Science Infinity Biology 1 Syllabus 2018-2019

This is the syllabus for Biology 1 students who are new to biology and are beginners. This is based off of *The Dynamics of Life* by Glencoe. This is the [link](http://www.glencoe.com/sites/florida/student/science/assets/pdfs/FLBDOLReSE.pdf). For every chapter we do, we suggest that the student read through the sections to get a deeper understanding. They can use this syllabus to know what will be taught throughout the year and they can explore the topics in the book. This is a condensed version of the Honors Biology syllabus.

**Homework:**

We will assign a sheet of homework every class. It will not take too long and it is there to reinforce the lessons from class and for the student to use the homework as a study tool for tests. We will occasionally assign reading homework to the students from the book when we feel that the topic is complex and more understanding is needed. The homework will be graded in class and then returned to the students to go over missed answers.

**Tests/Quizzes:**

We will occasionally give the students quizzes and tests. Quizzes will be more frequent than tests. We will tell the students about upcoming tests. We will usually give students an advance for tests but there will sometimes be surprise pop quizzes. There will also be a pretest on the very first day for the teacher to know what to focus on for the students. That test will not matter and the pop quizzes are also used as a tool to tell teachers what to cover most. The pop quizzes are very short and we will go over them in class right after taking them. Tests will take longer and will take up half or more of the class and will be graded immediately after.

**Topics and their breakdown:**

1. **Chapter 2: Principles of Ecology**

* Organisms and Their Environment
* Nutrition and Energy Flow

1. **Chapter 6: The Chemistry of Life**

* Atoms and Their Interactions
* Water and Diffusion
* Life Substances

1. **Chapter 7: A View of the Cell**

* The Discovery of Cells
* The Plasma Membrane
* Eukaryotic Cell Structure
* Prokaryotic Cell Structure (this is not in the book, but we will still cover it)

1. **Chapter 8 and 9: Cellular Transport, The Cell Cycle, and Energy in a Cell**

* Cellular Transport
* Cell Growth and Reproduction
* Photosynthesis
* Getting Energy to Make ATP

1. **Chapter 10: Mendel and Meiosis**

* Mendel’s Law of Heredity
* Meiosis
* Mitosis(this is not in the book, but we will cover it in class)

1. **Chapter 11: DNA and Genes**

* DNA
* From DNA to Protein
* Genetic Changes

1. **Chapter 12 and 13: Patterns of Heredity and Human Genetics; and Genetic Technology**

* When Heredity Follows Different Rules
* Complex Inheritance of Human Traits
* The Human Genome

1. **Chapter 15: The Theory of Evolution**

* Natural Selection and the Evidence for Evolution
* Mechanisms of Evolution

1. **Chapter 17 and 18: Organizing Life’s Diversity and Viruses and Bacteria**

* Classification
* The Six Kingdoms
* Viruses
* Archaebacteria and Eubacteria

1. **Chapter 23: Plant Structure and Function**

* Plant Cells and Tissues
* Roots, Stems, and Leaves
* Plan Responses

1. **Chapter 25: What is an Animal?**

* Typical Animal Characteristics
* Body Plans and Adaptations

1. **Chapter 31 and 32: Reptiles and Birds, and Mammals**

* Reptiles
* Birds
* Mammal Characteristics
* Diversity of Mammals

1. **Chapter 35: The Digestive and Endocrine Systems**

* Following Digestion of a Meal
* The Endocrine System

1. **Chapter 36 and 37: The Nervous System, Respiration, Circulation, and Excretion**

* The Nervous System
* The Respiratory System

1. **Chapter 39: Immunity from Disease**

* The Nature of Disease
* Defense Against Infectious Diseases