

GRADE 6– PREALGEBRA UNIT 2

Mission Statement

The primary goal of the Swedesboro-Woolwich School District is to prepare each student with the real life skills needed to compete in a highly competitive global economy. This will be achieved by providing a comprehensive curriculum, the integration of technology, and the professional services of a competent and dedicated faculty, administration, and support staff.

Guiding this mission will be Federal mandates, including No Child Left Behind, the New Jersey Core Curriculum Content Standards, and local initiatives addressing the individual needs of our students as determined by the Board of Education. The diverse resources of the school district, which includes a caring PTO and active adult community, contribute to a quality school system. They serve an integral role in supporting positive learning experiences that motivate, challenge and inspire children to learn.

Unit/Module Overview

Unit Two includes Expressions and Equalities and Ratios and Proportions encompassing (approximately) the next fifty days. The main focus is writing, solving and graphing inequalities, writing and solving proportions, and solving problems with percents. Mathematical Practices from the box below will be connected to the daily lessons.

UNIT 2	Content Focus	Math Practices	Vocabulary
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15 days	Inequalities	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them 2. Reason abstractly and quantitatively 3. Construct viable arguments and critique the reasoning of others 4. Model with Mathematics 5. Use appropriate tools strategically 6. Attend to precision 7. Look for and make use of structure 8. Look for and express regularity in repeated reasoning 	<ul style="list-style-type: none"> · Addition Property of Inequality · Division Property of Inequality · graph of an inequality · inequality · Multiplication Property of Inequality · solution of inequality · solution set · Subtraction Property of Inequality
20 days	Ratios and Proportions	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them 2. Reason abstractly and quantitatively 3. Construct viable arguments and critique the reasoning of others 4. Model with Mathematics 5. Use appropriate tools strategically 6. Attend to precision 7. Look for and make use of structure 8. Look for and express regularity in repeated reasoning 	<ul style="list-style-type: none"> · complex fraction · constant of proportionality · cross products · Cross Products Property · direct variation · proportion · proportional · rate · ratio · slope · unit rate

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25 days	Percents	<ol style="list-style-type: none"> 1. Make sense of problems and persevere in solving them 2. Reason abstractly and quantitatively 3. Construct viable arguments and critique the reasoning of others 4. Model with Mathematics 5. Use appropriate tools strategically 6. Attend to precision 7. Look for and make use of structure 8. Look for and express regularity in repeated reasoning 	<ul style="list-style-type: none"> · discount · interest · markup · percent of change · percent of decrease · percent error · percent of increase · principal · simple interest
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Standards Covered in Current Unit/Module	
Standards	
MA.7.RP.A.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.
MA.7.RP.A.2a	Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
MA.7.RP.A.2b	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
MA.7.RP.A.2c	Represent proportional relationships by equations.
MA.7.RP.A.2d	Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.
MA.7.RP.A.3	Use proportional relationships to solve multistep ratio and percent problems.
MA.7.EE	Expressions and Equations

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MA.7.EE.B.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.

MA.7.EE.B.4b Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.

Content Focus	NJSLS Priority Standards	Learning Goals	Learning Targets
Solve with Inequalities	7.EE.4b	Students will be able to solve and graph word problems leading to inequalities	<ul style="list-style-type: none"> Solve with Inequalities
Ratios and Proportions	7.RP.1 7.RP.2 7.RP.3 7.G.1	SWBAT compute unit rates associated with ratios of fractions measured in like and unlike terms SWBAT explain what a point (x,y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0,0) and (1,r) where r is the unit rate	<ul style="list-style-type: none"> Ratios and Proportions
Percents	7.RP.3 7.EE.2 7.EE.3	<ul style="list-style-type: none"> SWBAT use proportional relationships to solve multistep ratio and percent problems, for example, simple interest, tax, markups, and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error 	<ul style="list-style-type: none"> Percents

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		<ul style="list-style-type: none"> · · SWBAT rewrite expressions in different forms in a problem context to demonstrate how quantities are related · SWBAT apply properties of operations to calculate with number in any form as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies 	
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Weekly Learning Activities and Pacing Guide						
Unit 2	Topic	Activity	Learning Goal	Learning Target	Resources	Assessments
Weeks 1-3	Inequalities	<p>Whole Group: Ch. 4 /Lessons 1-4 (from Big Ideas Teachers Manual) Chapter Opener, Start Thinking! Warm-Up Introduce Vocabulary Words. Laurie's notes. Activity Journal with partners. Teachers can decide which pages will be done in groups and which pages will be done during independent work.)</p> <p>Small Group: Journal activities. Lesson problems from text or on-line digital book. Lesson tutorials from dynamic classroom.</p>	SEE LEARNING GOALS	<ul style="list-style-type: none"> • SEE LEARNING TARGET SECTION • 	Big Ideas Chapter 4 National Library of Virtual Manipulatives Accelerated Math Corestandards.org NJCTL Chromebooks	<p>After Lesson 4.2 – Quiz</p> <p>After Lesson 14.4 -Quiz</p> <p>After Chapter is completed - Chapter 4 Test</p>

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		<p>Differentiated lessons from dynamic classroom. Skills review handbook.</p> <p>Independent Work: Resources by the Chapter – Practice A and B Puzzle Time Student Text problems Enrichment and Extension Technology Connection</p>				
Weeks 4-7	Ratios and Proportions	<p>Whole Group: Ch. 5 /Lessons 1-6 (from Big Ideas Teachers Manual) Chapter Opener, Start Thinking! Warm-Up Introduce Vocabulary Words. Laurie's notes. Activity Journal with partners. Teachers can decide which pages will be done in groups and which pages will be done during independent work.)</p> <p>Small Group: Journal activities. Lesson problems from text or on-line digital book. Lesson tutorials from dynamic classroom. Differentiated lessons from dynamic classroom. Skills review handbook.</p> <p>Independent Work: Resources by the Chapter – Practice A and B Puzzle Time Student Text problems Enrichment and Extension Technology Connection</p>	SEE LEARNING GOALS	<ul style="list-style-type: none"> See learning targets section 	<p>Big Ideas Chapter 5 National Library of Virtual Manipulatives Accelerated Math Corestandards.org NJCTL Chromebooks</p>	<p>After Lesson 5.3 – Quiz After Lesson 5.6 -Quiz After Chapter is completed - Chapter 5 Test</p>
Weeks 8-11	Percents	<p>Whole Group: Ch. 6 /Lessons 1-7 (from Big Ideas Teachers Manual) Chapter Opener, Start Thinking! Warm-Up Introduce Vocabulary Words. Laurie's notes. Activity Journal with partners. Teachers can decide which pages will be done in groups and which pages will be done during independent work.)</p>	SEE LEARNING GOALS	<ul style="list-style-type: none"> see learning targets section 	<p>Big Ideas Chapter 6 National Library of Virtual Manipulatives Accelerated Math Corestandards.org NJCTL Chromebooks</p>	<p>After Lesson 6.4 – Quiz After Lesson 6,7-Quiz After Chapter is completed - Chapter 6 Test</p>

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		<p>Small Group: Journal activities. Lesson problems from text or on-line digital book. Lesson tutorials from dynamic classroom. Differentiated lessons from dynamic classroom. Skills review handbook.</p> <p>Independent Work: Resources by the Chapter – Practice A and B Puzzle Time Student Text problems Enrichment and Extension Technology Connection</p>				S/W Math Benchmark 2
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Materials and Resources	Possible Assessments
<ul style="list-style-type: none"> • Big Ideas - Big Ideas Learning LLC. 2014 www.bigideasmath.com • National Library of Virtual Manipulatives http://nlvm.usu.edu/en/nav/vlibrary.html • www.corestandards.org • http://www.njctl.org/courses/math/ • Chromebooks • http://www.sheppardsoftware.com/ • Accelerated Math • www.mathplayground.com/grade_6_games.html • www.mathantics.com 	<ul style="list-style-type: none"> • Big Ideas Quiz 4.1-4.2 • Big Ideas Quiz 4.3-4.4 • Big Ideas Chapter 4 Assessment with Standards • Big Ideas Quiz 5.1-5.3 • Big Ideas Quiz 5.4-5.6 • Big Ideas Chapter 5 Assessment with Standards • Big Ideas Quiz 6.1-6.4 • Big Ideas Quiz 6.5-6.7 • Big Ideas Chapter 6 Assessment with Standards • Journal Writing • Exit Tickets • Response Boards • IXL, or other technology programs • http://www.njctl.org/2012/10/nj-model-curriculum-assessments-available-on-line/

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Technology Integration	Interdisciplinary Connections	21st Century Life and Career Skills
<ul style="list-style-type: none"> • 8.1.8.A.1 Demonstrate knowledge of a real world problem using digital tools . • Use digital camera or webcam to record problem explanations. . • Foster skill practice using specific apps . <p>TECH.8.1.8.A.1 Demonstrate knowledge of a real world problem using digital tools.</p> <p>TECH.8.1.8.A.2 Create a document (e.g., newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications to be critiqued by professionals for usability.</p> <p>TECH.8.1.8.A.3 Use and/or develop a simulation that provides an environment to solve a real world problem or theory.</p> <p>TECH.8.1.8.A.4 Graph and calculate data within a spreadsheet and present a summary of the results.</p> <p>TECH.8.1.8.A.5 Create a database query, sort and create a report and describe the process, and explain the report results.</p>	<ul style="list-style-type: none"> • Reading and Comprehension - involved for all word problems. • Science- Scientific Notation, decimals, multiplication, division, labels • Social Studies- foreign currency • Social Studies: determining elapsed time and reading time lines 	<ul style="list-style-type: none"> • CRP2. Apply appropriate academic and technical skills. • CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

[Link to Additional Components including Cross Curricular Connections, Accommodations, Assessments, Etc](#)

[ELA Enduring Understanding Statements](#)