

CLASSIFICATION SYSTEM

Name _____ Hour _____

Introduction

What makes a worm a worm? Why isn't a ringworm a worm? Is a sponge an animal? All of these questions can be answered through taxonomy, the science of naming and classifying organisms. Taxonomy arranges organisms into groups based on similarities. The most inclusive level in the taxonomic hierarchy is a kingdom which can be subdivided into phyla. The phyla can in turn be separated into smaller groups called classes. A class can be subdivided into families and a family into genera. A genus can be split into smaller groups called species.

Purpose

In this webquest, you will explore the classification system currently used to sort and categorize living organisms. You will focus on the kingdom Animalia and its diverse set of members as you explore the various levels at which organisms can be classified. You will be assigned a specific organism to investigate as you explore the classification system.

Procedure

- I. Visit the following website and answer questions 1 -4.
http://anthro.palomar.edu/animal/animal_1.htm
 1. Why are classification systems useful?
 2. What is *Systema Naturae*? Who wrote it and when?
 3. What is binomial nomenclature and what two categories are used in a binomen?
 4. What is your binomen or scientific name?

- II. Research the following site to determine characteristics of the five kingdoms and complete the table on the next page. **Be very specific!** <http://www.microscopy-uk.org.uk/mag/indexmag.html?http://www.microscopy-uk.org.uk/mag/artmay98/classif.html>

Since the web address is extremely long, you may go to Mrs. Mullins web page by using this address www.unit5.org/mullinsk and then click on the biology tab. You will find a link to this "classification webquest." The document that appears should have working links in it.

Kingdom	Characteristics

5. The five kingdom model of classification is not universally accepted. Discuss 2 other ways that scientists believe kingdoms should be divided.

III. Use the search engine Google to classify a **rhesus monkey**. You need to classify the rhesus monkey starting with the Kingdom and ending with the species.

Kingdom	
Phylum	
Class	
Order	
Family	
Genus	
Species	

6. What is the scientific name of the rhesus monkey?

IV. Use the search engine Google to complete the following chart.

Common Name	Sketch of Organism	Phylum Name	Phylum Traits	Habitat Information	Two Other Phyla Members
Sponge					
Jellyfish					
Tapeworm					
Roundworm					
Leech					
Slug					
Beetle					
Starfish					
Mouse					

Conclusion Questions

1. To which kingdom would an organism belong if it is
 - a. Prokaryotic, unicellular, and has a cell wall?
 - b. Photosynthetic, aquatic, unicellular?
 - c. Photosynthetic, multicellular, and terrestrial?
 - d. Heterotrophic, multicellular, and ingestive?
2. Based on the binomial classification system, the mosquito, *Anopheles punctulatus*, is most closely related in structure to
 - a. *Culex pipiens*
 - b. *Anopheles quadrimaculatus*
 - c. *Aedes aegypti*
 - d. *Aedes sollicitans*
3. Jellyfish, earthworms, grasshoppers, and humans are all classified in the same
 - a. Kingdom
 - b. Phylum
 - c. Class
 - d. Species
4. Which of the classification groups would contain the most similar members? Explain your answer.
5. How are all of the organisms observed in part IV of this activity similar?
6. What similarities are found among segmented worms, like the leech, and flatworms, such as the tapeworm? What differences are found among these two groups?