Ch. 17 Classification Notes

Classification

- Classification is the _____ of _____ into _____ based on their _____.
- Classification shows how organisms are _____.
- How organism are classified:
  1.
  2. Behavior
  3. Molecular structure (e.g., _____)
  4. _____ relationships
  - _____ is the most _____ to _____
  - Organisms that _____ are more _____ and are grouped together.

Taxonomy

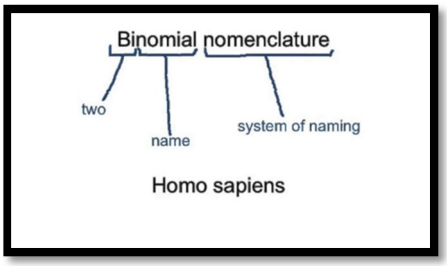
- Classification is also known as _____.
- Taxonomy is the branch of _____ that studies the _____ and _____ of organisms.

Carolus Linnaeus (1707-1778)

- Called the "_____"
- Classified organisms by their _____ and _____.
- Placed organisms into two Kingdoms: _____ & _____
- Developed _____
- (Two-word name: _____and _____)

Binomial Nomenclature

- The modern system of naming organisms



Classification Groups

- _____ levels of classification:
- _____ is a category into which _____organisms are placed.
- _____ -broadest, most _____

3 Domains

1. _____ 2. _____ 3. _____

6 Kingdoms of Life

1.
2.
3.
4.
5.
6

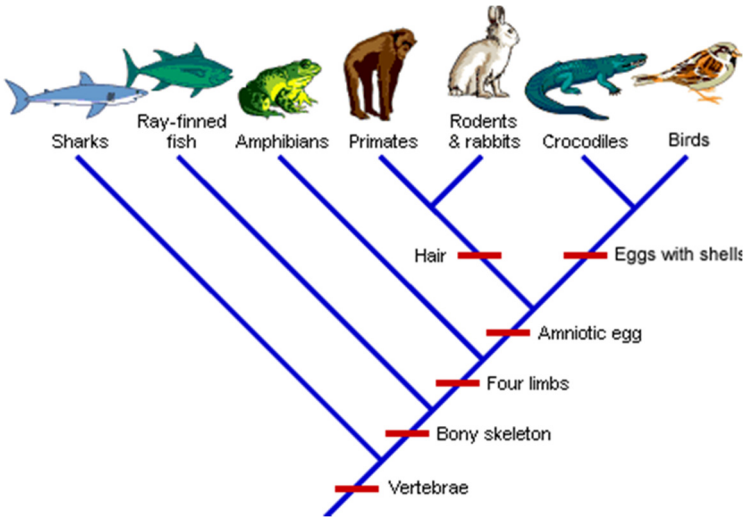
Levels	

Cladistic

- Classification based on _____.
  - _____ placed in order that they _____ from common ancestor
- _____ is the evolutionary history for a group of species.
  - shown with _____ tree diagrams
- A _____ is an evolutionary _____that proposes how species may be related to each other through common ancestors.
  - A _____is a group of _____ that shares a common ancestor.
- _____ are traits shared in different degrees by _____.
  - More _____ species share more _____characters
  - Represented on cladogram as _____marks
- _____ represent the most recent _____ of a clade.
- _____ evidence reveals species' _____.
  - _____ may confirm classification based on _____similarities.
  - Molecular data may lead scientists to propose a _____classification.
  - _____is usually given the last word by _____.

Label on the diagram

- Descendants
- Derived characteristic
- Clade
- Node



Create a cladogram using the derived characteristics and descendants below.

Derived Characteristics	Descendants
Motor	Car
Passengers enclosed	Motorcycle
Wheels	Walking
Wings	Airplane