KEY CONCEPTS AND GENERAL CONCEPTS FOR CLASSIFICATION

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| **1.** | **The classification system in use by the biological sciences today to classify all living things. It was invented by and subsequently named after an 18th century Swedish botanist. With this system, organisms are classified according to the greater or lesser extent of their similarities to other organisms.** | Linnaean classification system |
| **2.** | **The process of naming, describing, and classifying organisms into different categories on the basis of evolutionary relationships. The biological sciences primarily use the Linnaean classification system for this purpose.** | taxonomy |
| **3.** | **The term for the two Latin name categories (genus and species) used in the Linnaean classification system to designate each type of organism.  The term you are looking for literally means "two names" in Latin.** | binomial nomenclature |
| 4. | **The largest natural population** of organisms that can potentially interbreed to produce fertile offspring. | species |
| 5. | **A group of closely related species.  In the Linnaean classification system, this is the category immediately above species.** | Genus (plural genera) |
| 6. | The genus and species of all living humans. | *Homo sapiens* |
| 7. | **The biological order that includes all species of monkeys, apes, and humans. The word was derived from a Latin word meaning “first.”** | Primates |
| 8 | **Organisms are classified based upon similarities in homologous structures, embryo development and DNA** | Basis for modern classification |
| 9 | **Anatomical structures in different species that are similar due to descent from a common ancestor that had them. An example would be the same functional types of bones in the front leg of a bear and your arm as well as in the front leg of our common reptilian ancestor.** | Homologous structures |
| 10 | **The highest category or level in the Linnaean system of classification.** | Domain |
| 11 | **The category or level in the Linnaean classification system in which organisms are primarily distinguished on the basis of overall basic body plan or organization (e.g., soft, unsegmented bodies in contrast to external skeletons along with jointed bodies and limbs).** | phylum (plural phyla) |
| 12 | **The category or level in the Linnaean system of classification in which organisms are primarily distinguished on the basis of cellular organization and methods of nutrition.  Whether they are single or multiple-celled and whether they absorb, ingest, or produce food are also critical factors.** | kingdom |
| 13 | The kingdom that includes organisms that **do not produce their own food but must eat other organisms to obtain it.  They have nerves and muscles that aid in controlled movement around their environment.** | *Animalia* (animals) |
| 14 | **The kingdom that includes organisms that produce new cell matter out of inorganic material by photosynthesis.   They do not have the ability to move around their environment except by growing or being transported by wind, water, or other external forces.** | Plantae(plants) |
| 15 | **The phylum of animals that have a spinal and nervous cord.** | *Chordata* (chordates) |
| 16 | The phylum of animals that is characterized by **external skeletons as well as jointed bodies and limbs.  Insects, spiders, centipedes, lobsters, and crabs are members of this phylum.** | *Arthropoda* (arthropods) |
| 17 | The phylum of animals that is characterized by **soft, unsegmented bodies that are usually, but not always, enclosed in hard shells.  They also usually have at least one strong foot that helps them move.  Octopi, squids, snails, slugs, clams, and other shellfish are members of this phylum.** | *Mollusca* (mollusks) |
| 18 | **The subphylum of chordates in which the spinal chord is protected by a segmented vertebral column of cartilage and/or bone.** | Vertebrata (vertebrates) |