

Unit 1: Intro to Biology and Classification

Dragonfly Textbook Ch. 1, and 18

Openstax Textbook Chapter 1.1 & 20.1

Quiz Dates: _____

Test Date: _____

A: Characteristics of Living Things

Watch the MooMooMath video titled, *Characteristics of living things-what makes something alive.*

<https://www.youtube.com/watch?v=30qOijVBS7o>

1. Use the video and your own knowledge to define the following terms in your own words: Organism, Cell, DNA, Energy, Reproduction, Growth, Development, Adaptation, Homeostasis
2. List the characteristics of living things according to the video. Give an example of **how a pine tree** fulfills each characteristic of life.
3. What is the study of Biology all about?

B: Classification and Nomenclature

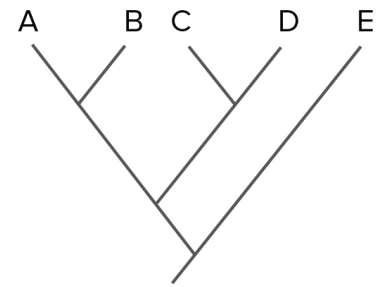
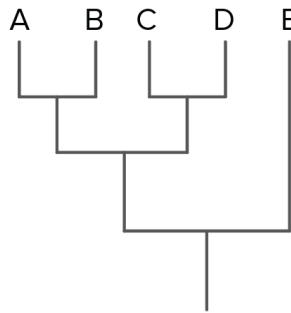
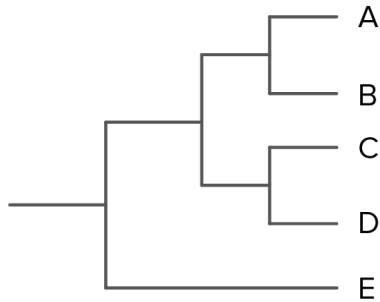
1. Define Classification and Taxonomy.
2. List the levels of classification and make your own mnemonic device to help you remember these steps in order.
3. Answer the following questions using your knowledge of naming and classification as well as this webpage http://www.butterflyboutique.net/articles/articles_scientific-names.html :
 - a. What is the scientific name of the Monarch Butterfly?
 - b. What level(s) of classification does the Monarch Butterfly have in common with humans?
 - c. Name one other insect in the same order as the Monarch Butterfly.
 - d. What domain would the Monarch Butterfly be classified under?

C: The 6 Kingdoms

1. Fill out the table below:

Domain	Kingdom	Characteristics	Example
	Archaeobacteria		
	Eubacteria		
	Protista		
	Fungi		
	Plantae		
	Animalia		

2. Use the information from the table to create a tree diagram for the 6 kingdoms (use these examples to help you)



3.

According to YOUR tree:

- a. Which 2 groups of organisms are most similar? How do you know?
 - b. Which 2 groups of organisms are least similar? How do you know?
4. Watch the Amoeba Sisters Classification video at: <https://www.youtube.com/watch?v=wpKulkADzBk>. Using the tree you created for #2 and what you learn in the video, create a dichotomous key for the 6 kingdoms.

D: Biology as a Science

1. Watch the Scientific Method Song at https://www.youtube.com/watch?v=KIFz_-KzURY

You could also use the Scientific Method powerpoint on our class website 😊

Use this information and previous knowledge to answer the following:

- a. What are the steps of the scientific method?
 - b. What is a control and how do you set one up?
 - c. What do you do if you conclude that your hypothesis is invalid?
2. Distinguish between qualitative and quantitative data.
3. Distinguish between dependent and independent variables.
4. Put it all together-Describe a controlled experiment that you could do to determine if a new plant fertilizer helps plants to grow better.
- a. What is/are your independent variable(s)?
 - b. What is/are your dependent variable(s)?
 - c. What quantitative data would you collect? How?
 - d. What qualitative data would you collect? How?