

# POR Academic Math

## Course Compendium

### UNITS OF STUDY\*

Unit 1- *Real Numbers*

Unit 2- *Operations with Numbers*

Unit 3- *Ratios, Proportions & Percents*

Unit 4- *Statistics & Data Analysis*

Unit 5- *Probability*

Unit 6- *Variables and Equations*

Unit 7- *The Coordinate Plane*

Unit 8- *Linear Relationships*

Unit 9- *Geometric Probability*

Unit 10- *Area and Perimeter*

### INTERDISCIPLINARY CONNECTIONS

#### **NJSLS Companion Standards Grades 6-8**

**RST.6-8.3.** Follow precisely a multi-step 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.

#### **21st Century Life and Careers**

**CRP1.** Act as a responsible and contributing citizen and employee.

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

**CRP12.** Work productively in teams while using cultural global competence

**9.3.ST.5** Demonstrate an understanding of the breadth of career opportunities and means to those opportunities in each of the Science, Technology, Engineering & Mathematics Career Pathways.

**9.3.ST.6** Demonstrate technical skills needed in a chosen STEM field.

## 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 & 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.

**8.1.12.A.CS1** Understand and use technology systems.

**8.1.12.B.CS1** Apply existing knowledge to generate new ideas, products, or processes.

**8.2.12.E.1** Demonstrate an understanding of the problem-solving capacity of computers in our world.

GENERAL CONSIDERATIONS FOR DIVERSE LEARNERS		
English Language Learners	Students Receiving Special Education Services	Advanced Learners
<ul style="list-style-type: none"> <li>- Personal glossary</li> <li>- Text-to-speech</li> <li>- Extended time</li> <li>- Simplified / verbal instructions</li> <li>- Frequent breaks</li> </ul> <p><a href="#">WIDA Can Do Descriptors for Grade 9-12</a>  <a href="#">WIDA Essential Actions Handbook</a>  <a href="#">FABRIC Paradigm</a>  <a href="#">Wall Township ESL Grading Protocol</a></p> <p>*Use WIDA Can Do Descriptors in coordination with Student Language Portraits (SLPs).</p>	<ul style="list-style-type: none"> <li>- Small group/One to one</li> <li>- Additional time</li> <li>- Review of directions</li> <li>- Student restates information</li> <li>- Space for movement or breaks</li> <li>- Extra visual and verbal cues and prompts</li> <li>- Preferential seating</li> <li>- Follow a routine/schedule</li> <li>- Rest breaks</li> <li>- Verbal and visual cues regarding directions and staying on task</li> <li>- Checklists</li> <li>- Immediate feedback</li> </ul> <p>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.</p> <p><a href="#">National Center on Universal Design for Learning - About UDL</a>  <a href="#">UDL Checklist</a>  <a href="#">UDL Key Terms</a></p>	<ul style="list-style-type: none"> <li>- Use of high level academic vocabulary/texts</li> <li>- Problem-based learning</li> <li>- Preassess to condense curriculum</li> <li>- Interest-based research</li> <li>- Authentic problem-solving</li> <li>- Homogeneous grouping opportunities</li> </ul> <p><a href="#">Knowledge and Skill Standards in Gifted Education for All Teachers Pre-K-Grade 12 Gifted Programming Standards</a>  <a href="#">Gifted Programming Glossary of Terms</a></p>
		<b>Students with 504 Plan</b>
		Teachers are responsible for implementing designated services and strategies identified on a student's 504 Plan.

*\*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