Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CLASSIFICATION NOTES Chapter 18** SOL.1adelm3b4c56ade

***How do we identify and name all living organisms?***

* We use a classification system which is a way to organize all organisms into specific groups

**Common Name vs Scientific Name**

 What is wrong with using common names to classify organisms? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Carolus Linnaeus**

* First to develop a \_\_\_\_\_\_ word naming system called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is assigned a \_\_\_\_ part scientific name
* The first word is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the organism
	+ It must be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The second word is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ name of the organism
	+ It must be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The entire scientific name is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Why does every organism have a scientific name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Examples: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Over time \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ wasn’t enough

* Scientists found that we must \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organisms into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ groups
* The goal of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (classification) is to organize living things into groups that have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ meaning
	+ These groups are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ This is a hierarchical classification system



**Taxonomic Categories**

= this is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and most \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of groups

= these are related groups of \_\_\_\_\_\_\_\_\_\_\_\_ that are different but share important \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= these are related \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= these are closely related \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= these consist of several related \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

= a groups of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that are closely related and share a common \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= the specific organism (group of organisms that are capable of producing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ offspring

****

**Dichotomous key:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Section 2 Modern Evolutionary Classification Page 490***

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** the evolutionary history of a species

The goal of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is to group species into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ categories that reflect lines of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ descent rather than overall \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and differences

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:**  this links groups of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by showing how evolutionary lines \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ off from common \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 What is a node? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 This demonstrates where derived characteristics began

 AKA: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



***Section 3 Building the Tree of Life***

Linnaeus started with only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ groups back in the 1700’s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

But over time different types of organisms were found and the classification system needed to be changed

**~The Modern Classification of all living organisms~**

|  |  |
| --- | --- |
| **DOMAINS** |  **Key Characteristics about each domain** |
| **DOMAIN BACTERIA** | Kingdom Bacteria |
| **DOMAIN ARCHEA** | Kingdom Archaea |
| **DOMAIN EUKARYA** | Kingdom Protists, Kingdom Fungi, Kingdom Plantae, Kingdom Animalia |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Cell Type** | **Number of Cells** | **Cell walls** | **Nutrition** | **Mobility** | **2 Specific Examples** |
| **KINGDOM****BACTERIA** |  |  |  |  |  |  |
| **KINGDOM****ARCHAEA** |  |  |  |  |  |  |
| **KINGDOM****PROTISTIA** |  |  |  |  |  |  |
| **KINGDOM****FUNGI** |  |  |  |  |  |  |
| **KINGDOM****PLANTAE** |  |  |  |  |  |  |
| **KINGDOM****ANIMALIA** |  |  |  |  |  |  |

**Viruses:** a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_surrounded by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and is considered to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and not part of the biological classification system