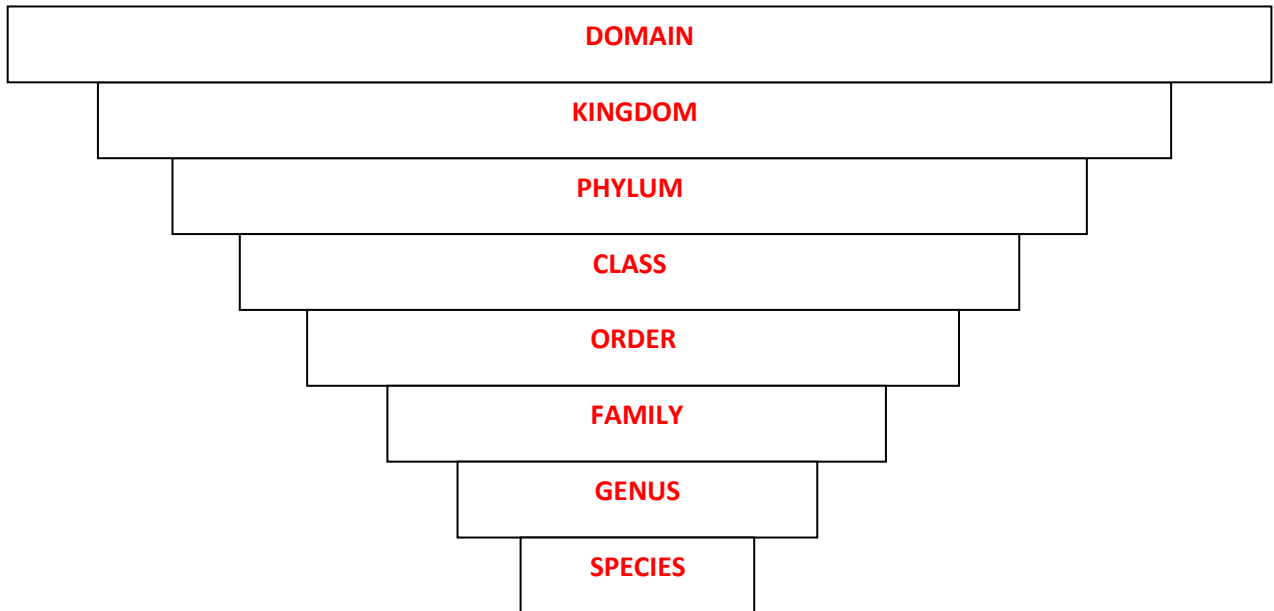


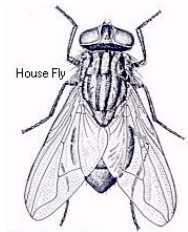
Unit 12 Classification Review Answers (8A,8B,8C)

1. Fill in the correct levels of classification in order from the largest to the smallest in the pyramid below.

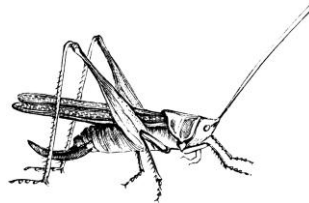


2. What two levels of classification make up the scientific name? ***Genus species***
3. What is the scientific name for humans? ***Homo sapiens***
4. What Kingdom do humans belong to? ***Animalia***
5. What language is the scientific name written in? ***Latin***
6. Why do scientists use an organized classification system? ***So scientists around the world, despite language & cultural barriers, will be able to communicate precisely about the species they are studying.***
7. Circle the genus name of the animal listed: ***Canis familiaris***
8. Circle the species name of the animal listed below: ***Vulpes vulpes***
9. Who is known as the father of taxonomy? ***Carolus Linnaeus***
10. Define taxonomy. ***the scientific system of naming and classifying organisms***
11. How are plants and fungi similar? How are they different? ***Both are eukaryotic, have cell walls, most are multicellular, & reproduce either asexually or sexually. Plants have cell walls made of cellulose & are autotrophs while fungi have cell walls made of chitin & are heterotrophs.***
12. Circle the two organisms that are most closely related.
- a. ***Ursus maritimus***, *Ailuropoda melanoleuca*, ***Ursus arctos***
- b. ***Bufo quercicus***, ***Bufo terrestris***, *Acris crepitans*
- c. ***Sternotherus minor minor***, *Kinosternon baurii*, ***Sternotherus odoratus***

13. Use the following dichotomous key to identify the order of the insects pictured below:



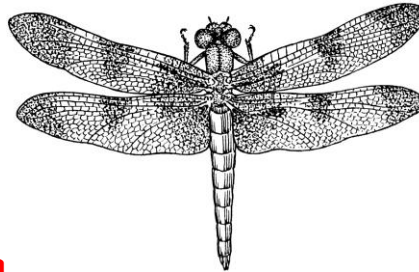
Order **Diptera**



Order **Orthoptera**



Order **Coleoptera**



Order **Odonata**

- 1a. wings covered by an exoskeletongo to step 2
- 1b. wings not covered by an exoskeletongo to step 3
- 2a. body has a round shape**Order Coleoptera**
- 2b. body has an elongated shape**Order Orthoptera**
- 3a. wings point out from the side of the body**Order Odonata**
- 3b. wings point to the posterior of the body**Order Diptera**

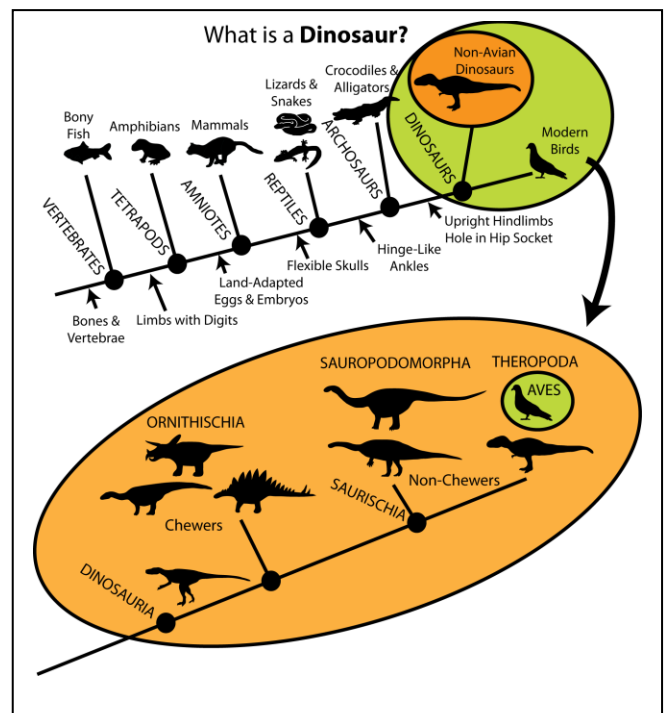
14. What kingdom do the following organisms belong to?

A=Animalia, F = Fungi, P= Plantae, B = Eubacteria, R = Protista, AB = Archaeabacteria

- | | |
|------------------------|---|
| F athletes foot | A human |
| A coyote | F toadstool |
| P grass | AB thermophiles (live in extreme hot conditions) |
| B cyanobacteria | R amoeba |
| F mushroom | P mountain laurel tree |

15. Use the cladogram to the right to answer the following questions.

- a. What dinosaurs are non-chewers?
Sauropodomorpha
- b. What dinosaurs are chewers? **Ornithischia**
- c. What animals do not have limbs with digits?
bony fish
- d. What animals have upright hindlimbs and hole in hip sockets? **Dinosaurs & modern birds**
- e. What animals have bones and vertebrae?
every animal listed on the cladogram



16. DEFINE Which of the following is the best description of taxonomy?
- Taxonomy is the study of grouping organism based on traditional naming systems.
 - Taxonomy is the study of giving organisms a two-word name in Latin.
 - Taxonomy is the study of classifying and naming organisms based on shared characteristics.
 - Taxonomy is the study of classifying organisms based on similar structures and DNA sequences.
17. IDENTIFY Why do scientists use binomial nomenclature to name species?
- Binomials are specific and universally understood by scientists.
 - A single binomial can be used for many species, making it easier to name different animals.
 - Binomials tell scientists how a species looks, relative to others in the same genus.
 - A binomial is easier to remember than a long name with multiple Latin words.
18. INFER Class Mammalia includes mammals, which are animals that have hair or fur and that make milk for their young. Many mammals, called placental mammals, complete their development within their mother. Marsupials, which include kangaroos and koalas, are mammals that complete their development in their mother's pouch. In which group are marsupials classified?
- a class other than class Mammalia
 - an order of class Mammalia
 - a kingdom that does not include class Mammalia
 - a phylum that does not include class Mammalia
19. INFER In a cladogram, what does the appearance of a derived character tell you?
- It tells you the name of the ancestral groups.
 - It tell you which traits were exhibited in the ancestral group but are not seen in more modern groups.
 - It tells you in which groups a new trait arose.
 - It tells you the species of an organism.
20. IDENTIFY What is a dichotomous key used for?
- A dichotomous key can be used to find the ancestral form of a species.
 - A dichotomous key can be used to find the classification and species of an organism.
 - A dichotomous key can be used to show the evolutionary relatedness of different species.
 - A dichotomous key can be used to make a cladogram.
21. COMPARE & CONTRAST What characteristic applies to all members of the kingdoms Protista, Fungi, Plantae, and Animalia but not to members of the other kingdoms?
- Protista, Fungi, Plantae, and Animalia are heterotrophs.
 - Protista, Fungi, Plantae, and Animalia are multicellular.
 - Protista, Fungi, Plantae, and Animalia are prokaryotes.
 - Protista, Fungi, Plantae, and Animalia are eukaryotes.
22. CONTRAST What is one way in which archaea are different from bacteria?
- Archaea lack peptidoglycan in their cell wall.
 - Archaea do not have a nucleus.
 - Archaea are eukaryotes.
 - Archaea are heterotrophs.

23. CLASSIFY You have a unicellular heterotrophic eukaryote under your microscope. To which kingdom does it belong?
- a. Eubacteria
 - b. Protista
 - c. Archaeobacteria
 - d. Animalia
24. IDENTIFY Which of the following lists includes all the kingdoms with autotrophic organisms?
- a. Bacteria, Archaeobacteria, Plantae
 - b. Plantae
 - c. Bacteria, Archaeobacteria, Fungi, Plantae
 - d. Bacteria, Archaeobacteria, Protista, Plantae
25. DISTINGUISH What are two characteristics by which you can distinguish fungi from plants? **Unlike plants, which are autotrophs, fungi are heterotrophs that obtain their nutrients by decomposing other organisms. In addition, the cell walls of fungi contain chitin, whereas cell walls of plants contain cellulose.**