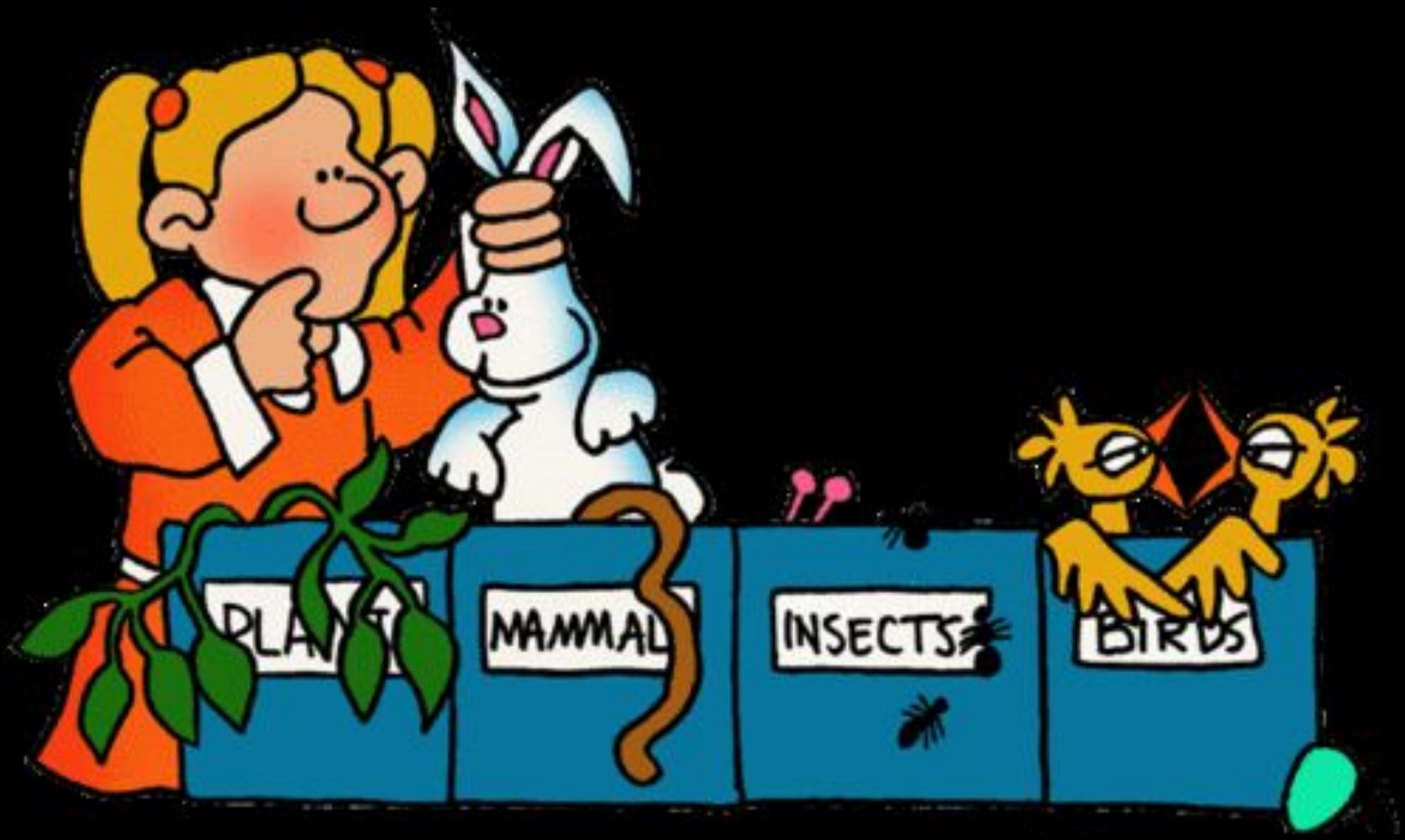
# Classification of Life



# Learning Objectives

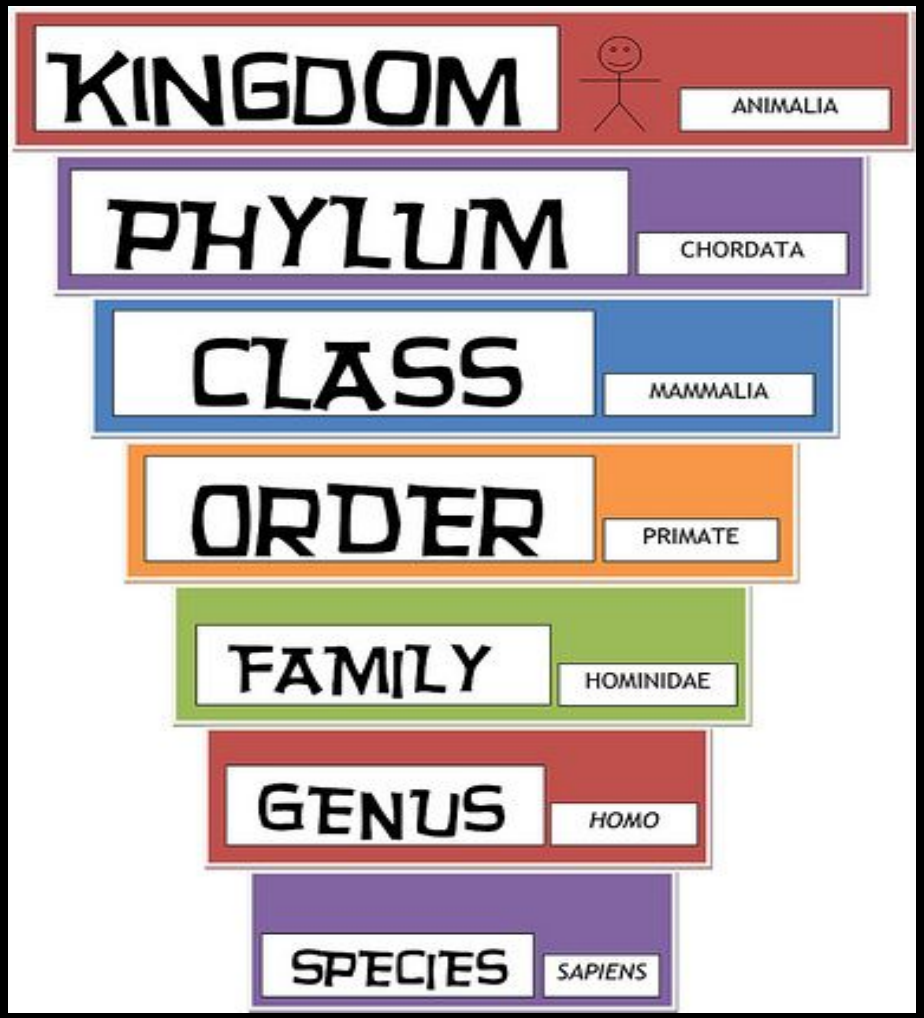
- Describe how living things are organized for study
- Explain binomial nomenclature

# Species of Organisms

There are over 13 billion known species of organisms living today.

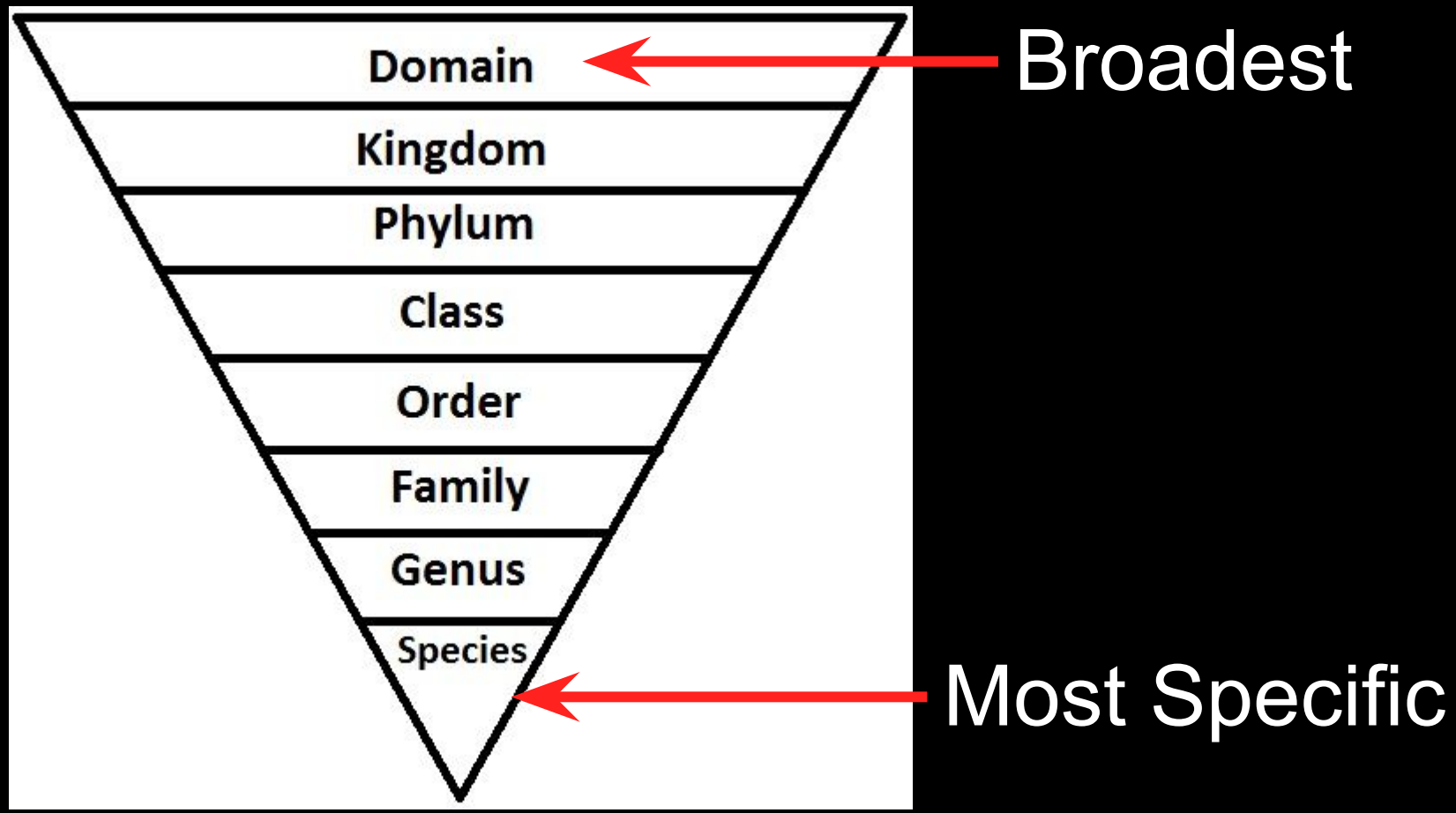
# Taxonomy

## aka Classification




Arrangement of organisms into orderly groups based on their similarities

# Classification Groups




Taxon - A category into which related organisms are placed

# Confusion in the Languages

# Latin Names


Latin names are understood by all taxonomists

# Binomial Nomenclature

Human: *Homo sapien*


Wolf: *Canus lupus*

A two word naming system:
*Genus* and *species*

# Standardized Naming

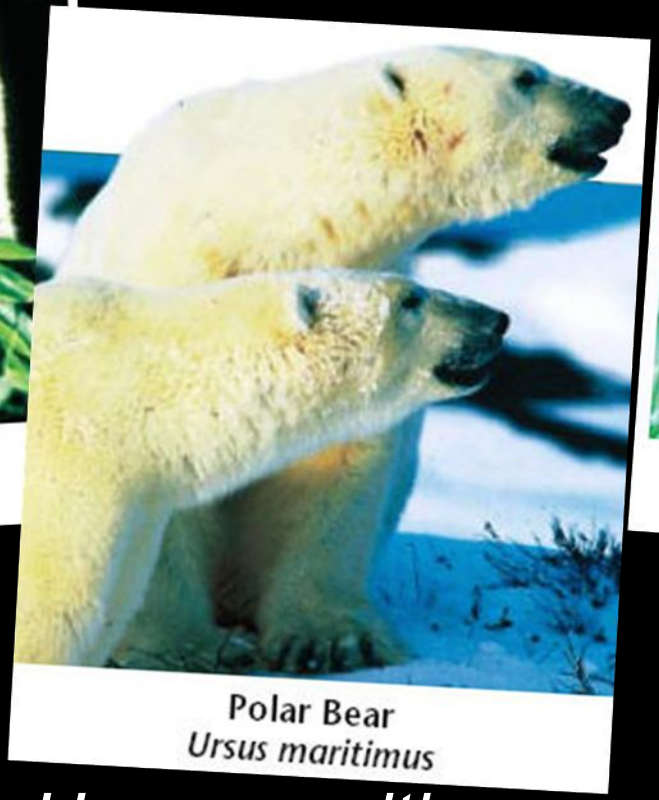
*Turdus migratorius*

- Capitalize *Genus* but not *species*
- Italicize both

American Robin

# Which two are more closely related?


*Alluropoda melanoleuca*




*Ursus maritimus*

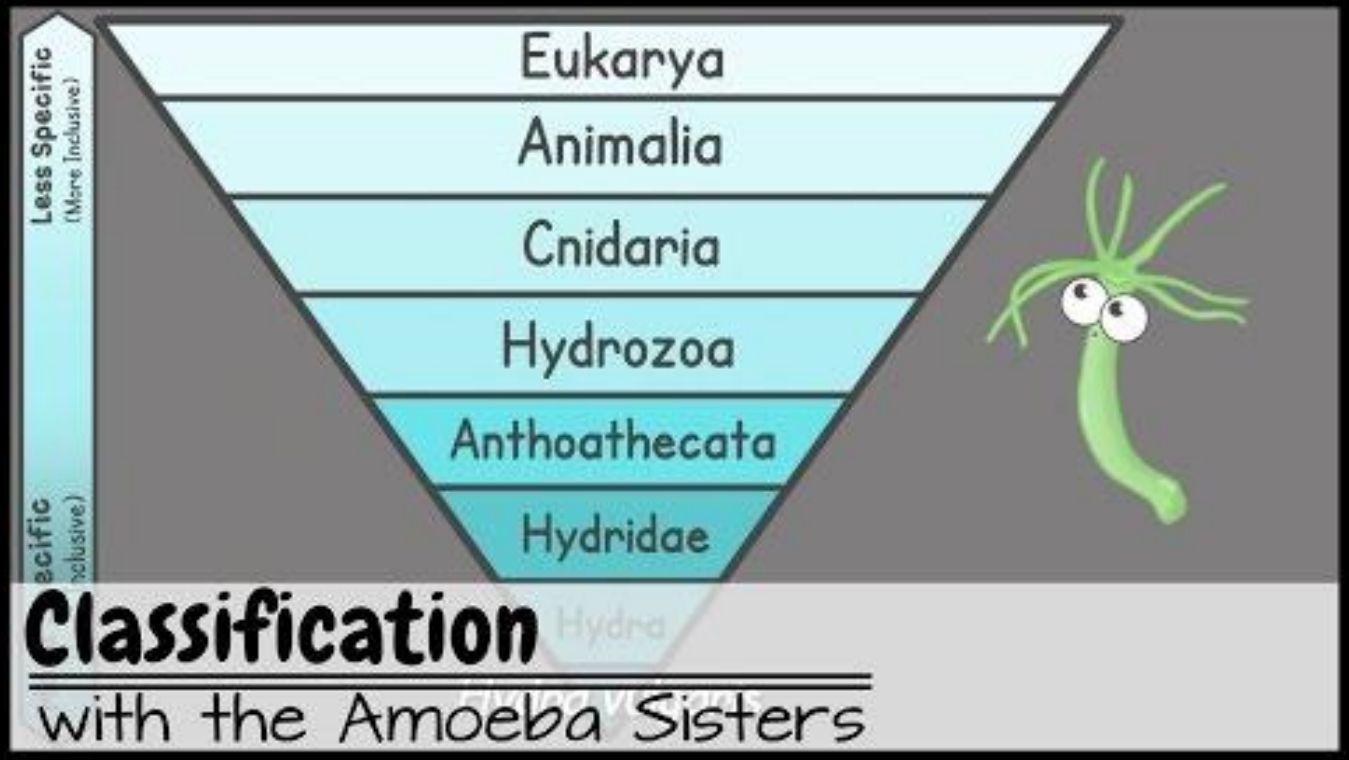

*Ursus arctos*

Polar bear and Grizzly bear

## Table 1.1 Classification of Humans

| Classification Category | Characteristics |
|---|---|
| Domain Eukarya | Cells with nuclei |
| Kingdom Animalia | Multicellular, motile, ingestion of food |
| Phylum Chordata | Dorsal supporting rod and nerve cord |
| Class Mammalia | Hair, mammary glands |
| Order Primates | Adapted to climb trees |
| Family Hominidae | Adapted to walk erect |
| Genus *Homo* | Large brain, tool use |
| Species *Homo sapiens** | Body proportions of modern humans |

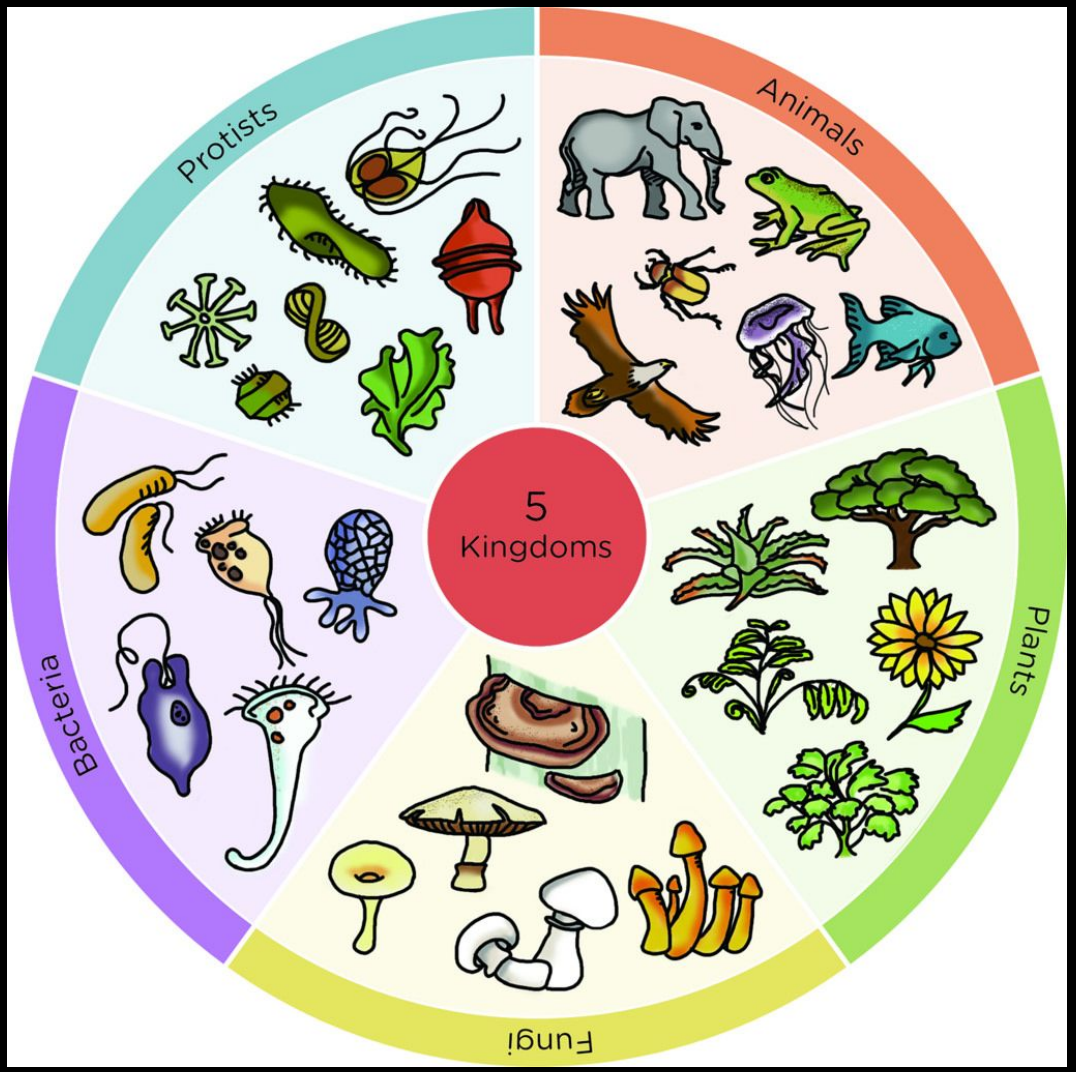
# Classification of LivingThings Amoeba Sisters



YouTube
Classification of
Living Things
Mark Drolinger

# Stop Here

# Kingdom




Kingdom – grouping organisms by kingdom helps scientists understand similarities and differences