

<b>Original Adoption:</b>	School Year 2017-2018
<b>Revised On:</b>	July / August 2019
<b>Board Approved:</b>	August 21, 2019

7th Grade non-tracked Curriculum Documents

<b>TIME PERIOD</b>	<b>UNIT (topics)</b>	<b>STANDARDS AND STUDENT LEARNING OBJECTIVES</b>	<b>NJSLS CONCEPT</b>
September through Mid-November (Days 1-45)	1. Number Operations (Addition and Subtraction)	<ul style="list-style-type: none"> <li>● 7.NS.1</li> <li>● 7.NS.2</li> <li>● 7.NS.3</li> <li>● 7.EE.1</li> <li>● 7.EE.2</li> </ul>	<p><b>NS.A. The Number System</b> Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</p> <p><b>EE.A. Expressions and Equations</b> Use properties of operations to generate equivalent expressions.</p>
	2. Number Operations (Multiplication and Division)	<ul style="list-style-type: none"> <li>● 7.NS.1</li> <li>● 7.NS.2</li> <li>● 7.NS.3</li> <li>● 7.EE.1</li> <li>● 7.EE.2</li> </ul>	<p><b>NS.A. The Number System</b> Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</p> <p><b>EE.A. Expressions and Equations</b> Use properties of operations to generate equivalent expressions.</p>
End-November through January (Days 46-90)	3. Multi-Step Expressions	<ul style="list-style-type: none"> <li>● 7.EE.1</li> <li>● 7.EE.2</li> </ul>	<p><b>EE.A. Expressions and Equations</b> Use properties of operations to generate equivalent expressions.</p>

	4. Equations	<ul style="list-style-type: none"> <li>● 7.EE.3</li> <li>● 7.EE.4a</li> </ul>	<p><b>EE.B. Expressions and Equations</b> Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</p>
	5. Inequalities	<ul style="list-style-type: none"> <li>● 7.EE.4b</li> </ul>	<p><b>EE.B. Expressions and Equations</b> Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</p>
February through Beg-April (Days 91-135)	6. Ratios and Proportions/ Scale	<ul style="list-style-type: none"> <li>● 7.RP.1</li> <li>● 7.RP.2</li> <li>● 7.RP.3</li> </ul>	<p><b>RP.A. Ratios and Proportional Relationships</b> Analyze proportional relationships and use them to solve real-world and mathematical problems.</p>
	7. Percents	<ul style="list-style-type: none"> <li>● 7.RP.3</li> <li>● 7.EE.3</li> </ul>	<p><b>RP.A. Ratios and Proportional Relationships</b> Analyze proportional relationships and use them to solve real-world and mathematical problems.</p> <p><b>EE.B. Expressions and Equations</b> Solve real-life and mathematical problems using numerical and algebraic expressions and equations.</p>
	8. Statistics and Probability	<ul style="list-style-type: none"> <li>● 7.SP.1</li> <li>● 7.SP.2</li> <li>● 7.SP.3</li> <li>● 7.SP.4</li> <li>● 7.SP.5</li> <li>● 7.SP.6</li> <li>● 7.SP.7</li> </ul>	<p><b>SP.A. Statistics and Probability</b> Use random sampling to draw inferences about a population.</p> <p><b>SP.B. Statistics and Probability</b> Draw informal comparative inferences about two populations.</p>

		<ul style="list-style-type: none"> <li>• 7.SP.8</li> </ul>	<b>SP.C. Statistics and Probability</b> Investigate chance processes and develop, use, and evaluate probability models.
April through June (Days 136-181)	9. Circles and Area (Also covered in AA throughout the year)	<ul style="list-style-type: none"> <li>• 7.G.4</li> <li>• 7.G.5</li> <li>• 7.G.6</li> </ul>	<b>G.B. Geometry</b> Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
	10. Surface Area and Volume (Also covered in AA throughout the year)	<ul style="list-style-type: none"> <li>• 7.G.4</li> <li>• 7.G.5</li> <li>• 7.G.6</li> </ul>	<b>G.B. Geometry</b> Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
	11. Constructions and Scale Drawing (Also covered in AA throughout the year)	<ul style="list-style-type: none"> <li>• 7.G.1</li> <li>• 7.G.2</li> <li>• 7.G.3</li> </ul>	<b>G.A. Geometry</b> Draw, construct, and describe geometrical figures and describe the relationships between them.

**7th Grade Unit 1: Number Operations (addition/subtraction)**

**Course: 7th Grade Non-Track**

**Timeframe: 25 days**

**Unit Essential Questions:**

- How do we perform operations on rational numbers and algebraic expressions?
- How do we add and subtract positive and negative rational numbers in any form?

**Unit Enduring Understandings:**

*Students will understand how to...*

- add and subtract rational numbers and algebraic expressions.
- use appropriate tools to solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals)
- extend previous understandings of addition and subtraction to add and subtract rational numbers.

**Primary Interdisciplinary Connections:**

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

- [NJSLSA.R4](#)
- [NJSLSA.R7](#)
- [NJSLSA.R8](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

**21st Century Career Ready Practices:**

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [CRP8](#) - Utilize critical thinking to make sense of problems and persevere in solving them.
- [CRP11](#) - Use technology to enhance productivity.
- [CRP12](#) - Work productively in teams while using cultural global competence.
- **9.1.8.E.6** Compare the value of goods or services from different sellers when purchasing large quantities and small quantities.
- **9.1.8.E.5** Analyze interest rates and fees associated with financial services, credit cards, debit cards, and gift cards.

**Standards for Mathematical Practices:**

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- MP.1 - Make sense of problems and persevere in solving them.
- MP.2 - Reason abstractly and quantitatively.
- MP.3 - Construct viable arguments and critique the reasoning of others.
- MP.4 - Model with Mathematics.
- MP.5 - Use appropriate tools strategically.
- MP.6 - Attend to precision.
- MP.7 - Look for and make use of structure.
- MP.8 - Look for and express regularity in repeated reasoning.

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
<p><b>7.NS.A.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</b></p> <p>a. Describe situations in which opposite quantities combine to make 0.</p>	<ul style="list-style-type: none"> <li>● WALT apply previous understandings of addition to add rational numbers</li> <li>● WALT describe situations in which opposites combine to make zero</li> <li>● WALT show by modeling, a number and its opposite have a sum of zero (additive inverse)</li> </ul>	<ul style="list-style-type: none"> <li>● Big Ideas Math - Red                             <ul style="list-style-type: none"> <li>○ Sections 1.1, 1.2, 1.3, 2.1, 2.2, 2.3, 3.1, 3.2</li> </ul> </li> <li>● i-Ready</li> <li>● Illustrative Mathematics                             <ul style="list-style-type: none"> <li>○ 7.NS.1 <a href="https://tasks.illustrativemathematics.org/content-standards/7/NS/A/1/tasks">https://tasks.illustrativemathematics.org/content-standards/7/NS/A/1/tasks</a></li> <li>○ 7.NS.2 <a href="https://tasks.illustrativemathematics.org/content-standards/7/NS/A/2/tasks">https://tasks.illustrativemathematics.org/content-standards/7/NS/A/2/tasks</a></li> <li>○ 7.NS.3 <a href="https://tasks.illustrativemathematics.org/content-standards/7/NS/A/3/tasks">https://tasks.illustrativemathematics.org/content-standards/7/NS/A/3/tasks</a></li> </ul> </li> </ul>
<p><b>7.NS.A.1</b></p> <p>b. Understand <math>p + q</math> as the number located a distance <math> q </math> from <math>p</math>, in the positive or negative direction depending on whether <math>q</math> is</p>	<ul style="list-style-type: none"> <li>● WALT <math>p + q</math> is the number located a distance <math> q </math> from <math>p</math>, in the positive or negative direction depending on whether <math>q</math> is positive or negative (e.g. <math>5 + -4</math> is 4 units in the negative direction)</li> </ul>	<ul style="list-style-type: none"> <li>● Activities on the Team Drive</li> <li>● PARCC Released Items</li> <li>● Khan Academy</li> </ul>

<p>positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</p>	<p>from 5 and, similarly, <math>5 + 4</math> is also 4 units away in the positive direction)</p> <ul style="list-style-type: none"> <li>● WALT represent addition and subtraction of signed rational numbers on a vertical or horizontal number line</li> <li>● WALT interpret sums of rational numbers in real world situations</li> </ul>	
<p><b>7.NS.A.1</b> c. Understand subtraction of rational numbers as adding the additive inverse, <math>p - q = p + (-q)</math>. Show that the distance between two rational numbers on the number line is the absolute value of their difference and apply this principle in real-world contexts.</p>	<ul style="list-style-type: none"> <li>● WALT apply previous understandings of subtraction to subtract rational numbers</li> <li>● WALT subtraction of rational numbers is the same as adding the additive inverse, <math>p - q = p + (-q)</math></li> <li>● WALT show by modeling on a number line that the distance between two rational numbers is the absolute value of their differences and apply the concept in real world contexts</li> </ul>	
<p><b>7.NS.A.1</b> d. Apply properties of operations as strategies to add and subtract rational numbers.</p>	<ul style="list-style-type: none"> <li>● WALT apply properties of operations as strategies to add and subtract rational numbers</li> </ul>	

<b>7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.</b>	<ul style="list-style-type: none"> <li>● WALT solve real-world and mathematical problems involving the four operations with rational numbers in fraction form</li> <li>● WALT solve real-world and mathematical problems involving the four operations with rational numbers in decimal form</li> </ul>	
<b>7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</b>	<ul style="list-style-type: none"> <li>● WALT apply the properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients</li> </ul>	
<b>7.EE.A.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.</b>	<ul style="list-style-type: none"> <li>● WALT rewrite an expression in different forms can clarify the problem and how the quantities are related</li> </ul>	

Evidence of Learning			
Assessment			
<b>Formative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Observation</li> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communicat</li> </ul>	<b>Benchmark Assessments may include:</b> <ul style="list-style-type: none"> <li>● Beginning of Year i-Ready Diagnostic</li> <li>● Quarterly Portfolio</li> <li>● NJSLA</li> </ul>	<b>Summative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Chapter/Unit Test</li> <li>● Quizzes</li> <li>● Presentations</li> <li>● NJSLA</li> </ul>	<b>Alternative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Authentic Performance Tasks</li> <li>● Unit Projects</li> </ul>

- ors
- Do-Now
- Notebook
- Exit passes

### Modifications & Reflections

#### **Suggested Options for Differentiation**

##### *English Language Learners*

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

##### *Students at Risk of Failure*

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

##### *Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

##### *504*

- Extension activities



- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*Gifted & Talented*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

**7th Grade Unit 2: Number Operations / Simple Expressions**

**Course: 7th Grade Non-Track**

**Timeframe: 20 days**

**Unit Essential Questions:**

- How do you perform operations on rational numbers and algebraic expressions?
- How do we multiply and divide positive and negative rational numbers in any form?

**Unit Enduring Understandings:**

*Students will understand how to...*

- multiply and divide rational numbers and algebraic expressions.
- use appropriate tools to solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals)

	<ul style="list-style-type: none"> <li>• extend previous understandings of multiplication and division to multiply and divide rational numbers.</li> </ul>
<p><b>Primary Interdisciplinary Connections:</b>          Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:</p> <ul style="list-style-type: none"> <li>• <a href="#">NJSLSA.R4</a></li> <li>• <a href="#">NJSLSA.R7</a></li> <li>• <a href="#">NJSLSA.R8</a></li> <li>• <a href="#">8.1.8.D.4</a></li> <li>• <a href="#">8.1.8.E.1</a></li> </ul>	<p><b>21st Century Career Ready Practices:</b>          Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:</p> <ul style="list-style-type: none"> <li>• <a href="#">CRP2</a> - Apply appropriate academic and technical skills.</li> <li>• <a href="#">CRP4</a> - Communicate clearly and effectively and with reason.</li> <li>• <a href="#">CRP8</a> - Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>• <a href="#">CRP11</a> - Use technology to enhance productivity.</li> <li>• <a href="#">CRP12</a> - Work productively in teams while using cultural global competence.</li> <li>• <b>9.1.8.B.2</b> - Construct a simple personal savings and spending plan based on various sources of income.</li> </ul>
<p><b>Standards for Mathematical Practices:</b>          The following <a href="#">Standards for Mathematical Practice</a> will be covered throughout the unit:</p> <ul style="list-style-type: none"> <li>• MP.1 - Make sense of problems and persevere in solving them.</li> <li>• MP.2 - Reason abstractly and quantitatively.</li> <li>• MP.3 - Construct viable arguments and critique the reasoning of others.</li> <li>• MP.4 - Model with Mathematics.</li> <li>• MP.5 - Use appropriate tools strategically.</li> <li>• MP.6 - Attend to precision.</li> <li>• MP.7 - Look for and make use of structure.</li> <li>• MP.8 - Look for and express regularity in repeated reasoning.</li> </ul>	

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
7.NS.A.2 Apply and extend previous	<ul style="list-style-type: none"> <li>• WALT apply previous understandings of multiplication</li> </ul>	<ul style="list-style-type: none"> <li>• Big Ideas Math - Red               <ul style="list-style-type: none"> <li>○ Sections 1.4, 1.5, 3.1, 3.2, 3.2 extension</li> </ul> </li> </ul>

<p><b>understandings of multiplication and division of fractions to multiply and divide rational numbers.</b></p> <p>a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as <math>(-1)(-1) = 1</math> and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.</p>	<p>of fractions to multiply signed rational numbers</p> <ul style="list-style-type: none"> <li>● WALT operations on signed rational numbers continue to satisfy the properties of operations</li> <li>● WALT the distributive property, leading to products such as <math>(-1)(-1) = 1</math> and the rules for multiplying signed numbers</li> <li>● WALT interpret the products of signed rational numbers in real world situations</li> </ul>	<ul style="list-style-type: none"> <li>● i-Ready</li> <li>● Illustrative Mathematics <ul style="list-style-type: none"> <li>○ 7.NS.1 <a href="https://tasks.illustrativemathematics.org/content-standards/7/NS/A/1/tasks">https://tasks.illustrativemathematics.org/content-standards/7/NS/A/1/tasks</a></li> <li>○ 7.NS.2 <a href="https://tasks.illustrativemathematics.org/content-standards/7/NS/A/2/tasks">https://tasks.illustrativemathematics.org/content-standards/7/NS/A/2/tasks</a></li> <li>○ 7.NS.3 <a href="https://tasks.illustrativemathematics.org/content-standards/7/NS/A/3/tasks">https://tasks.illustrativemathematics.org/content-standards/7/NS/A/3/tasks</a></li> </ul> </li> <li>● Activities on the Team Drive:</li> <li>● PARCC Released Items</li> <li>● Khan Academy</li> </ul>
<p><b>7.NS.A.2</b></p> <p>b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If <math>p</math> and <math>q</math> are integers, then <math>-(p/q) = (-p)/q = p/(-q)</math>. Interpret quotients of rational numbers by describing real world contexts.</p>	<ul style="list-style-type: none"> <li>● WALT apply previous understandings of division of fractions to divide signed rational numbers</li> <li>● WALT integers can be divided as long as the divisor is not zero</li> <li>● WALT division of integers results in a signed rational number</li> <li>● WALT If <math>p</math> and <math>q</math> are integers, then <math>-(p/q) = (-p)/q = p/(-q)</math></li> <li>● WALT interpret quotients of signed rational numbers by describing real world contexts</li> </ul>	

<p><b>7.NS.A.2</b> c. Apply properties of operations as strategies to multiply and divide rational numbers.</p>	<ul style="list-style-type: none"> <li>● WALT apply properties of operations as strategies to multiply and divide signed rational numbers</li> </ul>	
<p><b>7.NS.A.2</b> d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.</p>	<ul style="list-style-type: none"> <li>● WALT convert a rational number to a decimal using long division</li> <li>● WALT the decimal form of a rational number terminates in zeros or eventually repeats</li> </ul>	
<p><b>7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.</b></p>	<ul style="list-style-type: none"> <li>● WALT solve real-world and mathematical problems involving the four operations with rational numbers in fraction form</li> <li>● WALT solve real-world and mathematical problems involving the four operations with rational numbers in decimal form</li> </ul>	
<p><b>7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</b></p>	<ul style="list-style-type: none"> <li>● WALT apply the properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients</li> </ul>	
<p><b>7.EE.A.2 Understand that rewriting an expression in different forms in a</b></p>	<ul style="list-style-type: none"> <li>● WALT rewrite an expression in different forms can clarify the problem and how the quantities</li> </ul>	

<b>problem context can shed light on the problem and how the quantities in it are related.</b>	are related	
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<b>Evidence of Learning</b>			
<b>Assessment</b>			
<b>Formative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Observation</li> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communicators</li> <li>● Do-Now</li> <li>● Notebook</li> <li>● Exit passes</li> </ul>	<b>Benchmark Assessments may include:</b> <ul style="list-style-type: none"> <li>● Quarterly Portfolio</li> <li>● NJSLA</li> </ul>	<b>Summative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Chapter/Unit Test</li> <li>● Quizzes</li> <li>● Presentations</li> <li>● iReady quizzes</li> <li>● NJSLA</li> </ul>	<b>Alternative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Authentic Performance Tasks</li> <li>● Unit Projects</li> </ul>
<b>Modifications &amp; Reflections</b>			
<b>Suggested Options for Differentiation</b> <i>English Language Learners</i> <ul style="list-style-type: none"> <li>● Peer tutoring</li> <li>● Manipulatives</li> <li>● Use of Home Language</li> <li>● Limiting Concepts or Vocabulary</li> <li>● Providing Visuals</li> </ul> <i>Students at Risk of Failure</i> <ul style="list-style-type: none"> <li>● Extended Time</li> <li>● Flexible Grouping</li> <li>● Small Group Instruction</li> <li>● Peer Buddies</li> </ul>			

- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

*Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
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*504*

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*Gifted & Talented*

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- Tiered Activities

**Course: 7th Grade Non-Track**

**Timeframe: 14 days**

**Unit Essential Questions:**

- How do we expand linear expressions with and without rational coefficients?
- When will a different form of an expression help us make more sense of a problem?

**Unit Enduring Understandings:**

*Students will understand that...*

- Expressions can be written in different forms and still be equivalent
- Writing an expression in a different form can shed light on the problem

**Primary Interdisciplinary Connections:**

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

- [NJSLSA.R4](#)
- [NJSLSA.R7](#)
- [NJSLSA.R8](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

**21st Century Career Ready Practices:**

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [CRP8](#) - Utilize critical thinking to make sense of problems and persevere in solving them.
- [CRP11](#) - Use technology to enhance productivity.
- [CRP12](#) - Work productively in teams while using cultural global competence.
- **9.1.8.B.2** Construct a simple personal savings and spending plan based on various sources of income.

**Standards for Mathematical Practices:**

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- MP.1 - Make sense of problems and persevere in solving them.
- MP.2 - Reason abstractly and quantitatively.
- MP.3 - Construct viable arguments and critique the reasoning of others.
- MP.4 - Model with Mathematics.
- MP.5 - Use appropriate tools strategically.
- MP.6 - Attend to precision.
- MP.7 - Look for and make use of structure.
- MP.8 - Look for and express regularity in repeated reasoning.

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
<b>7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</b>	<ul style="list-style-type: none"> <li>WALT apply the properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients</li> </ul>	<ul style="list-style-type: none"> <li>Big Ideas Math - Red               <ul style="list-style-type: none"> <li>Sections 3.1, 3.2</li> </ul> </li> <li>i-Ready</li> <li>Illustrative Mathematics               <ul style="list-style-type: none"> <li>7.EE.1 <a href="https://tasks.illustrativemathematics.org/content-standards/7/EE/A/1/tasks">https://tasks.illustrativemathematics.org/content-standards/7/EE/A/1/tasks</a></li> <li>7.EE.2 <a href="https://tasks.illustrativemathematics.org/content-standards/7/EE/A/2/tasks">https://tasks.illustrativemathematics.org/content-standards/7/EE/A/2/tasks</a></li> </ul> </li> <li>Activities on the Team Drive:               <ul style="list-style-type: none"> <li></li> </ul> </li> <li>PARCC Released Items</li> <li>Khan Academy               <ul style="list-style-type: none"> <li></li> </ul> </li> </ul>
<b>7.EE.A.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.</b>	<ul style="list-style-type: none"> <li>WALT rewriting an expression in different forms can clarify the problem and how the quantities are related</li> </ul>	

Evidence of Learning			
Assessment			
<b>Formative Assessments may include:</b> <ul style="list-style-type: none"> <li>Observation</li> </ul>	<b>Benchmark Assessments may include:</b> <ul style="list-style-type: none"> <li>Quarterly Exam</li> </ul>	<b>Summative Assessments may include:</b> <ul style="list-style-type: none"> <li>Chapter/Unit Test</li> </ul>	<b>Alternative Assessments may include:</b> <ul style="list-style-type: none"> <li>Authentic Performance</li> </ul>



<ul style="list-style-type: none"> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communicators</li> <li>● Do-Now</li> <li>● Notebook</li> <li>● Exit passes</li> </ul>	<ul style="list-style-type: none"> <li>● NJSLA</li> </ul>	<ul style="list-style-type: none"> <li>● Quizzes</li> <li>● Presentations</li> <li>● iReady quizzes</li> <li>● NJSLA</li> </ul>	<ul style="list-style-type: none"> <li>● Tasks</li> <li>● Unit Projects</li> </ul>
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### Modifications & Reflections

#### **Suggested Options for Differentiation**

##### *English Language Learners*

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

##### *Students at Risk of Failure*

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

##### *Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects

504

- Tiered Activities
- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*Gifted & Talented*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

**7th Grade Unit 4: Equations**

**Course: 7th Grade Non-Track**

**Timeframe: 20 days**

**Unit Essential Questions:**

- How do we solve real-world problems involving positive and negative rational numbers in any form and assess the reasonableness of our solution?
- How do we solve equations of the form  $px + q = r$  and  $p(x + q) = r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers with accuracy and efficiency?

**Unit Enduring Understandings:**

*Students will understand how to/that...*

- construct simple equations to solve problems by reasoning about the quantities.
- solve simple equations of particular forms fluently and interpret solutions in the context of the problem.

<ul style="list-style-type: none"> <li>How do we solve real-world problems by reasoning about their quantities and constructing simple equations of the form <math>p(x + q) = r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers?</li> </ul>	
<p><b>Primary Interdisciplinary Connections:</b>          Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:</p> <ul style="list-style-type: none"> <li><a href="#">NJSLSA.R4</a></li> <li><a href="#">NJSLSA.R7</a></li> <li><a href="#">NJSLSA.R8</a></li> <li><a href="#">8.1.8.D.4</a></li> <li><a href="#">8.1.8.E.1</a></li> </ul>	<p><b>21st Century Career Ready Practices:</b>          Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:</p> <ul style="list-style-type: none"> <li><a href="#">CRP2</a> - Apply appropriate academic and technical skills.</li> <li><a href="#">CRP4</a> - Communicate clearly and effectively and with reason.</li> <li><a href="#">CRP8</a> - Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li><a href="#">CRP11</a> - Use technology to enhance productivity.</li> <li><a href="#">CRP12</a> - Work productively in teams while using cultural global competence.</li> <li><b>9.1.8.B.2</b> Construct a simple personal savings and spending plan based on various sources of income.</li> </ul>
<p><b>Standards for Mathematical Practices:</b>          The following <a href="#">Standards for Mathematical Practice</a> will be covered throughout the unit:</p> <ul style="list-style-type: none"> <li>MP.1 - Make sense of problems and persevere in solving them.</li> <li>MP.2 - Reason abstractly and quantitatively.</li> <li>MP.3 - Construct viable arguments and critique the reasoning of others.</li> <li>MP.4 - Model with Mathematics.</li> <li>MP.5 - Use appropriate tools strategically.</li> <li>MP.6 - Attend to precision.</li> <li>MP.7 - Look for and make use of structure.</li> <li>MP.8 - Look for and express regularity in repeated reasoning.</li> </ul>	

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
7.EE.B.3 Solve multi-	<ul style="list-style-type: none"> <li>WALT convert between forms</li> </ul>	<ul style="list-style-type: none"> <li>Big Ideas Math - Red</li> </ul>

<p><b>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.</b></p>	<p>(fractions, decimals, and whole numbers) as appropriate to solve multi-step real life and mathematical problems with positive and negative rational numbers in any form</p> <ul style="list-style-type: none"> <li>WALT apply the properties of operations to calculate with numbers in any form when solving multi-step real-life and mathematical problems, and assess the reasonableness of answers using mental computation and estimation strategies</li> </ul>	<ul style="list-style-type: none"> <li>Sections 3.3, 3.4, 3.5</li> <li>i-Ready</li> <li>Illustrative Mathematics <ul style="list-style-type: none"> <li>7.EE.3 <a href="https://tasks.illustrativemathematics.org/content-standards/7/EE/B/3/tasks">https://tasks.illustrativemathematics.org/content-standards/7/EE/B/3/tasks</a></li> <li>7.EE.4 <a href="https://tasks.illustrativemathematics.org/content-standards/7/EE/B/4/tasks">https://tasks.illustrativemathematics.org/content-standards/7/EE/B/4/tasks</a></li> </ul> </li> <li>Activities on the Team Drive:</li> <li>NJSLA Released Items</li> <li>Khan Academy</li> </ul>
<p><b>7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.</b> a. Solve word problems leading to equations of the form <math>px + q = r</math> and <math>p(x + q) = r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational</p>	<ul style="list-style-type: none"> <li>WALT solve real-world problems by reasoning about their quantities and constructing simple equations of the form <math>p(x + q) = r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers</li> <li>WALT compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.</li> <li>WALT solve equations of the form <math>px + q = r</math> and <math>p(x + q) = r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers with accuracy and</li> </ul>	

<p>numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach</p>	<p>efficiency</p>	
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Evidence of Learning			
Assessment			
<p><b>Formative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Observation</li> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communications</li> <li>● Do-Now</li> <li>● Notebook</li> <li>● Exit passes</li> </ul>	<p><b>Benchmark Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Quarterly Exam</li> <li>● Middle of the Year i-Ready Diagnostic</li> <li>● NJSLA</li> </ul>	<p><b>Summative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Chapter/Unit Test</li> <li>● Quizzes</li> <li>● Presentations</li> <li>● iReady quizzes</li> <li>● NJSLA</li> </ul>	<p><b>Alternative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Authentic Performance Tasks</li> <li>● Unit Projects</li> </ul>
Modifications & Reflections			
<p><b>Suggested Options for Differentiation</b>  <i>English Language Learners</i></p> <ul style="list-style-type: none"> <li>● Peer tutoring</li> <li>● Manipulatives</li> <li>● Use of Home Language</li> <li>● Limiting Concepts or Vocabulary</li> <li>● Providing Visuals</li> </ul>			

*Students at Risk of Failure*

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

*Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*504*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*Gifted & Talented*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects

- Tiered Activities

## 7th Grade Unit 5: Inequalities

Course: 7th Grade Non-Track

Timeframe: 20 days

### Unit Essential Questions:

- How do we solve real-world problems by constructing simple inequalities using rational numbers?
- How do we use variables to represent unknown quantities in mathematical problems to construct and solve simple inequalities?
- How do we describe the solution of an inequality using a graph and inequality statement and interpret its meaning in the context of the problem?

### Unit Enduring Understandings:

*Students will understand how to/that...*

- construct simple inequalities to solve problems by reasoning about the quantities.
- solve simple equations of particular forms fluently, graph the solution set of inequalities, and interpret solutions in the context of the problem.

### Primary Interdisciplinary Connections:

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

- [NJSLSA.R4](#)
- [NJSLSA.R7](#)
- [NJSLSA.R8](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

### 21st Century Career Ready Practices:

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [CRP8](#) - Utilize critical thinking to make sense of problems and persevere in solving them.
- [CRP11](#) - Use technology to enhance productivity.
- [CRP12](#) - Work productively in teams while using cultural global competence.
- **9.1.8.B.8** Develop a system for keeping and using financial records.
- **9.1.8.D.4** Distinguish between income and investment growth.

**Standards for Mathematical Practices:**

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- MP.1 - Make sense of problems and persevere in solving them.
- MP.2 - Reason abstractly and quantitatively.
- MP.3 - Construct viable arguments and critique the reasoning of others.
- MP.4 - Model with Mathematics.
- MP.5 - Use appropriate tools strategically.
- MP.6 - Attend to precision.
- MP.7 - Look for and make use of structure.
- MP.8 - Look for and express regularity in repeated reasoning.

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
<p><b>7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.</b></p> <p>b. Solve word problems leading to inequalities of the form <math>px + q &gt; r</math> or <math>px + q &lt; r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the</p>	<ul style="list-style-type: none"> <li>● WALT solve word problems by reasoning about their quantities and constructing simple inequalities of the form <math>px + q &gt; r</math> or <math>px + q &lt; r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers</li> <li>● WALT use variables to represent unknown quantities in mathematical problems to construct and solve simple inequalities</li> <li>● WALT describe the solution of an inequality using a graph and inequality statement and interpret its meaning in the context of the problem</li> </ul>	<ul style="list-style-type: none"> <li>● Big Ideas Math - Red               <ul style="list-style-type: none"> <li>● Sections 4.1, 4.2, 4.3, 4.4</li> </ul> </li> <li>● i-Ready</li> <li>● Illustrative Mathematics               <ul style="list-style-type: none"> <li>○ 7.EE.4</li> <li>○ <a href="https://tasks.illustrativemathematics.org/content-standards/7/EE/B/4/tasks">https://tasks.illustrativemathematics.org/content-standards/7/EE/B/4/tasks</a></li> </ul> </li> <li>● Activities on the Team Drive:</li> <li>● NJSLA Released Items</li>   <li>● Khan Academy</li> </ul>



problem.		
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Evidence of Learning			
Assessment			
<b>Formative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Observation</li> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communications</li> <li>● Do-Now</li> <li>● Notebook</li> <li>● Exit passes</li> </ul>	<b>Benchmark Assessments may include:</b> <ul style="list-style-type: none"> <li>● Quarterly Exam</li> <li>● NJSLA</li> </ul>	<b>Summative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Chapter/Unit Test</li> <li>● Quizzes</li> <li>● Presentations</li> <li>● iReady quizzes</li> <li>● NJSLA</li> </ul>	<b>Alternative Assessments may include:</b> <ul style="list-style-type: none"> <li>● Authentic Performance Tasks</li> <li>● Unit Projects</li> </ul>
Modifications & Reflections			
<b>Suggested Options for Differentiation</b> <i>English Language Learners</i> <ul style="list-style-type: none"> <li>● Peer tutoring</li> <li>● Manipulatives</li> <li>● Use of Home Language</li> <li>● Limiting Concepts or Vocabulary</li> <li>● Providing Visuals</li> </ul> <i>Students at Risk of Failure</i> <ul style="list-style-type: none"> <li>● Extended Time</li> <li>● Flexible Grouping</li> <li>● Small Group Instruction</li> <li>● Peer Buddies</li> <li>● Graphic Organizers</li> </ul>			

- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

*Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*504*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*Gifted & Talented*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

**Course: 7th Grade Non-Track**

**Timeframe: 15 days**

**Unit Essential Questions:**

- How do we compute unit rates involving ratios of fractions?
- How do we decide whether two quantities show a proportional relationship by testing for equivalence in different ways?
- How do we solve multistep ratio and percent problems using proportional relationships in different contexts (sales tax, markups, markdowns, simple interest, gratuities, etc.)?

**Unit Enduring Understandings:**

*Students will understand to/that...*

- recognize and represent proportional relationships in multiple ways, deciding whether two quantities are in a proportional relationship.
- identify the constant of proportionality in a variety of representations (e.g. tables, graphs, equations, diagrams, and verbal descriptions)
- represent proportional relationships by equations, interpret points on graphs of proportional relationships in context, and use proportional relationships to solve multi-step percent and ratio problems.

**Primary Interdisciplinary Connections:**

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

- [NJSLSA.R4](#)
- [NJSLSA.R7](#)
- [NJSLSA.R8](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

**21st Century Career Ready Practices:**

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [CRP8](#) - Utilize critical thinking to make sense of problems and persevere in solving them.
- [CRP11](#) - Use technology to enhance productivity.
- [CRP12](#) - Work productively in teams while using cultural global competence.
- **9.1.8.B.2** Construct a simple personal savings and spending plan based on various sources of income.
- **9.1.8.C.5** Calculate the cost of borrowing various amounts of money using different types of credit (e.g., credit cards, installment loans, mortgages).

**Standards for Mathematical Practices:**

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- MP.1 - Make sense of problems and persevere in solving them.
- MP.2 - Reason abstractly and quantitatively.
- MP.3 - Construct viable arguments and critique the reasoning of others.
- MP.4 - Model with Mathematics.
- MP.5 - Use appropriate tools strategically.
- MP.6 - Attend to precision.
- MP.7 - Look for and make use of structure.
- MP.8 - Look for and express regularity in repeated reasoning.

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
<b>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.</b>	<ul style="list-style-type: none"> <li>● WALT compute unit rates involving ratios of fractions (complex fractions) in quantities measured in like or different units</li> </ul>	<ul style="list-style-type: none"> <li>● Big Ideas Math - Red               <ul style="list-style-type: none"> <li>● Sections 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 7.5</li> </ul> </li> <li>● i-Ready</li> <li>● Illustrative Mathematics               <ul style="list-style-type: none"> <li>○ 7.RP.1 <a href="https://tasks.illustrativemathematics.org/content-standards/7/RP/A/1/tasks">https://tasks.illustrativemathematics.org/content-standards/7/RP/A/1/tasks</a></li> <li>○ 7.RP.2 <a href="https://tasks.illustrativemathematics.org/content-standards/7/RP/A/2/tasks">https://tasks.illustrativemathematics.org/content-standards/7/RP/A/2/tasks</a></li> <li>○ 7.RP.3 <a href="https://tasks.illustrativemathematics.org/content-standards/7/RP/A/3/tasks">https://tasks.illustrativemathematics.org/content-standards/7/RP/A/3/tasks</a></li> </ul> </li> <li>● Activities on the Team Drive:               <ul style="list-style-type: none"> <li>○</li> </ul> </li> <li>● NJSLA Released Items</li> <li>● Khan Academy</li> </ul>
<b>7.RP.A.2 Recognize and represent proportional relationships between quantities.</b> a. 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	<ul style="list-style-type: none"> <li>● WALT decide whether two quantities show a proportional relationship by testing for equivalent ratios in a table</li> <li>● WALT decide whether two quantities show a proportional relationship by graphing on a coordinate plane and observing whether the graph is a straight line through the origin</li> <li>● WALT identify the constant of</li> </ul>	<ul style="list-style-type: none"> <li>● Activities on the Team Drive:               <ul style="list-style-type: none"> <li>○</li> </ul> </li> <li>● NJSLA Released Items</li> <li>● Khan Academy</li> </ul>

<p>observing whether the graph is a straight line through the origin.  b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.</p>	<p>proportionality (unit rate) in equations and verbal descriptions of proportional relationships</p> <ul style="list-style-type: none"> <li>● WALT identify the constant of proportionality (unit rate) in tables, graphs, and diagrams</li> </ul>	<p>○</p>
<p><b>7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems.</b>  <i>Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.</i></p>	<ul style="list-style-type: none"> <li>● WALT solve multistep ratio and percent problems using proportional relationships</li> <li>● WALT solve multistep ratio and percent problems using proportional relationships involving simple interest and sales tax</li> <li>● WALT solve multistep ratio and percent problems using proportional relationships involving markups and markdowns</li> <li>● WALT solve multistep ratio and percent problems using proportional relationships involving gratuities, commissions, and fees</li> <li>● WALT solve multistep ratio and percent problems using proportional relationships involving percent increase, percent decrease, and percent error</li> </ul>	

## Evidence of Learning

### Assessment

#### Formative Assessments may include:

- Observation
- Homework
- Class participation
- Whiteboards/communications
- Do-Now
- Notebook
- Exit passes

#### Benchmark Assessments may include:

- Quarterly Portfolio
- NJSLA

#### Summative Assessments may include:

- Chapter/Unit Test
- Quizzes
- Presentations
- iReady quizzes
- NJSLA

#### Alternative Assessments may include:

- Authentic Performance Tasks
- Unit Projects

### Modifications & Reflections

#### Suggested Options for Differentiation

##### *English Language Learners*

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

##### *Students at Risk of Failure*

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

*Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

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- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*Gifted & Talented*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities
- Tiered Activities

**7th Grade Unit 7: Percents**

**Course: 7th Grade Non-Track**

**Timeframe: 15 days**

**Unit Essential Questions:**

- How do we solve multistep ratio and percent problems using proportional relationships in different contexts (sales tax, markups, markdowns, simple interest, gratuities, etc.)?

**Unit Enduring Understandings:**

*Students will understand how to...*

- work with proportions as they use proportional relationships to solve multi-step percent and ratio problems.

**Primary Interdisciplinary Connections:**

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

- [NJSLSA.R4](#)
- [NJSLSA.R7](#)
- [NJSLSA.R8](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

**21st Century Career Ready Practices:**

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [CRP8](#) - Utilize critical thinking to make sense of problems and persevere in solving them.
- [CRP11](#) - Use technology to enhance productivity.
- [CRP12](#) - Work productively in teams while using cultural global competence.
- **9.1.8.B.2** Construct a simple personal savings and spending plan based on various sources of income.
- **9.1.8.C.5** Calculate the cost of borrowing various amounts of money using different types of credit (e.g., credit cards, installment loans, mortgages).
- **9.1.8.C.4** Demonstrate an understanding of the terminology associated with different types of credit (e.g., credit cards, installment loans, mortgages) and compare the interest rates associated with each.

**Standards for Mathematical Practices:**

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- MP.1 - Make sense of problems and persevere in solving them.
- MP.2 - Reason abstractly and quantitatively.
- MP.3 - Construct viable arguments and critique the reasoning of others.
- MP.4 - Model with Mathematics.
- MP.5 - Use appropriate tools strategically.



- MP.6 - Attend to precision.
- MP.7 - Look for and make use of structure.
- MP.8 - Look for and express regularity in repeated reasoning.

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
<p><b>7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems.</b>  <i>Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.</i></p>	<ul style="list-style-type: none"> <li>● WALT solve multistep ratio and percent problems using proportional relationships</li> <li>● WALT solve multistep ratio and percent problems using proportional relationships involving simple interest and sales tax</li> <li>● WALT solve multistep ratio and percent problems using proportional relationships involving markups and markdowns</li> <li>● WALT solve multistep ratio and percent problems using proportional relationships involving gratuities, commissions, and fees</li> <li>● WALT solve multistep ratio and percent problems using proportional relationships involving percent increase, percent decrease, and percent error</li> </ul>	<ul style="list-style-type: none"> <li>● Big Ideas Math - Red <ul style="list-style-type: none"> <li>● Sections 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7</li> </ul> </li> <li>● i-Ready</li> <li>● Illustrative Mathematics <ul style="list-style-type: none"> <li>○ 7.RP.3  <a href="https://tasks.illustrativemathematics.org/content-standards/7/RP/A/3/tasks">https://tasks.illustrativemathematics.org/content-standards/7/RP/A/3/tasks</a></li> <li>○ 7.EE.3  <a href="https://tasks.illustrativemathematics.org/content-standards/7/EE/B/3/tasks">https://tasks.illustrativemathematics.org/content-standards/7/EE/B/3/tasks</a></li> </ul> </li> <li>● Activities on the Team Drive: <ul style="list-style-type: none"> <li>○</li> </ul> </li> <li>● NJSLA Released Items</li> <li>● Khan Academy <ul style="list-style-type: none"> <li>○</li> </ul> </li> </ul>

<p><b>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.</b></p>	<ul style="list-style-type: none"> <li>● WALT convert between forms (fractions, decimals, and whole numbers) as appropriate to solve multi-step real-life and mathematical problems with positive and negative rational numbers in any form</li> <li>● WALT apply the properties of operations to calculate with numbers in any form when solving multi-step real-life and mathematical problems, and assess the reasonableness of answers using mental computation and estimation strategies</li> </ul>	
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Evidence of Learning			
Assessment			
<p><b>Formative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Observation</li> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communications</li> <li>● Do-Now</li> <li>● Notebook</li> </ul>	<p><b>Benchmark Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Quarterly Portfolio</li> <li>● NJSLA</li> </ul>	<p><b>Summative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Chapter/Unit Test</li> <li>● Quizzes</li> <li>● Presentations</li> <li>● iReady quizzes</li> <li>● NJSLA</li> </ul>	<p><b>Alternative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Authentic Performance Tasks</li> <li>● Unit Projects</li> </ul>

- Exit passes

## Modifications & Reflections

### **Suggested Options for Differentiation**

#### *English Language Learners*

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

#### *Students at Risk of Failure*

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

#### *Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

#### *504*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration

- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*Gifted & Talented*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

**7th Grade Unit 8: Statistics and Probability**

**Course: 7th Grade Non-Track**

**Timeframe: 20 days**

**Unit Essential Questions:**

- How do we use random samples of populations to make predictions?
- How do we compare two populations using measures of center and variability?
- How can we measure if an event is likely or not likely to occur?
- How can we develop statistical models to help to determine probabilities of events and reason about discrepancies?

**Unit Enduring Understandings:**

*Students will understand to/that...*

- the probability of a chance event is a number between 0 and 1, with larger numbers indicating greater likelihood and probabilities near 0 indicating an unlikely event.
- collect data to approximate the probability of a chance event.
- develop uniform and non-uniform probability models, use them to find probabilities, and compare probabilities from a model to observed frequencies.
- represent sample spaces and find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

	<ul style="list-style-type: none"> <li>● that statistics can be used to gain information about a population by examining a sample of the population, and understand the role of random sampling in producing valid inferences.</li> <li>● use data from a random sample to draw inferences about a population and generate multiple samples to gauge the variation in predictions.</li> <li>● use measures of center and measures of variability for data from random samples to make informal inferences and compare two populations.</li> </ul>
<p><b>Primary Interdisciplinary Connections:</b>  Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:</p> <ul style="list-style-type: none"> <li>● <a href="#">NJSLSA.R4</a></li> <li>● <a href="#">NJSLSA.R7</a></li> <li>● <a href="#">NJSLSA.R8</a></li> <li>● <a href="#">8.1.8.D.4</a></li> <li>● <a href="#">8.1.8.E.1</a></li> </ul>	<p><b>21st Century Career Ready Practices:</b>  Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:</p> <ul style="list-style-type: none"> <li>● <a href="#">CRP2</a> - Apply appropriate academic and technical skills.</li> <li>● <a href="#">CRP4</a> - Communicate clearly and effectively and with reason.</li> <li>● <a href="#">CRP8</a> - Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>● <a href="#">CRP11</a> - Use technology to enhance productivity.</li> <li>● <a href="#">CRP12</a> - Work productively in teams while using cultural global competence.</li> <li>● <b>9.1.8.D.2</b> Differentiate among various savings tools and how to use them most effectively.</li> <li>● <b>9.1.8.D.3</b> Differentiate among various investment options</li> </ul>
<p><b>Standards for Mathematical Practices:</b>  The following <a href="#">Standards for Mathematical Practice</a> will be covered throughout the unit:</p> <ul style="list-style-type: none"> <li>● MP.1 - Make sense of problems and persevere in solving them.</li> <li>● MP.2 - Reason abstractly and quantitatively.</li> <li>● MP.3 - Construct viable arguments and critique the reasoning of others.</li> <li>● MP.4 - Model with Mathematics.</li> <li>● MP.5 - Use appropriate tools strategically.</li> <li>● MP.6 - Attend to precision.</li> <li>● MP.7 - Look for and make use of structure.</li> <li>● MP.8 - Look for and express regularity in repeated reasoning.</li> </ul>	

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
7.SP.A.1	<ul style="list-style-type: none"> <li>WALT statistics is used to gain information about a population by examining a sample of the population</li> <li>WALT generalizations about a population from a sample are valid only if the sample is representative of that population</li> <li>WALT random sampling tends to produce representative samples of the population and support valid inferences</li> </ul>	<ul style="list-style-type: none"> <li>Big Ideas Math - Red               <ul style="list-style-type: none"> <li>Sections 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7</li> </ul> </li> <li>i-Ready</li> <li>Illustrative Mathematics               <ul style="list-style-type: none"> <li>7.SP.1 <a href="https://tasks.illustrativemathematics.org/content-standards/7/SP/A/1/tasks">https://tasks.illustrativemathematics.org/content-standards/7/SP/A/1/tasks</a></li> <li>7.SP.2 <a href="https://tasks.illustrativemathematics.org/content-standards/7/SP/A/2/tasks">https://tasks.illustrativemathematics.org/content-standards/7/SP/A/2/tasks</a></li> <li>7.SP.3 <a href="https://tasks.illustrativemathematics.org/content-standards/7/SP/B/3/tasks">https://tasks.illustrativemathematics.org/content-standards/7/SP/B/3/tasks</a></li> <li>7.SP.4 <a href="https://tasks.illustrativemathematics.org/content-standards/7/SP/B/4/tasks">https://tasks.illustrativemathematics.org/content-standards/7/SP/B/4/tasks</a></li> <li>7.SP.6 <a href="https://tasks.illustrativemathematics.org/content-standards/7/SP/C/6/tasks">https://tasks.illustrativemathematics.org/content-standards/7/SP/C/6/tasks</a></li> <li>7.SP.7 <a href="https://tasks.illustrativemathematics.org/content-standards/7/SP/C/7/tasks">https://tasks.illustrativemathematics.org/content-standards/7/SP/C/7/tasks</a></li> <li>7.SP.8 <a href="https://tasks.illustrativemathematics.org/content-standards/7/SP/C/8/tasks">https://tasks.illustrativemathematics.org/content-standards/7/SP/C/8/tasks</a></li> </ul> </li> <li>Activities on the Team Drive:               <ul style="list-style-type: none"> <li></li> </ul> </li> </ul>
7.SP.A.2	<ul style="list-style-type: none"> <li>WALT use data from a random sample to make inferences about a population with an unknown characteristic</li> <li>WALT generate multiple samples, or simulated samples, of the same size to gauge variation in estimates or predictions</li> </ul>	
7.SP.3	<ul style="list-style-type: none"> <li>WALT informally gauge the extent of visual overlap between two numerical distributions with similar variabilities, measure the difference between the centers and express the difference as a multiple of the measure of variability</li> </ul>	
7.SP.4	<ul style="list-style-type: none"> <li>WALT draw informal comparative inferences about two populations by using the measures of center (mean and median) and measures of variability (interquartile range and mean absolute deviation) from random samples**</li> </ul>	

<p><b>7.SP.5</b></p>	<ul style="list-style-type: none"> <li>● WALT the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around <math>\frac{1}{2}</math> indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event</li> </ul>	<ul style="list-style-type: none"> <li>● NJSLA Released Items</li> <li>● Khan Academy <ul style="list-style-type: none"> <li>○</li> </ul> </li> </ul>
<p><b>7.SP.6</b></p>	<ul style="list-style-type: none"> <li>● WALT approximate the probability of a chance event by collecting data on the chance process that it produces observing long run relative frequency</li> <li>● WALT predict the approximate relative frequency</li> </ul>	
<p><b>7.SP.7</b></p>	<ul style="list-style-type: none"> <li>● WALT develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events</li> <li>● WALT develop a probability model, which may not be uniform, by observing frequencies in data generated from a chance process</li> <li>● WALT compare probabilities from a model to observed frequencies and explain possible sources of the discrepancy if the agreement is not good</li> </ul>	
<p><b>7.SP.8</b></p>	<ul style="list-style-type: none"> <li>● WALT the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs</li> <li>● WALT represent the sample space for a compound event using various methods such as, organized lists, tables, and tree diagrams</li> <li>● WALT identify the outcomes in the sample space which compose an event that has been</li> </ul>	

	described in everyday language <ul style="list-style-type: none"> <li>WALT design and use a simulation to generate frequencies for compound events</li> </ul>	
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Evidence of Learning			
Assessment			
<b>Formative Assessments may include:</b> <ul style="list-style-type: none"> <li>Observation</li> <li>Homework</li> <li>Class participation</li> <li>Whiteboards/communications</li> <li>Do-Now</li> <li>Notebook</li> <li>Exit passes</li> </ul>	<b>Benchmark Assessments may include:</b> <ul style="list-style-type: none"> <li>Quarterly Portfolio</li> <li>NJSLA</li> </ul>	<b>Summative Assessments may include:</b> <ul style="list-style-type: none"> <li>Chapter/Unit Test</li> <li>Quizzes</li> <li>Presentations</li> <li>iReady quizzes</li> <li>NJSLA</li> </ul>	<b>Alternative Assessments may include:</b> <ul style="list-style-type: none"> <li>Authentic Performance Tasks</li> <li>Unit Projects</li> </ul>
Modifications & Reflections			
<b>Suggested Options for Differentiation</b> <p><i>English Language Learners</i></p> <ul style="list-style-type: none"> <li>Peer tutoring</li> <li>Manipulatives</li> <li>Use of Home Language</li> <li>Limiting Concepts or Vocabulary</li> <li>Providing Visuals</li> </ul> <p><i>Students at Risk of Failure</i></p> <ul style="list-style-type: none"> <li>Extended Time</li> <li>Flexible Grouping</li> <li>Small Group Instruction</li> <li>Peer Buddies</li> </ul>			



- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

*Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*504*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

*Gifted & Talented*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

**Course: 7th Grade Non-Track**

**Timeframe: 15 days**

**Unit Essential Questions:**

- How do we find circumference and area of a circle using the relationship between them?
- How do we solve real-world and mathematical problems involving area of two-dimensional objects composed of triangles, quadrilaterals, and polygons?
- What are supplementary angles, complementary angles, vertical angles, and adjacent angles?
- How can we use multi-step problems to write and solve simple equations for an unknown angle using figure facts about supplementary, complementary, vertical and adjacent angles?

**Unit Enduring Understandings:**

*Students will understand to/that...*

- finding area and circumference of circles.
- solve real-world and mathematical problems involving area of two dimensional objects composed of triangles, quadrilaterals and polygons.
- return to writing and solving simple equations to conclude the unit, using facts about supplementary, complementary, vertical, and adjacent angles in multi-step problems.

**Primary Interdisciplinary Connections:**

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

- [NJSLSA.R4](#)
- [NJSLSA.R7](#)
- [NJSLSA.R8](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

**21st Century Career Ready Practices:**

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [CRP8](#) - Utilize critical thinking to make sense of problems and persevere in solving them.
- [CRP11](#) - Use technology to enhance productivity.
- [CRP12](#) - Work productively in teams while using cultural global competence.
- **9.2.8.B.2** Develop a Personalized Student Learning Plan with the assistance of an adult mentor that includes information about career areas of interest, goals and an educational plan.

**Standards for Mathematical Practices:**

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- MP.1 - Make sense of problems and persevere in solving them.
- MP.2 - Reason abstractly and quantitatively.

- MP.3 - Construct viable arguments and critique the reasoning of others.
- MP.4 - Model with Mathematics.
- MP.5 - Use appropriate tools strategically.
- MP.6 - Attend to precision.
- MP.7 - Look for and make use of structure.
- MP.8 - Look for and express regularity in repeated reasoning.

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
<b>7.G.B.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.</b>	<ul style="list-style-type: none"> <li>● WALT know the formulas for area and circumference of a circle</li> <li>● WALT solve problems using the formula for circumference of a circle and for the area of a circle</li> <li>● WALT informally derive the relationship between the circumference and area of a circle</li> </ul>	<ul style="list-style-type: none"> <li>● Big Ideas Math - Red <ul style="list-style-type: none"> <li>● Sections 8.1, 8.2, 8.3, 8.4</li> </ul> </li> <li>● i-Ready</li> <li>● Illustrative Mathematics <ul style="list-style-type: none"> <li>○ 7.G.4 <a href="https://tasks.illustrativemathematics.org/content-standards/7/G/B/4/tasks">https://tasks.illustrativemathematics.org/content-standards/7/G/B/4/tasks</a></li> <li>○ 7.G.6 <a href="https://tasks.illustrativemathematics.org/content-standards/7/G/B/6/tasks">https://tasks.illustrativemathematics.org/content-standards/7/G/B/6/tasks</a></li> </ul> </li> </ul>
<b>7.G.B.6 Solve real-world and mathematical problems involving area, volume and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</b>	<ul style="list-style-type: none"> <li>● WALT solve real-world and mathematical problems involving area of two-dimensional objects composed of triangles, quadrilaterals, and polygons</li> </ul>	<ul style="list-style-type: none"> <li>● Activities on the Team Drive: <ul style="list-style-type: none"> <li>○</li> </ul> </li> <li>● NJSLA Released Items</li> <li>● Khan Academy <ul style="list-style-type: none"> <li>○</li> </ul> </li> </ul>

<p><b>7.G.B.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.</b></p>	<ul style="list-style-type: none"> <li>● WALT supplementary angles are two angles whose sum is 180 degrees and complementary angles are two angles whose sum is 90 degrees</li> <li>● WALT vertical angles, the pairs of opposite angles made by two intersecting lines, have equal measures</li> <li>● WALT adjacent angles are two angles that share a vertex and a side</li> <li>● WALT use facts about supplementary, complementary, vertical and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure</li> </ul>	
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Evidence of Learning			
Assessment			
<p><b>Formative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Observation</li> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communications</li> <li>● Do-Now</li> <li>● Notebook</li> <li>● Exit passes</li> </ul>	<p><b>Benchmark Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Quarterly Exam</li> <li>● NJSLA</li> </ul>	<p><b>Summative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Chapter/Unit Test</li> <li>● Quizzes</li> <li>● Presentations</li> <li>● iReady quizzes</li> <li>● NJSLA</li> </ul>	<p><b>Alternative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Authentic Performance Tasks</li> <li>● Unit Projects</li> </ul>

## Modifications & Reflections

### Suggested Options for Differentiation

#### *English Language Learners*

- Peer tutoring
- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

#### *Students at Risk of Failure*

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
- Graphic Organizers
- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

#### *Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

#### *504*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities

- Group Projects
- Tiered Activities

*Gifted & Talented*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
- Student Driven Activities
- Group Projects
- Tiered Activities

**7th Grade Unit 10: Surface Area and Volume**

**Course: 7th Grade Non-Track**

**Timeframe: 15 days**

**Unit Essential Questions:**

- How do we find circumference and area of a circle using the relationship between them?
- How do we solve real-world and mathematical problems involving area of two-dimensional objects composed of triangles, quadrilaterals, and polygons using area and surface area?

**Unit Enduring Understandings:**

*Students will understand how to/that...*

- solve real-world and mathematical problems involving volume and surface area of three-dimensional objects.

**Primary Interdisciplinary Connections:**

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

- [NJSLSA.R4](#)
- [NJSLSA.R7](#)
- [NJSLSA.R8](#)

**21st Century Career Ready Practices:**

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.

<ul style="list-style-type: none"> <li>● <a href="#">8.1.8.D.4</a></li> <li>● <a href="#">8.1.8.E.1</a></li> </ul>	<ul style="list-style-type: none"> <li>● <a href="#">CRP8</a> - Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>● <a href="#">CRP11</a> - Use technology to enhance productivity.</li> <li>● <a href="#">CRP12</a> - Work productively in teams while using cultural global competence.</li> <li>● <b>9.2.8.B.2</b> Develop a Personalized Student Learning Plan with the assistance of an adult mentor that includes information about career areas of interest, goals and an educational plan.</li> </ul>
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**Standards for Mathematical Practices:**

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- MP.1 - Make sense of problems and persevere in solving them.
- MP.2 - Reason abstractly and quantitatively.
- MP.3 - Construct viable arguments and critique the reasoning of others.
- MP.4 - Model with Mathematics.
- MP.5 - Use appropriate tools strategically.
- MP.6 - Attend to precision.
- MP.7 - Look for and make use of structure.
- MP.8 - Look for and express regularity in repeated reasoning.

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
<p><b>7.G.B.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.</b></p>	<ul style="list-style-type: none"> <li>● WALT know the formulas for area and circumference of a circle</li> <li>● WALT solve problems using the formula for circumference of a circle and for the area of a circle</li> <li>● WALT informally derive the relationship between the circumference and area of a circle</li> </ul>	<ul style="list-style-type: none"> <li>● Big Ideas Math - Red <ul style="list-style-type: none"> <li>○ Sections 9.1, 9.2, 9.3, 9.4, 9.5</li> </ul> </li> <li>● i-Ready</li> <li>● Illustrative Mathematics <ul style="list-style-type: none"> <li>○ 7.G.4 <a href="https://tasks.illustrativemathematics.org/content-standards/7/G/B/4/tasks">https://tasks.illustrativemathematics.org/content-standards/7/G/B/4/tasks</a></li> <li>○ 7.G.6 <a href="https://tasks.illustrativemathematics.org/">https://tasks.illustrativemathematics.org/</a></li> </ul> </li> </ul>

<p><b>7.G.B.6 Solve real-world and mathematical problems involving area, volume and surface area of two and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</b></p>	<ul style="list-style-type: none"> <li>● WALT solve real-world and mathematical problems involving area of two-dimensional objects composed of triangles, quadrilaterals, and polygons</li> </ul>	<p><a href="https://content-standards/7/G/B/6/tasks">content-standards/7/G/B/6/tasks</a></p> <ul style="list-style-type: none"> <li>● Activities on the Team Drive: <ul style="list-style-type: none"> <li>○</li> </ul> </li> <li>● NJSLA Released Items</li> <li>● Khan Academy <ul style="list-style-type: none"> <li>○</li> </ul> </li> </ul>
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<b>Evidence of Learning</b>			
<b>Assessment</b>			
<p><b>Formative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Observation</li> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communications</li> <li>● Do-Now</li> <li>● Notebook</li> <li>● Exit passes</li> </ul>	<p><b>Benchmark Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Quarterly Exam</li> <li>● End of the Year i-Ready Diagnostic</li> <li>● NJSLA</li> </ul>	<p><b>Summative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Chapter/Unit Test</li> <li>● Quizzes</li> <li>● Presentations</li> <li>● iReady quizzes</li> <li>● NJSLA</li> </ul>	<p><b>Alternative Assessments may include:</b></p> <ul style="list-style-type: none"> <li>● Authentic Performance Tasks</li> <li>● Unit Projects</li> </ul>
<b>Modifications &amp; Reflections</b>			
<p><b>Suggested Options for Differentiation</b>  <i>English Language Learners</i></p> <ul style="list-style-type: none"> <li>● Peer tutoring</li> </ul>			



- Manipulatives
- Use of Home Language
- Limiting Concepts or Vocabulary
- Providing Visuals

*Students at Risk of Failure*

- Extended Time
- Flexible Grouping
- Small Group Instruction
- Peer Buddies
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- Chunking Information
- Scaffolded Questioning
- Tiered Activities
- Centers in Academic Activity

*Special Education*

- Extension activities
- Opportunities for Critical Thinking
- Problem Solving/Design Challenges
- Technology Integration
- Student Choice Activities
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*504*

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## 7th Grade Unit 11: Constructions

Course: 7th Grade Non-Track

Timeframe: 15 days

### Unit Essential Questions:

- How do we create scale drawings?
- How can we determine and create unique triangles using three side or angle measures?
- How can we describe the two-dimensional figures that result from slicing three-dimensional figures?

### Unit Enduring Understandings:

*Students will understand how to/that...*

- use proportions to solve problems involving scale drawings of geometric figures.
- describe the two-dimensional figures that result from slicing three-dimensional figures and draw (with technology, with a ruler and protractor, as well as freehand) geometric shapes with given conditions.
- focus on constructing triangles and noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

### Primary Interdisciplinary Connections:

Infused within the unit are connections to the content standards for English Language Arts and Technology, specifically:

- [NJSLSA.R4](#)
- [NJSLSA.R7](#)
- [NJSLSA.R8](#)
- [8.1.8.D.4](#)
- [8.1.8.E.1](#)

### 21st Century Career Ready Practices:

Through well-planned, student-based instruction models, students will develop the attributes that will prepare them for life as citizens and workers in the 21st century:

- [CRP2](#) - Apply appropriate academic and technical skills.
- [CRP4](#) - Communicate clearly and effectively and with reason.
- [CRP8](#) - Utilize critical thinking to make sense of problems and persevere in solving them.

- [CRP11](#) - Use technology to enhance productivity.
- [CRP12](#) - Work productively in teams while using cultural global competence.
- **9.2.8.B.2** Develop a Personalized Student Learning Plan with the assistance of an adult mentor that includes information about career areas of interest, goals and an educational plan.

**Standards for Mathematical Practices:**

The following [Standards for Mathematical Practice](#) will be covered throughout the unit:

- MP.1 - Make sense of problems and persevere in solving them.
- MP.2 - Reason abstractly and quantitatively.
- MP.3 - Construct viable arguments and critique the reasoning of others.
- MP.4 - Model with Mathematics.
- MP.5 - Use appropriate tools strategically.
- MP.6 - Attend to precision.
- MP.7 - Look for and make use of structure.
- MP.8 - Look for and express regularity in repeated reasoning.

Learning Targets		
Content Standard	Student Learning Objectives	Activities & Resources
<b>7.G.A.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.</b>	<ul style="list-style-type: none"> <li>● WALT solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale</li> </ul>	<ul style="list-style-type: none"> <li>● Big Ideas Math - Red               <ul style="list-style-type: none"> <li>● Sections 7.1, 7.2, 7.3, 7.4</li> </ul> </li> <li>● i-Ready</li> <li>● Illustrative Mathematics               <ul style="list-style-type: none"> <li>○ 7.G.1 <a href="https://tasks.illustrativemathematics.org/content-standards/7/G/A/1/tasks">https://tasks.illustrativemathematics.org/content-standards/7/G/A/1/tasks</a></li> <li>○ 7.G.2 <a href="https://tasks.illustrativemathematics.org/content-standards/7/G/A/2/tasks">https://tasks.illustrativemathematics.org/content-standards/7/G/A/2/tasks</a></li> <li>○ 7.G.3</li> </ul> </li> </ul>

<p><b>7.G.A.2 Draw (with technology, with ruler and protractor, as well as freehand) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</b></p>	<ul style="list-style-type: none"> <li>● WALT draw geometric shapes with given conditions with technology, with rulers and protractors, as well as freehand</li> <li>● WALT construct triangles from three measures of angles or sides using technology and notice when the conditions determine a unique triangle, more than one triangle, or no triangle</li> <li>● WALT construct triangles from three measures of angles or sides using rulers and protractors and notice when the conditions determine a unique triangle, more than one triangle, or no triangle</li> </ul>	<p><a href="https://tasks.illustrativemathematics.org/content-standards/7/G/A/3/tasks">https://tasks.illustrativemathematics.org/content-standards/7/G/A/3/tasks</a></p> <ul style="list-style-type: none"> <li>● Activities on the Team Drive: <ul style="list-style-type: none"> <li>○</li> </ul> </li> <li>● NJSLA Released Items</li> <li>● Khan Academy <ul style="list-style-type: none"> <li>○</li> </ul> </li> </ul>
<p><b>7.G.A.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.</b></p>	<ul style="list-style-type: none"> <li>● WALT describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids</li> </ul>	

<b>Evidence of Learning</b>			
<b>Assessment</b>			
<b>Formative Assessments may include:</b>	<b>Benchmark Assessments may include:</b>	<b>Summative Assessments may include:</b>	<b>Alternative Assessments may include:</b>

<ul style="list-style-type: none"> <li>● Observation</li> <li>● Homework</li> <li>● Class participation</li> <li>● Whiteboards/communications</li> <li>● Do-Now</li> <li>● Notebook</li> <li>● Exit passes</li> </ul>	<ul style="list-style-type: none"> <li>● Quarterly Exam</li> <li>● NJSLA</li> </ul>	<ul style="list-style-type: none"> <li>● Chapter/Unit Test</li> <li>● Quizzes</li> <li>● Presentations</li> <li>● iReady quizzes</li> <li>● NJSLA</li> </ul>	<ul style="list-style-type: none"> <li>● Authentic Performance Tasks</li> <li>● Unit Projects</li> </ul>
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**Modifications & Reflections**

**Suggested Options for Differentiation**

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504

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