

Biology 11 Course Outline

Panorama Ridge Secondary 2016/17

Mrs. Enders Room B204

Name _____

Date _____

Block _____

Welcome to Mrs. Enders' Biology 11 class. The purpose of this course is to build an awareness of the diversity of life in the world around us, and be able to classify and analyze different lifeforms and compare them to each other. Biology is the study of life. It is the study of how living things work, how they are made, how they came to be and how they interact with other individuals, other species and their environment. By studying how organisms are similar and how they are different, it is possible to form hypothesis about their relationship to other organisms (including humans), and thereby gain an understanding of our own possible origins.

Course Overview

Science Skills/Processes of Sciencec (Approx 1 week and ongoing through the course)



- **Lab Safety**
 - Correct use of microscopes and slides
- **Scientific Method/Science Skills**
 - Experiment design and procedures – creating and testing a hypothesis
 - Collecting, organizing, analyzing, interpreting, and presenting data
 - Drawing conclusions from data



Taxonomy (Approx 1 week)

➤ Classifying Organisms



- Dichotomous Key
- Naming selected organisms with binomial nomenclature

- Compare/contrast different Kingdoms

➤ Compare Prokaryotic Vs Eukaryotic cells

Evolution – Chapters 7, 13/14 (Approx 1 week)

- The basic structure of DNA and it's role in evolution
- The five agents of evolutionary change
 - Mutation, genetic drift, gene flow, non-random mating, natural selection

- Convergent/Divergent evolution and speciation
- Gradual change model vs Punctuated Equilibrium model



(or is it?)

Microbiology – Chapters 17/18 (Approx 4 weeks)

- Criteria for classifying organisms as living
- Basic structure of viruses
 - Viral specificity
- The role of the Host Cell
- Lytic and Lysogenic cycles
- How the body defends against a viral attack
 - Primary and secondary, tertiary lines of defence
 - Ways to reduce spread of viral diseases



- Characteristics of Monerans
 - Classification of different bacteria
 - Shapes
 - Motility
 - Nutrition
 - reproduction
 - Human diseases
- Beneficial roles of Bacteria

Plant Biology – Chaps 20 - 25 (Approx 4 weeks)

- Characteristics of Green Algae
- Mosses and their characteristics
- Ferns and their characteristics



- Characteristics of Gymnosperms
- Characteristics of Angiosperms
- Differences between Monocots and Dicots

Animal Biology – Chaps 26 – 33, 36 (Approx 5 - 6 weeks)

- Comparing different phyla
- Describing life functions animals need to survive
 - Feeding, respiration, excretion, reproduction, etc.
- Advantages and disadvantages of different ways animals carry out their life functions



- Eg. Filter feeding vs fluid feeding, asexual vs sexual reproduction
- Studying the various Phyla in depth**
 - Structures, ecological roles, life function

Ecology – Chaps 47 - 49 (Approx 1 ½ - 2 weeks)

- **Ecological succession**
- **Producers vs Consumers and the ecological pyramid**
 - Energy flow through the ecosystem
 - Photosynthesis and cellular respiration



- **Population changes – growth, carrying capacity, steady state**
 - Population limiters
- **Symbiosis and symbiotic relationships**

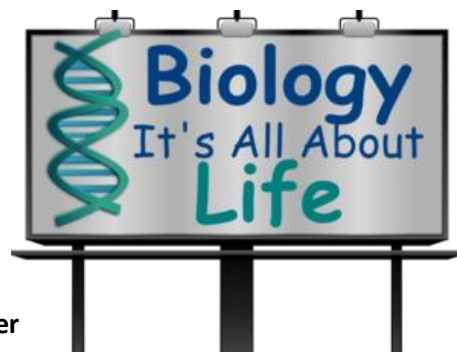
Supplies Needed

- **Textbook – Biology (Miller-Levine)**
*******Students are responsible for the numbered textbook assigned to them, and will be required to pay for any damages incurred while the text is in their possession, which could be up to full replacement cost which is \$95. Texts must be covered with paper to prevent damage!*******
 - **A 2 inch, 3 – ring binder with paper and dividers. *** No other subject should be included in this binder*****
- *** **How** you organize your binder is up to you (i.e. by chapter, assignment type, etc), but it **MUST** be organized in order to facilitate your success! ***

I suggest the following:

5 dividers with the following sections:

- Notes
- Homework/warmups
- Labs/assignments
- Quizzes/tests
- Scrapwork



- **Pencils, pens (blue and red), eraser, scientific calculator, ruler**
- **Agenda**

*******Please bring ALL these supplies to EVERY class. Students will NOT be allowed to return to their lockers to get supplies after the bell goes!*******

Evaluation

Your grade will be based on the following weighting policy:

In - Class Mark	Introduction (Processes of Science and Taxonomy)	6% (3% for each) Includes Science Application skills – graphing, lab skills	Final Grade In – Class mark 80% Finall Exam 20%
	Evolution	5%	
	Microbiology	22%	
	Plant Biology	22%	
	Animal Biology	34%	
	Ecology	11%	

Grades are broken down as follows:

- A 86 – 100%
- B 73% - 85%
- C+ 67% - 72%
- C 60% - 66%
- C- 50% - 59%
- Fail Below 50%

Website - www.enders.tk