

# RCSD Foundations of Science Literacy \* Quick Reference Pacing Guide \*

2024-2025

Foundations of Science Literacy is a ½ credit course

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

<u>1st Semester</u>	<u>2nd Semester</u>
<p><b><u>History of Science and Impacts on Society</u></b></p> <p><b>FSL.1 Students will relate the importance of significant historical experiments and their impact on research and development.</b></p> <p><i>FSL.1.1 Timeline of historical development of scientific ideas and theories</i> <i>FSL.1.2 Classic inventions; science and society</i> <i>FSL.1.3 Role of mathematics and technology in science</i> <i>FSL.1.4 Enrichment: Research, analyze, explain, and communicate the influence of society, including cultural components, on the direction and progress of science and technology</i></p> <p><b><u>Nature of Technology and Engineering</u></b></p> <p><b>FSL.2 Students will identify, research, and communicate the development of technology and engineering practices.</b></p> <p><i>FSL.2.1 Engineering Design Process</i> <i>FSL.2.2 Use an engineering design process to identify a problem within the local community, and propose and develop a possible solution for that problem.*</i> <i>FSL.2.3 Enrichment: Use a computer simulation to model the impact of proposed solutions on a complex, real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.*</i></p> <p><b><u>Nature of Science</u></b></p> <p><b>FSL.3A Students will apply science and engineering practices and skills to scientific investigations.</b></p> <p><i>FSL.3A.1 Ask questions and conduct research to generate a hypothesis, determine independent/dependent variables, and appropriate controls for scientific investigations and experiments.</i> <i>FSL.3A.2 Analyze and organize data from simple experiments</i> <i>FSL.3A.3 Safety and tools of science; lab equipment</i> <i>FSL.3A.4 Measurements and conversions</i> <i>FSL.3A.5 Analyze data sets from experiments for patterns and trends and identify any weaknesses in the experimental designs.</i></p>	<p><b><u>Nature of Science Continued</u></b></p> <p><b>FSL.3B Scientific literacy and thinking skills to analyze and interpret data found in various graphics, including but not limited to, those found in sample ACT science passages.</b></p> <p><i>FSL.3B.1 Analyze select data from a simple and complex data presentation (e.g., charts, graphs, diagrams).</i> <i>FSL.3B.2 Compare or combine data from two or more simple data presentations</i> <i>FSL.3B.3 Patterns, trends and relationships in data</i> <i>FSL.3B.4 Simple interpolation or simple extrapolation using data in a table or graph.</i> <i>FSL.3B.5 Analyze presented information when given new information (e.g., given a new scenario, how would a given scenario be changed).</i></p> <p><b>FSL.3C Students will apply scientific literacy and thinking skills to analyze scientific investigations found in various experimental designs including, but not limited to, those found in sample ACT science passages.</b></p> <p><i>FSL.3C.1 Methods and choice of tools used in simple and complex experimental designs.</i> <i>FSL.3C.2 Validity of scientific questions (e.g., hypothesis) and variables for complex experimental designs.</i> <i>FSL.3C.3 Alternate method for testing a hypothesis.</i> <i>FSL.3C.4 How modifying the experimental design or adding another measurement will affect results of the experiment.</i> <i>FSL.3C.5 How additional trials could be performed in an investigation to enhance the results of an experimental design.</i></p> <p><b>FSL.3D Students will apply scientific literacy and thinking skills to evaluate theoretical models, inferences, and experimental results found in various experimental designs including, but not limited to, those found in sample ACT science passages.</b></p> <p><i>FSL.3D.1 Hypotheses, predictions, and conclusions supported by data</i> <i>FSL.3D.2 Determine whether given information supports or contradicts a hypothesis or conclusion, and provide support for the reasoning.</i> <i>FSL.3D.3 Analyze and interpret data from informational texts and data</i> <i>FSL.3D.4 Use new information to make a prediction based on a theoretical model.</i> <i>FSL.3D.5 Select and explain why a hypothesis, prediction, or conclusion is, or is not, supported by data</i></p>

