8th Grade Science
Course Compendium

UNITS OF STUDY*

Unit 1 - Interactions of Matter - September - October (7 weeks)
Unit 2 - Motion and Energy - November - January (12 weeks)
Unit 3 - Understanding the Universe - February - March (8 weeks)
Unit 4 - Earth and Geologic Changes - April (4 weeks)
Unit 5 - Heredity and Body Systems - May (4 weeks)
Unit 6 - Exploring Ecology - June (3 weeks)

INTERDISCIPLINARY CONNECTIONS

NJSLS Companion Standards Grades 6-8 (Reading & Writing in Science)

RST.6-8.1. Cite specific textual evidence to support analysis of science and technical texts.
RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
RST.6-8.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6-8 texts and topics*.
RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.
NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

21st Century Life and Careers

CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP7. Employ valid and reliable research strategies.
CRP11. Use technology to enhance productivity.
9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.

**See individual units for Pacing Guide, NJSLS Standards, Transfer Skills, Enduring Understandings, Essential Questions, Learning Objectives, Key Vocabulary, Skills, Resources, & Assessments*

9.3.ST.4 Understand the nature and scope of the Science, Technology, Engineering & Mathematics Career Cluster and the role of STEM in society and the economy.

Technology

8.2.12.D.6 Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions.

8.2.8.E.1 Identify ways computers are used that have had an impact across the range of human activity and within different careers where they are used.

MODIFICATIONS / ACCOMMODATIONS

<table>
<tr><th colspan="3">GENERAL CONSIDERATIONS FOR DIVERSE LEARNERS</th></tr>
<tr><th>English Language Learners</th><th>Students Receiving Special Education Services</th><th>Advanced Learners</th></tr>
<tr>
<td>- Personal glossary
- Text-to-speech
- Extended time
- Simplified / verbal instructions
- Frequent breaks

WIDA Can Do Descriptors for Grade 6-8
WIDA Essential Actions Handbook
FABRIC Paradigm
Wall Township ESL Grading Protocol

*Use WIDA Can Do Descriptors in coordination with Student Language Portraits (SLPs).</td>
<td>- Small group/One to one
- Additional time
- Review of directions
- Student restates information
- Space for movement or breaks
- Extra visual and verbal cues and prompts
- Preferential seating
- Follow a routine/schedule
- Rest breaks
- Verbal and visual cues regarding directions and staying on task
- Checklists
- Immediate feedback

Students receiving Special Education programming have specific goals and objectives, as well as accommodations and modifications outlined within their Individualized Education Plans (IEP) due to an identified disability and/or diagnosis. In addition to exposure to the general education curriculum, instruction is differentiated based upon the student's needs. The IEP acts as a supplemental curriculum guide inclusive of instructional strategies that support each learner.

National Center on Universal Design for Learning - About UDL
UDL Checklist
UDL Key Terms</td>
<td>- Use of high level academic vocabulary/texts
- Problem-based learning
- Preassess to condense curriculum
- Interest-based research
- Authentic problem-solving
- Homogeneous grouping opportunities
Knowledge and Skill Standards in Gifted Education for All Teachers
Pre-K-Grade 12 Gifted Programming Standards
Gifted Programming Glossary of Terms

Students with 504 Plan

Teachers are responsible for implementing designated services and strategies identified on a student’s 504 Plan.</td>
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**See individual units for Pacing Guide, NJSLS Standards, Transfer Skills, Enduring Understandings, Essential Questions, Learning Objectives, Key Vocabulary, Skills, Resources, & Assessments*

At Risk Learners / Differentiation Strategies		
Alternative Assessments Choice Boards Games and Tournaments Group Investigations Guided Reading Learning Contracts Leveled Rubrics Literature Circles Multiple Texts Personal Agendas	Independent Research & Projects Multiple Intelligence Options Project-Based Learning Varied Supplemental Activities Varied Journal Prompts or RAFT Writing Tiered Activities/Assignments Tiered Products Graphic Organizers Choice of Books/Activities Mini-Workshops to Reteach or Extend Think-Pair-Share by readiness or interest Use of Collaboration of Various Activities	Jigsaw Think-Tac-Toe Cubing Activities Exploration by Interest Flexible Grouping Goal-Setting with Students Homework Options Open-Ended Activities Use of Reading Buddies Varied Product Choices Stations/Centers Work Alone/Together

**See individual units for Pacing Guide, NJSLS Standards, Transfer Skills, Enduring Understandings, Essential Questions, Learning Objectives, Key Vocabulary, Skills, Resources, & Assessments*