**SBI 3U: CLASSIFYING LIFE’S(TAXONOMY) DIVERSITY WORKSHEET**

**MULTIPLE CHOICE:**

1. what is the correct format for the species name for humans?
	1. homo sapiens
	2. *homo sapiens*
	3. *Homo Sapiens*
	4. *Homo sapiens*
2. What is the broadest category in the hierarchical classification system?
	1. Kingdom
	2. Phylum
	3. Order
	4. Class
3. How many kingdoms are used in the current system for classifying organisms?
	1. four
	2. five
	3. six
	4. seven
4. Eukaryotic cells:
	1. have a membrane-bound nucleus
	2. lack a membrane-bound nucleus
	3. lack genetic material
	4. have very few organelles
5. Which two kingdoms includes only heterotrophs?
	1. Archae
	2. Protista
	3. Animalia
	4. Fungi
6. In the scientific name of an organism, the first part is the:
	1. species identifier
	2. phyla
	3. genus
	4. subspecies

**SHORT ANSWER:**

1. Place these ranks in order from the rank that includes the MOST species to the one that includes the LEAST species:

Class, Order, Kingdom, Species, Family, Genus, Phylum

2. This table shows the classification of the Canada goose.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Rank | Kingdom | Phylum | Class | Order | Family | Genus | Species |
| Taxon | Animalia | Chordata | Aves | Anseriformes | Anatidae | *Branta* | *canadensis* |

a). What is the scientific name for the Canada goose?

b). Which organism is more closely related to the Canada goose: *Branta sandvicensis* (Hawaiian goose) or *Chen caerulescens* (snow goose)? How do you know?

Use the following table to answer questions 3-6:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Kingdom | Animalia | Animalia | Animalia | Animalia |
| Phylum | Chordata | Chordata | Chordata | Chordata |
| Class | Mammalia | Mammalia | Mammalia | Mammalia |
| Order | Cetacea | Carnivora | Carnivora | Carnivora |
| Family | Mysticeti | Mustelidae | Felidae | Felidae |
| Genus | Balaenoptora | Mustela | Felis | Felis |
| Species | *B*. *physalus* | *M. furo* | *F. domesticus* | *F. rufus* |
| Common Name | Blue Whale | Ferret | Domestic cat | Bobcat |

3. How does the table indicate that a cat is more closely related to a bobcat than a ferret?

4. At what level does the relationship between a blue whale and a ferret separate?

5. Which two animals are most closely related? Explain.

6. What kind of animal is *Balaenoptora borealis*? How do you know?

**RESEARCH QUESTIONS - USE THE INTERNET TO HELP YOU WITH THESE ONES**

7. What problems do you think biologists will/have encountered using the Linnaeus naming system? (\*\*\*hint: how is the giant panda classified?)

8. Define phylogeny.

9. In your opinion, which is a better way to classify species; based on morphology or based on phylogeny?