

# ASA Presentation Notes Lesson 2.2 Scientific Classification

Unit Name: [Unit 2 History and Use of Animals](#)

Lesson Topic: [Lesson 2.2 Naming Animals](#)

Presentation on: [Scientific Classification and Taxonomy](#)

Notes from Presentation:

Scientific Classification of All Living Organisms.

- Taxonomy – the science concerned with the naming and classification of organisms.
  - Aristotle is credited with the first system of classifying living things.
  - Carolus Linnaeus is credited with developing the modern method of classification.

Taxonomy.

- Kingdom.
  - Phylum.
    - Class .
      - Order.
        - Family .
          - Genus.
            - Species.

Kingdom.

- Kingdom is the highest category in the Linnaean system of classification.
- Organisms are distinguished by cellular organization and methods of obtaining nutrition.
  - Are they single celled or multi-celled?
  - Do they absorb, ingest, or produce food?
- These distinctions define the five kingdoms of living things.

The Five Kingdoms.

- **Animalia** – multi-cellular, ingest food, movement.
- **Plantae** – multi-cellular, photosynthesize.
- **Fungi** – molds and yeasts.
- **Monera** – bacterial organisms.
- **Protista** – paramecia and amoebae.

The Animal Kingdom.

- Characteristics of animal organisms:
  - Multi-cellular.
  - Specialized tissues.
  - Ingest food.
  - Sexual reproduction.
  - Ability to move.

## Phylum.

- Phyla are based on similarities in basic body structure or organization.
- Examples of animal phyla:
  - Arthropoda.
  - Mollusca.
  - Chordata.
    - Subphylum - Vertebrates.
- Animals discussed in this course will be in the phylum **Chordata**, subphylum **Vertebrate** and have the following characteristics:
  - Backbone and endoskeleton.
  - Closed circulatory system with pumping heart.
  - Direct development of young.

## Class.

- Further categories of animals are based on:
  - Body covering.
  - Reproductive system.
  - Temperature regulation.
- Examples:

## Order and Family.

- Breaks classes into smaller groups with common characteristics.
- All families are named for a type of genus.
  - Ending “idae” for animals.
  - Ending “aceae” for plants.
  - Added to the stem of the genus name.

## Genus.

- Refers to a group of closely related species.
- Three criteria:
  - Descendants are grouped together.
  - Compact group.
  - Distinct features within group.

## Species.

- The basic unit of taxonomic rank.
- Refers to the largest natural population that can interbreed and produce fertile offspring.

## Binomial Nomenclature.

- System of naming organisms by their genus and species using Latin.
  - The genus is identified first and the first letter is capitalized.
  - The species is second with the first letter in lower-case.
  - Both words should be italicized.
- For example:

## Use of Taxonomy:

- Classification of the Wolf.

# ASA Reflection Page

List 5 key points that are important to remember from this presentation.

- 1.
- 2.
- 3.
- 4.
- 5.

List 3 ideas or concepts that this new information has in common with previous things learned.

- 1.
- 2.
- 3.

List questions or ideas that remain unclear about the information presented that should be asked for clarity at the appropriate time.