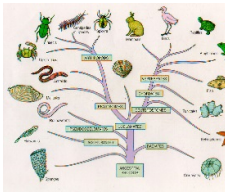
Taxonomy – Unit Need to Knows – NTKs

Domains and Kingdoms

I can explain the differences between prokaryotes and eukaryotes.
I can compare and contrast the locomotion, cell types, metabolism, response to the environment, and reproduction of all the kingdoms.



Classification
I can explain binomial nomenclature and the hierarchy of classification (DKPCOFGS)
I can use a dichotomous key to identify flora and fauna in Virginia.
I can interrupt cladograms and phylogenetic trees.
I can identify the IV, DV, Control and Constants in an experiment.

Quizlet #3 – Domains and Kingdoms	
Taxonomy	The branch of biology that classifies organisms into groups and names each organism
Domain	The largest taxonomic ranking -- larger than a kingdom (Bacteria, Eukarya, and Archaea)
Kingdom	The largest taxa group; there are six kingdoms Archaebacteria, Eubacteria, Protista, Fungi, Plant, and Animal)
Archaebacteria	A kingdom of prokaryotes, ancient bacteria; live in harsh environments
Eubacteria	A kingdom that contains all prokaryotes; true bacteria
Protista	A kingdom composed of eukaryotes that are uni- or multicellular, eukaryotes (have nucleus), live in pond water, can move, some are photosynthetic
Fungi	Kingdom composed of heterotrophs; multicellular, eukaryotes (have nucleus), that can not move
Plantae	Kingdom of multicellular photosynthetic autotrophs that have cell walls containing multicellular eukaryotes, that can not move
Animal	A kingdom made up of complex, multicellular organisms that lack cell walls, can usually move
Prokaryotes	Cells that have NO nucleus or organelles, have ribosomes
Eukaryotes	Have a nucleus, membrane-bound organelles, and ribosomes
Multicellular	Made of more than one cell
Unicellular	Made of one cell
Heterotroph	Organisms that consume their food

Quizlet #4 – Classification	
Classify/classification	The grouping of objects or information based on similarities
Dichotomous key	Tool used to identify organisms. At each step, it splits characteristics into two categories: "has" or "does not have"
Kingdom	The largest taxa group; there are six kingdoms Archaebacteria, Eubacteria, Protista, Fungi, Plant, and Animal)
Phylum	A group of closely related classes
Class	A group of closely related orders
Order	A group of closely related families
Family	A group of closely related genera (plural for genus)
Genus	A group of closely related species. The first part of a scientific name. Always capitalized.
Species	A group of similar organisms that can interbreed and have fertile offspring. The second part of a scientific name. Always lower case.
Binomial Nomenclature	Two name scientific naming system, uses Latin, developed by Carolus Linneaus. Where the first name is the genus and the second name is the species of organism.
Bilateral Symmetry	When split in half, each side is the same as the opposite half
Taxa	Groupings based on physical characteristics. Kingdom (Broad) → Phylum → Class → Order → Family → Genus → Species (narrow)
Aristotle	Greek philosopher, developed first system of classification, only had two kingdoms (plant and animal)
Linnaeus	Swedish botanist; develop current system of classification; based groups on physical characteristics called Taxa, added additional kingdoms (Bacteria, Protist, Fungi)
Phylogeny	Evolutionary relationships between organisms - shown in a diagram known as a cladogram
Embryology Development	Developmental stages in embryo development of organisms
Biochemistry	Comparison of the chemical analysis of DNA of organisms
Behavioral patterns	Comparison of behaviors between organisms (ex. mating calls)