



# HIGH SCHOOL BIOLOGY YEAR AT A GLANCE

## MRS. ROSAS

| TOPICS COVERED                                                                                                                                                                                                                                                                                                                                                                                                                                 | DATES                            | TEKS                                                          |
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| <b>Scientific &amp; Engineering Practices, Biomolecules, &amp; Cells</b> <ul style="list-style-type: none"> <li>• Lab safety and scientific investigations</li> <li>• Characteristics of living organisms</li> <li>• Biomolecules (carbohydrates, lipids, proteins, nucleic acids)</li> <li>• Prokaryotic vs. eukaryotic cells</li> <li>• Cell organelles and functions</li> <li>• Viruses</li> <li>• Cell membrane and homeostasis</li> </ul> | <b>AUGUST 12 - SEPTEMBER 24</b>  | <b>B.1A–B.4D</b> (SEPs – embedded)<br><b>B.5A, B.5B, B.5D</b> |
| <b>Cell Processes &amp; Cellular Energy</b> <ul style="list-style-type: none"> <li>• Cell transport (diffusion, osmosis, active transport)</li> <li>• Enzymes</li> <li>• Photosynthesis</li> <li>• Cellular respiration</li> <li>• ATP and energy transformations</li> <li>• Cell cycle and mitosis</li> <li>• Cell differentiation</li> </ul>                                                                                                 | <b>SEPTEMBER 28 - NOVEMBER 6</b> | <b>B.5C, B.5E, B.11A, B.11B</b>                               |
| <b>Genetics &amp; Molecular Biology</b> <ul style="list-style-type: none"> <li>• DNA structure and replication</li> <li>• Transcription and translation</li> <li>• Protein synthesis</li> <li>• Mutations</li> <li>• Meiosis</li> <li>• Mendelian genetics</li> <li>• Punnett squares and inheritance patterns</li> </ul>                                                                                                                      | <b>NOVEMBER 9 - DECEMBER 18</b>  | <b>B.6A–B.6C</b><br><b>B.7A–B.7D</b>                          |
| <b>Evolution &amp; Biological Diversity</b> <ul style="list-style-type: none"> <li>• Evidence of evolution</li> <li>• Natural selection</li> </ul>                                                                                                                                                                                                                                                                                             | <b>JANUARY 5 - FEBRUARY 12</b>   | <b>B.7E</b><br><b>B.8A–B.8D</b>                               |

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| <ul style="list-style-type: none"> <li>• Adaptations</li> <li>• Speciation</li> <li>• Taxonomy and classification</li> <li>• Cladograms and phylogenetic trees</li> <li>• Biodiversity</li> </ul>                                                                                                                                                                      |                              |                                                                          |
| <b>Ecology &amp; Environmental Systems</b> <ul style="list-style-type: none"> <li>• Ecosystems</li> <li>• Energy flow through ecosystems</li> <li>• Food chains and food webs</li> <li>• Ecological pyramids</li> <li>• Biogeochemical cycles</li> <li>• Population dynamics</li> <li>• Symbiotic relationships</li> <li>• Ecological succession</li> </ul>            | <b>FEBRUARY 15 - APRIL 2</b> | <b>B.9A–B.9F</b><br><b>B.10A–B.10C</b>                                   |
| <b>Biological Systems &amp; Biology EOC Review</b> <ul style="list-style-type: none"> <li>• Homeostasis</li> <li>• Structure and function of biological systems</li> <li>• Plant systems</li> <li>• Human body systems</li> <li>• Biotechnology applications</li> <li>• Comprehensive Biology EOC review</li> <li>• Benchmark testing and performance tasks</li> </ul> | <b>APRIL 5 - MAY 19</b>      | <b>Review of B.5–B.13 with emphasis on</b><br><b>Readiness Standards</b> |