

**GLENCOE CORRELATION**  
**CHEMISTRY: MATTER AND CHANGE**  
**NEW JERSEY**  
 Core Curriculum Content Standards for Science  
 Grade 12

| STANDARDS  | PAGE REFERENCES  |
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| <b>STANDARD 5.1 (SCIENTIFIC PROCESSES) ALL STUDENTS WILL DEVELOP PROBLEM-SOLVING, DECISION-MAKING AND INQUIRY SKILLS, REFLECTED BY FORMULATING USABLE QUESTIONS AND HYPOTHESES, PLANNING EXPERIMENTS, CONDUCTING SYSTEMATIC OBSERVATIONS, INTERPRETING AND ANALYZING DATA, DRAWING CONCLUSIONS, AND COMMUNICATING RESULTS.</b> |  |
| Building upon knowledge and skills gained in the preceding grades, by the end of Grade 12, students:   |  |
| <b>A. Habits of Mind</b>   |  |
| 1. When making decisions, evaluate conclusions, weigh evidence, and recognize that arguments may not have equal merit.   | SE: 10-13<br><i>Chemistry and Society</i> 80, 482<br><i>Chemistry and Technology</i> 768<br><i>ChemLab</i> 46-47, 410-411, 550-551<br><i>Problem-Solving Lab</i> 130, 191, 583, 860                    |
| 2. Assess the risks and benefits associated with alternative solutions.  | SE: 3-6, 828-831<br><i>Chemistry and Society</i> 482, 834<br><i>Chemistry and Technology</i> 344, 690<br><i>Everyday Chemistry</i> 730<br><i>Problem-Solving Lab</i> 44, 390, 860                      |
| 3. Engage in collaboration, peer review, and accurate reporting of findings.   | SE: 10-15, 36-41, 129-134, 893-896<br><i>Chemistry and Society</i> 20, 110<br><i>Chemistry and Technology</i> 344, 690, 768<br><i>Everyday Chemistry</i> 730   |
| 4. Explore cases that demonstrate the interdisciplinary nature of the scientific enterprise.   | SE: <i>Chemistry and Society</i> 20, 80, 482<br><i>Chemistry and Technology</i> 690, 768<br><i>Everyday Chemistry</i> 412<br><i>Physics Connection</i> 808<br><i>Problem-Solving Lab</i> 647, 679, 860 |
| <b>B. Inquiry and Problem Solving</b>  |  |
| 1. Select and use appropriate instrumentation to design and conduct investigations.  | SE: 118-120, 827-828<br><i>Problem-Solving Lab</i> 96, 478<br><i>ChemLab</i> 480-481, 626-627, 688-689, 796-797, 832-833, 862-863  |
| 2. Show that experimental results can lead to new questions and further investigations.  | SE: 92-104, 117-126, 151-158<br><i>Chemistry and Society</i> 110<br><i>ChemLab</i> 78-79, 170-171, 300-301, 520-521, 626-627, 832-833  |
| <b>C. Safety</b>   |  |
| 1. Understand, evaluate and practice safe procedures for conducting science investigations.  | SE: 14-16<br><i>ChemLab</i> 142-143, 300-301, 520-521, 654-655, 728-729, 832-833<br><i>Problem-Solving Lab</i> 60, 390, 830  |