

RCSD Biology * Quick Reference Pacing Guide * 2022-2023

<p><u>1st Term: Aug. 5 - Oct.7</u> <i>August 1 - 4 - Staff Development</i> <i>August 5 -1st Day of School</i> <i>Sept. 5 - School Holiday</i> <i>Oct. 10 - School Holiday</i> <i>Oct. 11 - Student Holiday</i></p>	<p><u>2nd Term: Oct.12-Dec. 21</u> <i>Nov. 21 - 25 - Thanksgiving Break</i> <i>Dec. 16 - 21 - Exams</i> <i>Dec. 21 - 60% Day</i> <i>Dec. 22 - 30 - Christmas Break</i></p>	<p><u>3rd Term: Jan.10 - March 10</u> <i>Jan. 2- 6 - Christmas Break</i> <i>Jan. 9 - Staff PD - Student Holiday</i> <i>Jan. 10 - Students Return</i> <i>Jan. 16 - School Holiday</i> <i>Feb. 20 - School Holiday</i> <i>March 13 - March 17 - Spring Break</i></p>	<p><u>4th Term: March 20 - May 25</u> <i>April 7 - School Holiday</i> <i>April 10 - School Holiday</i> <i>May 22 - 25 - Exams</i> <i>May 25 - 60% Day</i> <i>May 26 - Teacher's Last Day</i></p>
<p>*Science and Engineering Practices *Tools and Technology; Safety *Norms of Scientific Investigations *Introduction to Labs and Lab Reports *Unifying Themes in Biology</p> <p><i>*These are concepts and skills that should be incorporated in lessons throughout the year.</i></p> <p><u>Characteristics of Life</u> BIO.1A.1 - living vs nonliving BIO.1A.4 - viruses</p> <p>BIO.1B.1 - macromolecules BIO.1B.2 - enzymes</p> <p><u>Cellular Organelles</u> BIO.1A.2 - cell theory; scientists BIO.1A.3 - levels of organization BIO.1C.1 - cell organelles BIO.1C.2 - prokaryotic/eukaryotic cells; plant/animal/fungal cells BIO.1C.3 - comparing viruses to cells</p> <p><u>Cellular Transport</u> BIO.1D.1 - cell membrane; active and passive transport BIO.1D.2 - regulating cellular transport; homeostasis</p>	<p><u>Energy Transfer</u> BIO.2.1 - ATP/ADP BIO.2.2 - photosynthesis BIO.2.3 - cellular respiration BIO.2.4 - aerobic vs anaerobic</p> <p><u>Cell Growth and Division</u> BIO.1E.3 - asexual reproduction BIO.1E.2 - cell cycle; replication; cancer</p> <p>BIO.1E.1 - mitosis BIO.1E.4 (enrichment) - stem cells BIO.3A.1 - meiosis BIO.3A.2 - comparing mitosis/meiosis BIO.3A.3 - chromosomal abnormalities</p> <p><u>DNA and Protein Synthesis</u> BIO.3C.1 - DNA/genes/chromosomes BIO.3C.2 - protein synthesis BIO.3C.3 - nucleotide sequence; mutations BIO.3C.4 - DNA technology</p> <p style="text-align: center;"><u>Benchmark 1 Window =</u> <u>Dec. 2 - Dec. 21</u></p>	<p><u>DNA and Protein Synthesis (BIO.3C) continued</u></p> <p><u>Genetics</u> BIO.3B.1 - Mendel's Law of Dominance/Punnett Squares BIO.3B.2 - Mendel's Law of Independent Assortment/Punnett Squares BIO.3B.3 - non-Mendelian inheritance patterns BIO.3B.4 - Analyze and interpret data (pedigrees, family/population studies)</p> <p><u>Ecology</u> BIO.5.1 - levels of ecological hierarchy BIO.5.2 - abiotic/biotic factors; cycling of matter BIO.5.3 - effects of greenhouse gasses BIO.5.4 - flow of energy/food chains/food webs/energy pyramids BIO.5.5 - ecological relationships BIO.5.6 - population studies/limiting factors/carrying capacity</p> <p>BIO.5.7 - ecological succession</p> <p style="text-align: center;"><u>Benchmark 2 Window =</u> <u>Feb. 22 - March 8</u></p>	<p><u>Adaptations and Evolution</u> BIO.4.3 - cladograms BIO.4.6 - mechanisms of speciation BIO.4.4 - natural selection</p> <p>BIO.4.5 - Darwin's theory of evolution by natural selection</p> <p>BIO.4.1 - organic/chemical evolution BIO.4.2 - evidence for biological evolution (homologous structures, embryological similarities, fossil record, molecular/biochemical similarities, biogeographical distribution)</p> <p style="text-align: center;"><u>Review for State Assessment</u></p> <p style="text-align: center;"><u>State Testing Window</u> <u>April 10 - May 12</u></p> <p><i>Suggestion: Use Enrichment Standards for planning lessons after state testing.</i></p> <p>BIO.1E.4 - Stem Cell research BIO.2.5 - Real world applications of fermentation BIO.3C.5 - Biotechnology BIO.4.7 - Disease agents BIO.5.8 -Design ecological solutions BIO.5.9 - Biomimicry</p>