

## TOPIC: INTRODUCTION TO PHYLOGENY

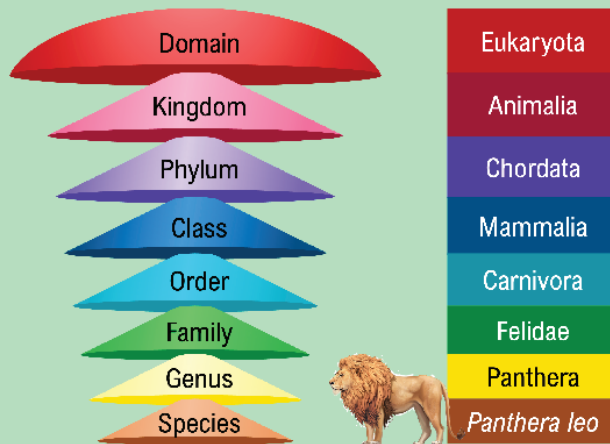
### Systematics

- ◆ **Systematics:** scientific field that groups and \_\_\_\_\_ organisms.
- ◆ **Taxonomy:** the systematic \_\_\_\_\_ of organisms.
  - Taxon (plural taxa): \_\_\_\_\_ at any taxonomic level.

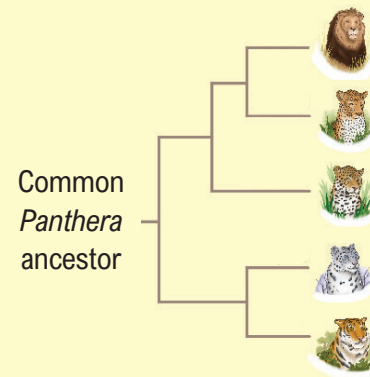


Dear King Phillip Came Over For Good Soup

- ◆ **Linnean Hierarchy:** \_\_\_\_\_ classification system developed by Carolus Linnaeus.



- ◆ **Phylogenetics:** study of \_\_\_\_\_ relationships.



- ◆ Taxonomy should \_\_\_\_\_ phylogeny.

### PRACTICE

Which of the following are paired correctly?

- a) Taxonomy: study of evolutionary relationships.
- b) Taxonomy: the naming and classification of organisms.
- c) Phylogeny: the process of classifying organisms into species.
- d) Phylogeny: the process of naming organisms.

### PRACTICE

Which statement below is correct?

- a) Members of the same genus are more likely to be closely related than members of the same order.
- b) A class is made up of many phyla.
- c) An order contains more types of organisms than a class.
- d) Members of the same family are, by definition, also members of the same genus.

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### Binomial Nomenclature

◆ **Binomial Nomenclature:** \_\_\_\_ word naming system used in Linnean taxonomy.

- Uses \_\_\_\_ names (or \_\_\_\_ sounding).
- **1st word:** \_\_\_\_ name (capitalized).
- **2nd word:** \_\_\_\_ name (lower case).
- Always written in \_\_\_\_.

**Genus**

**species**

\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_



### EXAMPLE

Three species names are given below using binomial nomenclature. Identify any errors in how these names were written.



*Pan Paniscus*



Amphiprion ocellaris



*ochotona princeps*

### PRACTICE

Henry writes the scientific name for the pigeon as *columba livia*. What would he have to do to format this name correctly according to the standards of binomial nomenclature?

- Capitalize the species and italicize the genus.
- Capitalize the genus and italicize the species.
- Capitalize the genus and italicize both the genus and species.
- Capitalize both the genus and species.