**Pre-Algebra**

**Course Compendium**

**UNITS OF STUDY\***

Unit 1- *Variables, Expressions, and Integers, 4 weeks*

Unit 2- *Solving Equations, 4 weeks*

Unit 3- *Multi-Step Equations and Inequalities, 4 weeks*

Unit 4- *Factors, Fractions, and Exponents, 4 weeks*

Unit 5- *Rational Numbers and Equations, 3 weeks*

Unit 6- *Ratios, Proportions, Percents, and Probability, 4 weeks*

Unit 7- *Measurement, Area, Volume, Angle Relationships, 5 weeks*

Unit 8- *Data Analysis and Probability, 4 weeks*

Unit 9- *Linear Numbers, 4 weeks*

Unit 10- *Irrational Numbers and Nonlinear Functions*, 3 weeks

**INTERDISCIPLINARY CONNECTIONS**

**NJSLS Companion Standards Grades 6-8**

[**RST.6-8.3**](http://www.corestandards.org/ELA-Literacy/RST/6-8/3/)**.** Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

[**RST.6-8.4**](http://www.corestandards.org/ELA-Literacy/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**](http://www.corestandards.org/ELA-Literacy/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.

**21st Century Life and Careers**

**CRP2**. Apply appropriate academic and technical skills.

**CRP4**. Communicate clearly and effectively and with reason.

**CRP11**. Use technology to enhance productivity.

**9.3.ST.2** Use technology to acquire, manipulate, analyze and report data.

**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**

**8.1.8.A.1** Demonstrate knowledge of a real world problem using digital tools.

**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.

**8.1.8.D.1** Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media.

**8.2.8.C.1** Explain how different teams/groups can contribute to the overall design of a product.

**8.2.8.C.8** Develop a proposal for a chosen solution that include models (physical, graphical or mathematical) to communicate the solution to peers.

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| **GENERAL CONSIDERATIONS FOR DIVERSE LEARNERS** | | |
| **English Language Learners** | **Students Receiving Special Education Services** | **Advanced Learners** |
| * [WIDA Can Do Descriptors for Grades 6-8](https://drive.google.com/open?id=0B-j1SG5dErXzODlwUW5wSE82MlE)\* * [WIDA Essential Actions Handbook](https://drive.google.com/file/d/1MOkRH7aeYmJ3FwxKsT9bcQJXGfTWkidY/view?usp=sharing) * [FABRIC Paradigm](https://drive.google.com/file/d/1R7mxpIl_nttbJf6leydxHWloMs2ykocb/view?usp=sharing) * [Wall Township ESL Grading Protocol](https://drive.google.com/file/d/1P7F_7Iq9knrCdTXo77tEpoGfVOtH-mPW/view?usp=sharing)   \*Use WIDA Can Do Descriptors in coordination with [Student Language Portraits (SLPs)](https://docs.google.com/document/d/1qs-mZZZ9bBPRNsJcSvmMYB1REHPENPy_XQQwGWo7Nhw/edit?usp=sharing).  **Potential Accommodations for ELLs**   * Personal glossary * Text-to-speech * Extended time * Simplified / verbal instructions * Frequent breaks * Small group/One to one * Additional time * Review of directions * Student restates information * Extra visual and verbal cues and prompts * Preferential seating * Verbal and visual cues regarding directions and staying on task * Checklists * Immediate feedback | * [New Jersey Tiered System of Supports](http://www.nj.gov/education/njtss/) * [National Center on Universal Design for Learning - About UDL](http://www.udlcenter.org/aboutudl) * [UDL Checklist](https://drive.google.com/open?id=12ND_gk5do8Cm5udNNsWpC6sHPKlaruqh) * [UDL Key Terms](https://drive.google.com/open?id=1GpRJu1U4CGCoBIjF2XlVjlmVnqWYU3P1)   Response to Intervention:  Reteach to Build Understanding, Additional Vocabulary Support, Build Mathematical Literacy  Students within this class receiving Special Education/Section 504 programming have specific goals and objectives, as well as accommodations and modifications outlined within their Individualized Education Plans (IEP)/504 Plans 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/504 Plan acts as a supplemental curriculum guide inclusive of instructional strategies that support each specific learner.  **Potential Accommodations for Special Education**  **Presentation accommodations**:   * Listen to audio recordings instead of reading text * Pre-teach unknown vocabulary through pictures or videos, and relate to prior knowledge * Work with fewer items per page and/or materials in a larger print size * Use a visual blocker * Use visual presentations of verbal material, such as word webs and visual organizers * Be given a written list of instructions/picture cues   **Response accommodations**:   * Give responses in a form (oral or written) that’s easier for him/her * Dictate answers to a scribe * Capture responses on an audio recorder * Use a spelling dictionary or electronic spell-checker * Use a word processor to give responses in class * Use a calculator or table of “math facts”   **Setting accommodations**:   * Work or take a test in a different setting, such as a quiet room with few distractions * Sit where he/she learns best (for example, near the teacher) * Take a test in small group setting   **Timing accommodations**:   * Take more time to complete a task or a test * Have extra time to process oral information and directions * Take frequent breaks, such as after completing a task   **Assignment modifications**:   * Complete fewer or different homework problems than peers * Shorten assignment * Answer fewer or different test questions * Create alternate projects or assignments | * [Knowledge and Skill Standards in Gifted Education for All Teachers](http://www.nagc.org/resources-publications/resources/national-standards-gifted-and-talented-education/knowledge-and) * [Pre-K-Grade 12 Gifted Programming Standards](https://drive.google.com/file/d/1kyzci6RjKrwn7Yo-g2su1DS0l8-rOeK4/view?usp=sharing) * [Gifted Programming Glossary of Terms](https://drive.google.com/file/d/13bnynRPFgKtxapLCyu8f7y_hIIf9HQvU/view?usp=sharing)   **Potential Accommodations for Advanced Learners**   * Use of high level academic vocabulary/texts * Problem-based learning * Pre-assess to condense curriculum * Interest-based research * Authentic problem-solving * Homogeneous grouping opportunities |
| **Students with 504 Plans** |
| Teachers are responsible for implementing designated services and strategies identified on a student’s 504 Plan. |
| **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 |

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