

RCSD Biology * Quick Reference Pacing Guide * 2024-2025

Note: This document is meant to be a quick reference of the standards covered each nine weeks. For a complete description of the course, standards and performance objectives, see the [MS College and Career Readiness Standards for Science](#).

1st Term: Aug. 1 - Oct. 4 <i>July 25-26:29-31 - Staff Development Aug. 1 - First Day of School Sept 2 -Labor Day/Holiday Oct. 7-11 - School Holiday/Fall Break Oct. 14 - Staff Development</i>	2nd Term: Oct. 15 - Dec. 20 <i>Nov. 25-29 - Thanksgiving Break Dec. 16 - 20 - Exams Dec. 20 - Reduced Day Dec. 23 - Jan. 3 - Christmas Break</i>	3rd Term: Jan. 7 - Mar 7 <i>Jan. 6 - Staff Development Jan. 7 - Students Return Jan. 20 - MLK Day/Holiday Feb. 17 - Presidents' Day/Holiday March 10 - 14 - Spring Break</i>	4th Term: March 17 - May 23 <i>April 18, 21 - Easter/Holiday *STATE TESTING Window opens mid-April* May 19-23 - Exams May 23 - Reduced Day May 23 - Last Teacher Day</i>
<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>*These are concepts and skills that should be incorporated in lessons throughout the year.</p> <p><u>Characteristics of Life</u> <i>BIO.1A.1 - living vs nonliving BIO.1A.4 - viruses</i> <i>BIO.1B.1 - macromolecules BIO.1B.2 - enzymes</i></p> <p><u>Cellular Organelles</u> <i>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</i></p> <p><u>Cellular Transport</u> <i>BIO.1D.1 - cell membrane; active and passive transport BIO.1D.2 - regulating cellular transport; homeostasis</i></p>	<p><u>Energy Transfer</u> <i>BIO.2.1 - ATP/ADP BIO.2.2 - photosynthesis BIO.2.3 - cellular respiration BIO.2.4 - aerobic vs anaerobic</i></p> <p><u>Cell Growth and Division</u> <i>BIO.1E.3 - asexual reproduction BIO.1E.2 - cell cycle; replication; cancer</i> <i>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</i></p> <p><u>DNA and Protein Synthesis</u> <i>BIO.3C.1 - DNA/genes/chromosomes BIO.3C.2 - protein synthesis BIO.3C.3 - nucleotide sequence; mutations BIO.3C.4 - DNA technology</i></p> <p style="text-align: center;"><u>Benchmark 1 Window =</u> TBD</p>	<p><u>DNA and Protein Synthesis (BIO.3C) continued</u></p> <p><u>Genetics</u> <i>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)</i></p> <p><u>Ecology</u> <i>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</i> <i>BIO.5.7 - ecological succession</i></p> <p style="text-align: center;"><u>Benchmark 2 Window =</u> TBD</p>	<p><u>Adaptations and Evolution</u> <i>BIO.4.3 - cladograms BIO.4.6 - mechanisms of speciation BIO.4.4 - natural selection</i> <i>BIO.4.5 - Darwin's theory of evolution by natural selection</i> <i>BIO.4.1 - organic/chemical evolution BIO.4.2 - evidence for biological evolution (homologous structures, embryological similarities, fossil record, molecular/biochemical similarities, biogeographical distribution)</i></p> <p style="text-align: center;"><u>Review for State Assessment</u></p> <p style="text-align: center;"><u>State Testing Window</u> TBD</p> <p><u>Suggestion:</u> Use Enrichment Standards for planning lessons after state testing.</p> <p><i>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</i></p>

