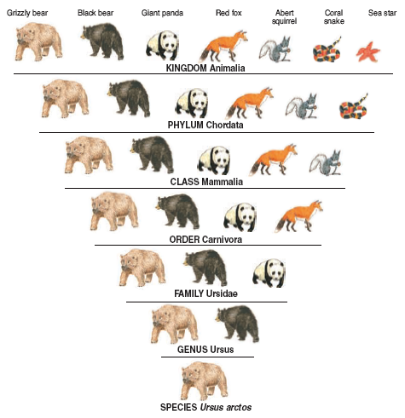
WEIGHT AND MASS

* **DEFINITIONS**
  + **Mass- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has.**
  + **Matter- something that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
  + **Weight- is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of an object, it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ upon \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
* **Units for Measuring Mass**
  + **Mass is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*.***
    - **1 paper clip= 1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ =1 kilogram**
    - **The average \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ adult weighs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Tools for Measuring Mass**
    - **The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the tool we use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mass.**
* **COMPARE AND CONTRAST**
  + **MASS vs. WEIGHT**
  + **Always remains \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Does \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on gravity weight=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ x gravity**
  + **weight of an object \_\_\_\_\_\_\_\_\_\_\_ if the gravity changes**

**Classification**

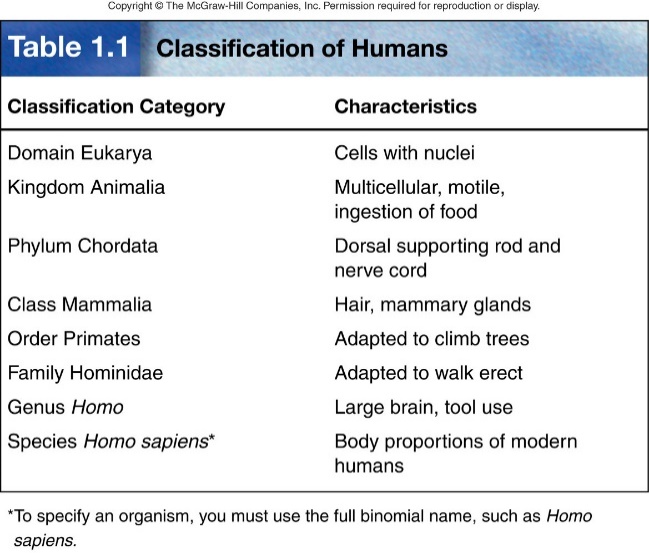
* **Species of Organisms**
  + **There are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ known species of organisms**
  + **This is only 5% of all organisms that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!!!!!**
  + **New organisms are still \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **What is Classification?**
  + **Classification is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of organisms into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_based on their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Classification is also known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Taxonomists are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that identify & name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Benefits of Classifying**
  + **Accurately & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ names organisms**
  + **Prevents \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ such as starfish & jellyfish that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fish**
  + **Uses same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Latin or some Greek) for all names** 
    - **Confusion in Using Different Languages for Names**
    - ****
    - **Latin Names are Understood by all**
    - ****
* **Early Taxonomists**
  + **2000 years ago, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ was the first \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **Aristotle \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organisms into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **He subdivided them by their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_---land, sea, or air dwellers**
  + **John Ray, a botanist, was the first to use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for naming**
    - **His names were very long \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ telling \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ about the plant**
* **Carolus Linnaeus 1707 – 1778**
  + **18th century \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Classified organisms by their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Developed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_still used today**
  + **Called the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of Taxonomy”**
  + **Developed the modern system of naming known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Two-word name (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)**
* **Standardized Naming**
  + **used**
  + ***Genus species***
  + **Latin or Greek**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in print**
  + **Capitalize \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but NOT \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when writing**
* **Rules for Naming Organisms**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Code for* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_contains the rules for naming organisms**
  + **All names must be approved by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Congresses (International Zoological Congress)**
  + **This prevents \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ names**
* **Classification Groups**
  + **Taxon (taxa-plural) is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organisms are placed**
  + **There is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of groups (taxa) from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to most \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Domain, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, Phylum, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, Order, Family, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*, species***
* **Hierarchy-Taxonomic Groups**
  + **Domain**
  + **Kingdom**
  + **Phylum (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – used for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)**
  + **Class**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Family**
  + **Genus**
  + **Species**
  + ****
  + **Dumb**
    - **King**
      * **Phillip**
        + **Came**

**Over**

**For**

**Gooseberry**

**Soup!**

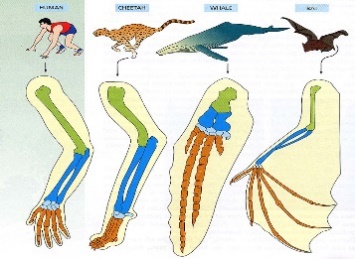
* ****
* **Domains**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, most inclusive taxon**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ domains**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ prokaryotes (no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or membrane-bound \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)**
    - **Archaea**
      * **ARCHAEBACTERIA**
        + **Probably the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to evolve**
        + **Live \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ environments**
        + **Found in:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Treatment Plants (Methanogens)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or Volcanic Vents (Thermophiles)**

**Hot Springs or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that are acid**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ water (Dead Sea; Great Salt Lake) - Halophiles**

* + - **Bacteria**
      * **EUBACTERIA**
        + **Some may cause \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
        + **Found in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ except \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ones**
        + **Important \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for environment**
        + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ important in making cottage \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, buttermilk, etc.**
  + **Eukarya are more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and membrane-bound \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **Domain Eukarya \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Kingdom**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (protozoans, algae…)**
    - **Most are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **Some are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **Some are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, while others are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (mushrooms, yeasts …)**
    - **Multicellular, except \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **Absorptive \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (digest food \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ their body & then absorb it)**
    - **Cell walls made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (multicellular plants)**
    - **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **Absorb \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to make \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
    - **Cell walls made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Animalia (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_animals)** 
    - **Multicellular**
    - **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ heterotrophs (consume \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_& digest it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_their bodies)**
    - **Feed on plants or animals**
* **Basis for Modern Taxonomy**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ structures (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)**
  + **Similar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ development**
  + **Molecular Similarity in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_sequence of Proteins**
  + ****