

## SBI 3UI Review for Taxonomy

| Organism A | Organism B | Organism C       | Organism D     |
|------------|------------|------------------|----------------|
| Animalia   | Animalia   | Animalia         | Animalia       |
| Chordata   | Chordata   | Chordata         | Chordata       |
| Mammalia   | Mammalia   | Mammalia         | Chondrichthyes |
| Carnivora  | Carnivora  | Chiroptera       | Lamniformes    |
| Canidae    | Mustelidae | Vespertilionidae | Lamnidae       |
| Canis      | Mephitis   | Myotis           | Carcharodon    |
| latrans    | odiferans  | lucifugus        | carcharia      |

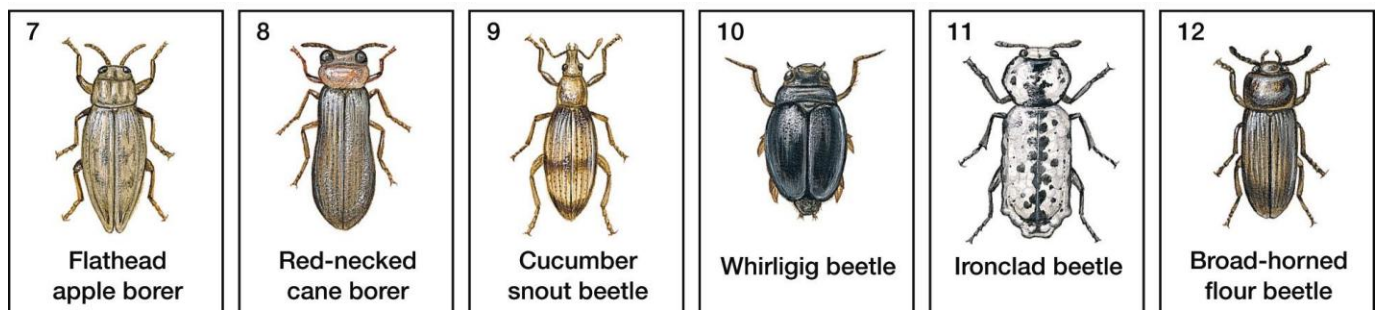
1. Referring to the taxonomic information in the table above:
  - a) To which **order** does Organism C belong? \_\_\_\_\_
  - b) To which **family** does Organism B belong? \_\_\_\_\_
  - c) Which organism is the most different from the other three? \_\_\_\_\_
  - d) Which two organisms are the most closely related? \_\_\_\_\_  
How do you know this?

- e) Using correct form, write the scientific name for Organism A:
- f) What is the name of the man who first came up with the binomial naming system?

2. Indicate whether each of the following characteristics best describes a Prokaryote (P) or Eukaryote (E):

| Characteristic  | P or E? |
|---|---------|
| Their cells lack a true nucleus.  |         |
| These organisms are always aerobic.                                     |         |
| The genome of these organisms is made up of several linear chromosomes. |         |
| These cells include either Bacteria and Archaea                         |         |
| These cells are primitive, small and simple.                            |         |
| These cells commonly reproduce sexually.                                |         |
| The DNA in these cells is concentrated to form a nucleoid region.       |         |
| These cells contain ribosomes, mitochondria and other organelles        |         |

3. Referring to the beetles in the picture below, suggest three different criteria that could be used as questions in a dichotomous key.



4. What are the three types of symmetry displayed in the animal kingdom?

5. What four kingdoms belong to Domain Eukarya?

6. In the space provided, indicate which Kingdom is being described. Kingdoms are used more than once.

| Description  | Kingdom |
|--|---------|
| This is the most diverse kingdom and will likely be sub-divided in the future.                           |         |
| This kingdom includes organisms that can survive extreme conditions.                                     |         |
| The organisms in this kingdom are classified by the amount of peptidoglycan in their cell wall.          |         |
| The organisms in this kingdom all require a moist/watery environment.                                    |         |
| The organisms in this kingdom are eukaryotic, heterotrophic and absorb nutrients from their environment. |         |
| The organisms in this kingdom are all photoautotrophic.  |         |
| All of the organisms in this kingdom are consumers in food chains.                                       |         |
| The organisms in this kingdom produce many useful products including antibiotics.                        |         |
| The organisms in this kingdom are all are non-motile, multicellular eukaryotes.                          |         |
| Some of these prokaryotes are pathogenic.  |         |
| These plant-like organisms are important producers in aquatic ecosystems.                                |         |
| Some members of this kingdom include the slime and water moulds.   |         |
| Some members of this kingdom are halophiles or psychrophiles.  |         |
| All members of this kingdom are multicellular, eukaryotic & motile at some point in life.                |         |
| This kingdom is organized by the presence or absence of vascular tissues.                                |         |
| Many of these single-celled eukaryotes carry out intra-cellular digestion.                               |         |
| Some species of this kingdom live in the digestive tracts of animals and produce vitamins.               |         |
| These prokaryotic heterotrophs are important decomposers in ecosystems.                                  |         |
| These eukaryotic heterotrophs are important decomposers in ecosystems.                                   |         |
| The organisms in this kingdom almost all reproduce using spores.   |         |

7. Review the parts of the earthworm from our dissection. Be able to:

- label a diagram of the worm
- describe the function of significant body parts (structures)

