

# **Science Infinity Biology Syllabus 2020-21**

## **Classroom Expectations**

Students are expected to come to class on time, prepared, and ready to learn. Students must come to each class with pencils, pens, a notebook, and completed homework. Students are expected to pay attention and not disrupt the class. Please limit personal distractions such as the use of personal devices in class.

## **Course Overview**

This course will follow *Campbell Biology* 9th edition by Campbell and Reece, and the book as well as other important resources can be found in this [drive](#). Other resources include other website links, and homework, that will be organized by class and topic. The content covered in this class will be similar, but condensed version of the content taught in AP Biology courses, so it is important that students keep up with class, ask questions, study at home, and complete assignments. Since this class will cover a condensed, easier-to-understand version of AP Biology, reading all the chapters listed is not required, but a resource you can use to review material, and explore further if you wish. The topics and corresponding chapters in Campbell are listed below.

## **Homework**

Homework will be given at the end of each class to help students review class material over the course of the following week. Homework will be directly related to the material and class, and will give students an opportunity to reinforce the concepts and clear up any doubts, misunderstanding, or confusions when we go over homework in class. Please complete the homework. It will be checked in class, and is assigned with your best interests in mind.

## **Assessments**

There will be Unit Assessments after we finish each topic. These will be in the form of short quizzes, and should be fairly easy if you've kept up with homework, and have reviewed class material. In biology, fundamental concepts are related with each other, so it's important to have good habits and maintain a strong foundation. These short quizzes will let the instructors gauge the level of understanding, and know if they need to review certain topics before moving on. Occasionally, there will be larger tests that will be announced ahead of time. These tests will cover recent units, but can also test on knowledge taught at the beginning of the year.

## Class Schedule

Unit	Chapters	Content
1	2,3,4	Chemistry background required for biology course - this will be a very short unit <ul style="list-style-type: none"> <li>● Element properties</li> <li>● Chemistry of Water and Carbon</li> </ul>
2	5,6,7	Cell Introduction <ul style="list-style-type: none"> <li>● Macromolecules, cell structures, and functions</li> </ul>
3	9,10,11	Cell Processes <ul style="list-style-type: none"> <li>● Photosynthesis</li> <li>● Cellular Respiration</li> <li>● Cell Communication</li> </ul>
4	12, 13	Cell Cycles <ul style="list-style-type: none"> <li>● Mitosis and Meiosis</li> </ul>
5	14-18, 21	Genetics - this will be a long unit! <ul style="list-style-type: none"> <li>● Genetic laws</li> <li>● Inheritance - Chromosomal structure and function</li> <li>● Genetic Disorders</li> <li>● DNA Replication</li> <li>● Protein Synthesis i.e. Transcription and Translation</li> <li>● Genome Evolution</li> </ul>
6	22, 23, 26	Evolution <ul style="list-style-type: none"> <li>● Natural Selection</li> <li>● Population Evolution</li> <li>● Phylogeny</li> </ul>
7	19,27,28	Microorganisms <ul style="list-style-type: none"> <li>● Viruses, Bacteria, Archaea, and Protists</li> </ul>
8	29, 35-39	Plants <ul style="list-style-type: none"> <li>● Structure, Development, Internal Processes</li> <li>● Plant Evolution</li> </ul>
9	40-41	Animal Form and Function <ul style="list-style-type: none"> <li>● Internal Systems i.e endocrine, nervous, circulatory, etc.</li> <li>● Animal Development and Behavior</li> </ul>
10	52-54	Ecology <ul style="list-style-type: none"> <li>● Population and Community Ecology, Ecosystems</li> </ul>