

Quinton Township School District
Math
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	1	Unit Title:	Topic 1: Rational Number Operations	Pacing:	16 days
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Unit Summary: Topic 1 exposes students to integers and integer operations. For a given set of integers there are relationships between positives and negative numbers that are always true, and these are the rules that govern arithmetic and algebra. Students will represent addition and subtraction on a horizontal and vertical number line diagram and learn rules for multiplying and dividing integers. They will be able to apply and extend previous understandings of fractions to add, subtract, multiply, and divide rational numbers. They will apply these concepts to solve real world problems including the four operations with rational numbers.

Objectives:

- Explain how integers and their opposites are related.
- Identify rational numbers and write them in decimal form.
- Add positive and negative integers.
- Model integer addition in real-life applications.
- Understand subtraction of integers as adding the additive inverse.
- Use properties of operations to add and subtract rational numbers.
- Multiply positive and negative integers.
- Apply integer multiplication to real-life applications.
- Find the product of rational numbers.
- Explain how to divide integers by applying the rules of multiplying integers.
- Determine equivalencies among integer quotients.
- Understand how the signs of integers in a multiplication sentence relate to the signs in a related division statement.
- Decide which operations to use to solve problems.
- Use precision when solving problems with rational numbers.
- Use mathematical modeling to represent a problem situation and to propose a solution.
- Test and verify the appropriateness of their math models.

Essential Questions:

- How can the properties of operations be used to solve problems involving integers and rational numbers?
- How are integers and their opposites related?
- How are rational numbers written as decimals?
- How do you use what you know about absolute value to add integers?
- How is subtracting integers related to adding integers?
- How are adding and subtracting integers related to adding and subtracting other rational numbers?
- How do the signs of factors affect their product?
- How is multiplying rational numbers like multiplying integers?
- How does dividing integers relate to multiplying integers?
- How is dividing rational numbers like dividing integers?
- How do you decide which rational number operations to use to solve problems?

New Jersey Student Learning Standards

Mathematics Learning Targets: 7.NS.A.1a, 7.NS.A.1b, 7.NS.A.1c, 7.NS.A.1d, 7.NS.A.2a, 7.NS.A.2b, 7.NS.A.2c, 7.NS.A.2d, 7.NS.A.3, 7.EE.B.3

Mathematics Practices: MP.4, MP.7, MP.6, MP.8

Cross Curricular Standards :: 9.4.8.TL.2, 8.1.8.DA.1: RI.TS.7.4,.

Overview of Activities**Teacher's Guide/ Resources****Core Instructional Materials****Technology Infusion**

<p>1.1 - Relate Integers and Their Opposites</p> <p>1.2 - Understand Rational Numbers</p> <p>1.3 - Add Integers</p> <p>1.4 - Subtract Integers</p> <p>1.5 - Add and Subtract Rational Numbers</p> <p>1.6 - Multiply Integers</p> <p>1.7 - Multiply Rational Numbers</p> <p>1.8- Divide Integers</p> <p>1.9- Divide Rational Numbers</p> <p>1.10-Solving Problems with Rational Numbers</p>	<p><i>enVision</i> Mathematics</p> <p>*Daily Review</p> <p>*Reteach to Build Understanding</p> <p>*Build Mathematical Literacy</p> <p>*Enrichment</p> <p>*<i>enVision</i> Stem Activity</p> <p>*Problem Solving Leveled-Reading Mat</p> <p>*Problem-Solving Reading Activity</p> <p>*Digital Math Tools Activities</p> <p>*Language Support Handguide</p> <p>*Listen and Look For</p> <p>*Home-School Connection</p>	<p>Student Textbook</p> <p>Additional Practice Workbook</p> <p>Notebook</p> <p>Pen/Pencil</p> <p>Index Cards</p>	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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Formative Assessment Plan	Summative Assessment Plan
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 1 Performance Task/Assessment - MAP benchmark test - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Convert Between Fractions and Decimals - Add and Subtract Rational Numbers - Multiply and Divide Rational Numbers
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	1	Unit Title:	Topic 2: Real Numbers	Pacing:	15 days
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Unit Summary: During Topic 2, students will build on their understanding of real numbers in order to classify numbers as rational or irrational. Students will understand the relationship between squares, square roots, cubes, and cube roots. Students will understand the purpose of scientific notation and how to perform operations in scientific notation. Students will discover integer exponent relationships to develop properties to perform operations with integer exponents.

Objectives:

- Locate repeating decimals on a number line.
- Write repeating decimals as fractions.
- Classify a number as rational or irrational.
- Understand the concepts of square root and perfect squares.
- Approximate square roots by using perfect squares.
- Compare and order rational and irrational numbers.
- Evaluate square roots and cube roots to solve problems.
- Evaluate perfect squares and perfect cubes.
- Solve equations involving perfect squares or cubes.
- Solve equations involving imperfect squares or cubes.
- Multiply and divide expressions with integer exponents.
- Find the power of a power.
- Simplify exponential expressions using the Zero Exponent Property and the Negative Exponent Property.
- Estimate and compare very large and very small quantities using powers of 10.
- Write very large and very small quantities using powers of 10.
- Convert scientific notation to standard form.
- Perform operations with numbers in scientific notation.

Essential Questions:

- How can you write repeating decimals as fractions?
- How is an irrational number different from a rational number?
- How can you compare and order rational and irrational numbers?
- How do you evaluate cube roots and square roots?
- How can you solve equations with squares and cubes?
- How do properties of integer exponents help you write equivalent expressions?
- What do the Zero Exponent and Negative Exponent Properties mean?
- When would you use a power of 10 to estimate a quantity?
- What is scientific notation and why is it used?
- How does using scientific notation help when computing with very large or very small numbers?

New Jersey Student Learning Standards

Mathematics Learning Targets: 8.NS.A.1, 8.NS.A.2, 8.NS.A.3, 8.EE.A.1, 8.EE.A.2, 8.EE.A.2a, 8.EE.A.2b, 8.EE.A.3, 8.EE.A.4

Mathematics Practices: MP.1, MP.2, MP.3, MP.6, MP.7

Cross Curricular Standards: 9.4.8.TL.2, 9.4.8.TL.3: 8.1.8.DA.1: RI.CR.8.1, SL.PE.8.1

Overview of Activities

Teacher's Guide/ Resources

Core Instructional Materials

Technology Infusion

<p>2.1 - Rational Numbers as Decimals</p> <p>2.2 - Understand Irrational Numbers</p> <p>2.3 - Compare and Order Real Numbers</p> <p>2.4 - Evaluate Square Roots and Cube Roots</p> <p>2.5 - Solve Equations Using Square Roots and Cube Roots</p> <p>2.6 - Use Properties of Integer Exponents</p> <p>2.7 - More Properties of Exponents</p> <p>2.8- Use Powers of 10 to Estimate Quantities</p> <p>2.9- Understand Scientific Notation</p> <p>2.10-Operations with Number in Scientific Notation</p>	<p><i>enVision</i> Mathematics</p> <p>*Daily Review</p> <p>*Reteach to Build Understanding</p> <p>*Build Mathematical Literacy</p> <p>*Enrichment</p> <p>*<i>enVision</i> Stem Activity</p> <p>*Problem Solving Leveled-Reading Mat</p> <p>*Problem-Solving Reading Activity</p> <p>*Digital Math Tools Activities</p> <p>*Language Support Handguide</p> <p>*Listen and Look For</p> <p>*Home-School Connection</p>	<p>Student Textbook</p> <p>Additional Practice Workbook</p> <p>Notebook</p> <p>Pen/Pencil</p> <p>Index Cards</p>	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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Formative Assessment Plan	Summative Assessment Plan
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 2 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Identify Rational Numbers - Compare and Order Rational Numbers - Square Roots/Cube Roots - Exponent Properties - Reading and Writing in Scientific Notation - Operations in Scientific Notation
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	1	Unit Title:	Topic 3: Analyze and Use Proportional Relationships	Pacing:	14 days
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Unit Summary: In Topic 3, students will analyze proportional relationships and use them to solve real world and mathematical problems. Students will be able to use ratios and proportions to solve problems, including those with tables and graphs.

Objectives:

- Use ratios and rates to describe the relationship between two quantities.
- Find equivalent ratios and use unit rates to solve multi-step problems.
- Find unit rates with ratios of fractions.
- Use unit rates to solve multi-step problems.
- Determine whether quantities are proportional by testing for equivalent ratios.
- Use the constant or proportionality to write equations that represent proportional relationships.
- Use equations to solve problems involving proportional relationships.
- Use mathematical modeling to represent a problem situation and to propose a solution.
- Test and verify the appropriateness of math models.
- Explain why the results from mathematical models may not align exactly to the problem situation.
- Use a graph to recognize proportionality.
- Identify a constant of proportionality from a graph.
- Interpret a point on a graph of a proportional relationship.
- Explain whether a situation represents a proportional relationship.
- Explain whether a situation represents a proportional relationship.
- Use representation to find entry points into a problem.

Essential Questions:

- How are ratios, rates and unit rates used to solve problems?
- Why is it useful to write a ratio of fractions as a unit rate?
- How are proportional quantities described by equivalent ratios?
- How can you represent a proportional relationship with an equation?
- What does the graph of proportional relationship look like?
- How can proportional reasoning help solve a problem?

New Jersey Student Learning Standards

Mathematics Learning Targets: 7.RP.A.1, 7.RP.A.2a, 7.RP.A.2b, 7.RP.A.3

Mathematics Practices: MP.2, MP.3

Cross Curricular Standards: 9.2.8.CAP.20: 8.1.8.DA.1: RI.TS.7.4.

Overview of Activities	Teacher’s Guide/ Resources	Core Instructional Materials	Technology Infusion
3.1 - Connect Ratios, Rates, and Unit Rates 3.2 - Determine Unit Rates with Ratios of Fractions 3.3 - Understand Proportional Relationships:Equivalent Ratios 3.4 - Describe Proportional Relationships: Constant of Proportionality 3.5 - Graph Proportional Relationships 3.6 - Apply Proportional Reasoning to Solve Problems	<i>enVision</i> Mathematics *Daily Review *Reteach to Build Understanding *Build Mathematical Literacy *Enrichment * <i>enVision</i> Stem Activity *Problem Solving Leveled Reading Mat *Problem-Solving Reading Activity *Digital Math Tools Activities *Language Support Handguide *Listen and Look For *Home-School Connection	Student Textbook Additional Practice Workbook Notebook Pen/Pencil Index Cards	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today’s Challenge ● Adaptive Practice ● Desmos ● IXL

Formative Assessment Plan	Summative Assessment Plan
<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 3 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Determine Unit Rates - Compare Ratios and Rates - Determine Proportionality - Solve problems using equations in the form $y=kx$ - Graphs of Proportional Relationships

Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: **Technology** **Careers** **Interdisciplinary Studies**

Marking Period:	2	Unit Title:	Topic 4: Analyze and Solve Percent Problems	Pacing:	14 Days
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Unit Summary: Topic 4 focuses on using the percent proportion and percent equation to find parts, wholes, and percents. Students will use percents in financial situations involving percents of increase, percentages of decrease, percent of discounts to find prices of items, percent of markups to find selling prices of items and the simple interest formula.

Objectives:

- Understand that equivalent rates can be used to find percentages.
- Analyze percentages of numbers in a real world context.
- Construct a percent proportion.
- Use a percent proportion to find an unknown part, whole, or percent.
- Understand the relationship between proportional reasoning and percent.
- Interpret the results of a percent equation in a real-life scenario.
- Solve real-world problems involving percent change and percent error.
- Understand the percent equation and the different ways it can be used.
- Use mathematical modeling to represent a problem situation and to propose a solution.
- Test and verify the appropriateness of their mathematical models.
- Understand and calculate markups and markdowns.
- Relate percent change to percent markup and markdown.
- Identify the parts of interest problems and how the values are related.
- Understand what simple interest is and how it is calculated.

Essential Questions:

- How do percentages show the relationship between quantities?
- How does proportional reasoning relate to percents?
- How are percent problems related to proportional reasoning?
- How is finding percent error similar to finding percent change?
- How are the concepts of percent markup and percent markdown related to the percent equation?
- How does simple interest show proportional reasoning and relate to the percent equation?

New Jersey Student Learning Standards

Mathematics Learning Targets: 7.RP.A.2c, 7.RP.A.3

Mathematics Practices: MP.2, MP.7

Cross Curricular Standards: 9.1.8.CDM.1, 9.1.8.CDM.2, 9.1.8.EG.3,9.1.8.FI.4 : 8.1.8.DA.1: RI.TS.7.4.

Overview of Activities	Teacher’s Guide/ Resources	Core Instructional Materials	Technology Infusion
4.1 - Analyze Percents of Numbers 4.2 - Connect Percent and Proportion 4.3 - Represent and Use the Percent Equation 4.4 - Solve Percent Change and Percent Error Problems 4.5 - Solve Markup and Markdown Problems 4.6 - Solve Simple Interest Problems	<i>enVision</i> Mathematics *Daily Review *Reteach to Build Understanding *Build Mathematical Literacy *Enrichment * <i>enVision</i> Stem Activity *Problem Solving Leveled Reading Mat *Problem-Solving Reading Activity *Digital Math Tools Activities *Language Support Handguide *Listen and Look For *Home-School Connection	Student Textbook Additional Practice Workbook Notebook Pen/Pencil Index Cards paper colored markers	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today’s Challenge ● Adaptive Practice ● Desmos ● IXL

Formative Assessment Plan	Summative Assessment Plan
<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 4 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Find Percent of a Number - Determine the percent, the part, or the whole - Percent of Change - Percent Error - Find markups and markdowns - Simple Interest

Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: **Technology** **Careers** **Interdisciplinary Studies**

Marking Period:	2	Unit Title:	Topic 5: Generate Equivalent Expressions	Pacing:	16 days
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Unit Summary: In Topic 5, students will use properties of operations to generate equivalent expressions. They will also solve real-life and mathematical problems using numerical and algebraic expressions.

Objectives:

- Understand how variables are used to represent unknown values in problems.
- Recognize when two expressions are equivalent.
- Use properties of operations to write equivalent expressions.
- Combine like integer and rational terms.
- Use the Distributive Property to expand expressions.
- Understanding expanding an expression is the reverse of factoring.
- Identify the GCF of algebraic terms in expressions.
- Use mathematical modeling to represent a problem situation and to propose a solution.
- Test and verify the appropriateness of their mathematical models.
- Explain why the results from their mathematical models may not align exactly to the problem situation.
- Use properties of operations to add expressions.
- Model addition of expressions in real-life applications.
- Use properties of operations to subtract expressions.
- Model subtraction of expressions in real-life applications.
- Write equivalent expressions to show how quantities are related in real-life applications.

Essential Questions:

- How can algebraic expressions be used to represent and solve problems?
- What are equivalent expressions?
- How are properties of operations used to simplify expressions?
- How does the value of an expression change when it is expanded?
- How does the distributive property relate to factoring expressions?
- How can properties of operations be used to add expressions?
- How can properties of operations be used to subtract expressions?
- How can writing equivalent expressions show how quantities are related?

New Jersey Student Learning Standards

Mathematics Learning Targets: 7.EE.A.1, 7.EE.A.2, 7.EE.B.3, 7.EE.B.4

Mathematics Practices: MP.2, MP.7

Cross Curricular Standards: 9.4.8.TL.2: 8.1.8.DA.1: TS.7.4.

Overview of Activities	Teacher’s Guide/ Resources	Core Instructional Materials	Technology Infusion
5.1 - Write and Evaluate Algebraic Expressions 5.2 - Generate Equivalent Expressions 5.3 - Simplify Expressions 5.4 - Expand Expressions 5.5 - Factor Expressions 5.6 - Add Expressions 5.7 - Subtract Expressions 5.8 - Analyze Equivalent Expressions	<i>enVision</i> Mathematics *Daily Review *Reteach to Build Understanding *Build Mathematical Literacy *Enrichment * <i>enVision</i> Stem Activity *Problem Solving Leveled Reading Mat *Problem-Solving Reading Activity *Digital Math Tools Activities *Language Support Handguide *Listen and Look For *Home-School Connection	Student Textbook Additional Practice Workbook Notebook Pen/Pencil Index Cards	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today’s Challenge ● Adaptive Practice ● Desmos ● IXL

Formative Assessment Plan	Summative Assessment Plan
<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 5 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Recognize Equivalent Expressions - Simplify Expressions - Factor Expressions - Add and Subtract Expressions

Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	2	Unit Title:	Topic 6: Solve Problems using Equations and Inequalities	Pacing:	15 Days
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Unit Summary: In Topic 6, students will write and solve two-step equations. They will also use properties of operations to simplify inequalities, solve real-life and mathematical problems using inequalities, and create graphs associated with inequalities, using the appropriate symbols.

Objectives:

- Analyze word problems to write two-step equations.
- Explain the relationship between the terms of the equation and the values they represent.
- Use models to solve two-step equations.
- Compare algebraic and arithmetic solutions.
- Solve equations using the Distributive Property.
- Graph the solution of inequalities on a number line.
- Solve inequalities using Addition or Subtraction Properties of Inequality.
- Write inequalities and solve them using Multiplication and Division Properties of Inequality.
- Graph the solutions of an inequality on a number line.
- Use mathematical modeling to represent a problem situation and to propose a solution.
- Test and verify the appropriateness of their mathematical models.
- Write and solve a two-step inequality to solve a problem.
- Solve an inequality by multiplying or dividing by a negative rational number.
- Explore the relationship between two-step inequalities and multi-step inequalities.
- Apply the Distributive Property to simplify and solve multi-step inequalities.

Essential Questions:

- How does an equation show the relationship between variables and other quantities in a situation?
- How is solving a two-step equation similar to solving a one-step equation?
- How does the Distributive Property help you solve an equation?
- How is solving inequalities with addition and subtraction similar to and different from solving equations with addition and subtraction?
- How is solving inequalities with multiplication and division similar to and different from solving equations with multiplication and division?
- How is solving a two-step inequality similar to and different from solving a two-step equation?
- How is solving a multi-step inequality similar to and different from solving a multi-step equation?

New Jersey Student Learning Standards

Mathematics Learning Targets: 7.EE.B.3, 7.EE.B.4a, 7.EE.B.4b

Mathematics Practices: MP.2, MP.3

Cross Curricular Standards: 9.4.8.TL.2, 9.4.8.TL.3, 9.4.8.IML.5 : 8.1.8.DA.1: RI.TS.7.4.

Overview of Activities	Teacher’s Guide/ Resources	Core Instructional Materials	Technology Infusion
6.1 - Write Two-Step Equations 6.2 - Solve Two-Step Equations 6.3 - Solve Equations Using the Distributive Property 6.4 - Solve Inequalities Using Addition or Subtraction 6.5 - Solve Inequalities Using Multiplication or Division 6.6 - Solve Two-Step Inequalities 6.7 - Solve Multi-Step Inequalities	<i>enVision</i> Mathematics *Daily Review *Reteach to Build Understanding *Build Mathematical Literacy *Enrichment * <i>enVision</i> Stem Activity *Problem Solving Leveled Reading Mat *Problem-Solving Reading Activity *Digital Math Tools Activities *Language Support Handguide *Listen and Look For *Home-School Connection	Student Textbook Additional Practice Workbook Notebook Pen/Pencil Index Cards	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today’s Challenge ● Adaptive Practice ● Desmos ● IXL

Formative Assessment Plan	Summative Assessment Plan
<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 6 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Write two-step equations - Solve two-step equations - Solve equations using the distributive property - Solve inequalities using addition or subtraction - Graph the solution of inequalities on a number line - Solve inequalities using multiplication and division - Write and solve a two-step inequality to solve a problem - Solve multi-step inequalities

Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce items given for homework and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable moments. • Utilize graphic organizers. • Introduce/review study skills 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	3	Unit Title:	Topic 7: Analyze and Solve Linear Equations	Pacing:	15 days
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Unit Summary: In Topic 7, students continue their understanding of solving equations to include multi-step equations where students may have zero, one, or infinitely many solutions. Students analyze equations, tables, and linear graphs to compare proportional relationships by interpreting the unit rates in context. Students connect the slope of a line with the unit rate in proportional relationships and extend their understanding to equations with non-zero y-intercepts.

Objectives:

- Combine like terms.
- Solve equations with like terms on one side of the equation.
- Make sense of the scenarios and represent them with equations.
- Solve equations with like terms on both sides of the equation.
- Plan multiple solution pathways and choose one to find the solution.
- Determine the number of solutions to an equation.
- Analyze equations, linear graphs, and tables to find unit rates and compare proportional relationships.
- Find the slope of a line using different strategies.
- Interpret the slope in context and relate it to steepness on a graph.
- Understand how the constant of proportionality and the slope relate in a linear equation.
- Write a linear equation in the form $y=mx$ when the slope is given.
- Graph a linear equation in the form $y=mx$.
- Interpret and extend the table or graph of a linear relationship to find its y -intercept.
- Analyze graphs in context to determine and explain the meaning of the y -intercept.
- Graph a line from an equation in the form $y=mx+b$.
- Write an equation that represents the given graph of a line.

Essential Questions:

- How do you solve equations that contain like terms?
- How do you use inverse operations to solve equations with variables on both sides?
- How can you use the Distributive Property to solve multi-step equations?
- Will a one-variable equation always have only one solution?
- How can you compare proportional relationships represented in different ways?
- What is slope?
- How does slope relate to the equation for a proportional relationship?
- What is the y -intercept and what does it indicate?
- What is the equation of a line for a non proportional relationship?

New Jersey Student Learning Standards

Mathematics Learning Targets: 8.EE.B.5, 8.EE.B.6, 8.EE.C.7a, 8.EE.C.7b

Mathematics Practices: MP.2, MP.4, MP.7

Cross Curricular Standards: 9.4.8.TL.2, 9.4.8.TL.3: 8.1.8.DA.1: SL.PE.8.1

Overview of Activities

Teacher's Guide/ Resources

Core Instructional Materials

Technology Infusion

<p>7.1 - Combine Like Terms to Solve Equations</p> <p>7.2 - Solve Equations with Variables on Both Sides</p> <p>7.3 - Solve Multi-Step Equations</p> <p>7.4 - Equations with No Solutions or Infinitely Many Solutions</p> <p>7.5 - Compare Proportional Relationships</p> <p>7.6 - Connect Proportional Relationships</p> <p>7.7- Analyze Linear Equations: $y=mx$</p> <p>7.8 - Understand the y-intercept of a Line</p> <p>7.9 - Analyze Linear Equations: $y=mx+b$</p>	<p><i>enVision</i> Mathematics</p> <p>*Daily Review</p> <p>*Reteach to Build Understanding</p> <p>*Build Mathematical Literacy</p> <p>*Enrichment</p> <p>*<i>enVision</i> Stem Activity</p> <p>*Problem Solving Leveled Reading Mat</p> <p>*Problem-Solving Reading Activity</p> <p>*Digital Math Tools Activities</p> <p>*Language Support Handguide</p> <p>*Listen and Look For</p> <p>*Home-School Connection</p>	<p>Student Textbook</p> <p>Additional Practice Workbook</p> <p>Notebook</p> <p>Pen/Pencil</p> <p>Index Cards</p>	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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Formative Assessment Plan	Summative Assessment Plan
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 7 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Solve Multi-Step Equations - Determine Slope - Write equations in $y=mx$ form - Write equations in $y=mx+b$ form.
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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Quinton Township School District
Math
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	3	Unit Title:	Topic 8: Use Sampling to Draw Inferences About Populations	Pacing:	10 Days
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Unit Summary: Topic 8 focuses on methods of sampling populations and will be used to determine population size. Using the data collected by statistical questions, students determine and analyze measures of center and measures of variation.

Objectives:

- Distinguish between a population and a sample.
- Establish whether a sample is representative of a population.
- Generate random samples.
- Make qualitative inferences from a sample data set.
- Make quantitative inferences from a sample data set.
- Make estimates about a population based on a sample data set, and assess whether the inferences are valid.
- Use box plots to compare and make inferences about populations.
- Use the median and IQR of datasets to informally compare and make inferences about two populations.
- Use the mode, range, mean, and mean absolute deviation (MAD) to compare populations.
- Use mathematical modeling to represent a problem situation and to propose a solution.
- Test and verify the appropriateness of their math models.
- Explain why the results from their mathematical models may not align exactly to the problem situation.

Essential Questions:

- How can you determine a representative sample of a population?
- How can inferences be drawn about a population from data gathered from samples?
- How can data displays be used to compare populations?
- How can dot plots and statistical measures be used to compare populations?

New Jersey Student Learning Standards

Mathematics Learning Targets: 7.SP.A.1, 7.SP.A.2, 7.SP.B.3, 7.SP.B.4, 7.RP.A.2c, 7.RP.A.3

Mathematics Practices: MP.2, MP.4

Cross Curricular Standards: 9.4.8.IML.5, 9.4.8.TL.2, 9.4.8.IML.4: 8.1.12.DA.1.; 8.1.8.DA.1.; RI.TS.7.4.

Overview of Activities

Teacher's Guide/ Resources

Core Instructional Materials

Technology Infusion

<p>8.1 - Populations and Samples 8.2 - Draw Inferences from Data 8.3 - Make Comparative Inferences About Populations 8.4 - Make More Comparative Inferences About Populations</p>	<p><i>enVision</i> Mathematics *Daily Review *Reteach to Build Understanding *Build Mathematical Literacy *Enrichment *<i>enVision</i> Stem Activity *Problem Solving Leveled Reading Mat *Problem-Solving Reading Activity *Digital Math Tools Activities *Language Support Handguide *Listen and Look For *Home-School Connection</p>	<p>Student Textbook Additional Practice Workbook Notebook Pen/Pencil Index Cards</p>	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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Formative Assessment Plan	Summative Assessment Plan
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 8 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Distinguish between a population and random sample - Generate random samples - Draw inferences from data - Make comparative inferences about populations - Use and make box plots to compare data. - Find median and IQR - Use mode, range, mean and MAD to compare populations
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	3	Unit Title:	Topic 9: Probability	Pacing:	14 Days
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Unit Summary: In Topic 9, students investigate probability and statistics. Students identify the difference between probability and likelihood. Students complete activities related to experimental and theoretical probabilities. Tree diagrams, tables, and formulas will create variable methods for students to identify numbers of possible outcomes. Probabilities of compound events as well as identifying independent and dependent events will be discussed.

Objectives:

- Use probability to describe the likelihood that an event will occur.
- Relate probability to mathematical fairness.
- Understand theoretical probability and how it can be used.
- Use theoretical probability to predict an outcome.
- Compare theoretical and experimental probabilities.
- Use experimental probability to make predictions.
- Explain the differences between theoretical and experimental probability.
- Develop a probability model.
- Use a probability model to evaluate a situation.
- Use a probability model to make an estimate.
- Use mathematical modeling to represent a problem situation and to propose a solution.
- Test and verify the appropriateness of the math models.
- Explain why the results from their mathematical models may not align exactly to the problem situation.
- Use a tree diagram, a table, or an organized list to represent the sample space for a compound event.
- Organize information about a compound event on a table, a tree diagram, or an organized list.
- Find the probability of a compound event.
- Use different tools to simulate a compound event.
- Model a real-world situation involving a compound event and predict its outcome using a simulation.

Essential Questions:

- What is probability?
- How can the probability of an event help make predictions?
- How is experimental probability similar to and different from theoretical probability ?
- How can a model be used to find the probability of an event?
- How can all the possible outcomes, or sample space, of a compound event be represented?
- How can a model help find the probability of a compound event?
- How can you use simulations to determine the probability of events?

New Jersey Student Learning Standards

Mathematics Learning Targets: 7.SP.C.5, 7.SP.C.6, 7.SP.C.7, 7.SP.C.7a, 7.SP.C.7b, 7.SP.C.8a, 7.SP.C.8b, 7.SP.C.8c, 7.EE.B.3

Mathematics Practices: MP.1, MP.7

Cross Curricular Standards: 9.4.8.IML.5, 9.4.8.TL.2, 9.4.8.IML.4: 8.1.8.DA.1: RI.TS.7.4.

Overview of Activities

Teacher's Guide/ Resources

Core Instructional Materials

Technology Infusion

<p>9.1 - Understand Likelihood and Probability</p> <p>9.2 - Understand Theoretical Probability</p> <p>9.3 - Understand Experimental Probability</p> <p>9.4 - Use Probability Models</p> <p>9.5 - Determine Outcomes of Compound Events</p> <p>9.6 - Find Probabilities of Compound Events</p> <p>9.7 - Simulate Compound Events</p>	<p><i>enVision</i> Mathematics</p> <p>*Daily Review</p> <p>*Reteach to Build Understanding</p> <p>*Build Mathematical Literacy</p> <p>*Enrichment</p> <p>*<i>enVision</i> Stem Activity</p> <p>*Problem Solving Leveled Reading Mat</p> <p>*Problem-Solving Reading Activity</p> <p>*Digital Math Tools Activities</p> <p>*Language Support Handguide</p> <p>*Listen and Look For</p> <p>*Home-School Connection</p>		<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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Formative Assessment Plan	Summative Assessment Plan
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 9 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Use probability to describe likelihood - Understand theoretical probability - Compare theoretical and experimental probability - Use probability models - Determine outcomes of compound events - Find probabilities of compound events - Simulate compound events
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	3	Unit Title:	Topic 10: Solve Problems Involving Geometry	Pacing:	15 Days
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Unit Summary: In Topic 10, students will construct angles and two-dimensional figures. Students will identify types of angles and triangles. Students will classify types of quadrilaterals. Area will be calculated for circles and composite figures. The distance around circles and composite figures will be calculated. Students will also work with figures in 3 dimensions. Formulas to find the surface area of prisms, pyramids, and cylinders will be discussed and explored. Formulas to find the volume of prisms and pyramids will be discussed and explored. Students will identify cross sections of three-dimensional solids.

Objectives:

- Use a scale drawing as a representation of actual lengths and area.
- Sketch quadrilaterals with given conditions.
- Name and classify quadrilaterals according to their properties.
- Construct triangles with given conditions.
- Conclude whether or not a triangle is formed and what type of triangle it is.
- Calculate the measures of angles by using angle relationships.
- Calculate the circumference, radius, or diameter of a circle.
- Recognize the relationship between the circumference and the diameter of a circle and π .
- Find the area of a circle.
- Use the area to find the radius and diameter.
- Solve problems involving the area of a circle.
- Use mathematical modeling to represent a problem situation and to propose a solution.
- Test and verify the appropriateness of their mathematical models.
- Describe cross sections of right rectangular prisms and pyramids.
- Solve problems involving cross sections.
- Find the surface area of two-dimensional composite figures.
- Find the surface area of three-dimensional composite shapes.
- Calculate the volume of various three-dimensional figures.
- Solve problems involving the volume of three-dimensional figures.

Essential Questions:

- How do scale drawings and actual measurements represent proportional relationships?
- How can a shape that meets its given conditions be drawn?
- How can you determine when it is possible to draw a triangle given certain conditions?
- How are angles formed by intersecting lines related?
- How is the circumference of a circle related to the length of its diameter?
- How can the area formula for a circle be used to solve problems?
- How do the faces of a three-dimensional figure determine the two-dimensional shapes created by slicing the figure?
- How is finding the area of composite two-dimensional figures similar to finding the surface areas of three-dimensional figures?
- How does the formula for volume of a prism help you understand what the volume of a prism means?

New Jersey Student Learning Standards

Mathematics Learning Targets: 7.G.A.1, 7.G.A.2, 7.G.A.3, 7.G.B.4, 7.G.B.5, 7.G.B.6, 7.NS.A.3, 7.EE.B.3, 7.EE.B.4a

Mathematics Practices: MP.1, MP.2, MP.7, MP.8

Cross Curricular Standards: 9.4.8.IML.3, 9.4.8.TL.3: 8.1.8.DA.1: RI.TS.7.4.

Overview of Activities

Teacher's Guide/ Resources

Core Instructional Materials

Technology Infusion

<p>10.1 - Solve Problems Involving Scale Drawings</p> <p>10.2 - Draw Geometric Figures</p> <p>10.3 - Draw Triangles with Given Conditions</p> <p>10.4 - Solve Problems Using Angle Relationships</p> <p>10.5 - Solve Problems Involving Circumference of a Circle</p> <p>10.6 - Solve Problems Involving Area of a Circle</p> <p>10.7 - Describe Cross Section</p> <p>10.8 - Solve Problems Involving Surface Area</p> <p>10.9 - Solve Problems Involving Volume</p>	<p><i>enVision</i> Mathematics</p> <p>*Daily Review</p> <p>*Reteach to Build Understanding</p> <p>*Build Mathematical Literacy</p> <p>*Enrichment</p> <p>*<i>enVision</i> Stem Activity</p> <p>*Problem Solving Leveled-Reading Mat</p> <p>*Problem-Solving Reading Activity</p> <p>*Digital Math Tools Activities</p> <p>*Language Support Handguide</p> <p>*Listen and Look For</p> <p>*Home-School Connection</p>	<p>Student Textbook</p> <p>Additional Practice Workbook</p> <p>Notebook</p> <p>Pen/Pencil</p> <p>Index Cards</p>	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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Formative Assessment Plan	Summative Assessment Plan
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 10 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Use scale drawings as a representation of actual lengths and area. - Sketch quadrilaterals - Name and classify quadrilaterals - Construct Triangles - Decide if a triangle is formed - Classify Triangles - Calculate measures of angles - Calculate the circumference, radius, and diameter of a circle - Find area and circumference of a circle - Solve problems involving cross sections - Find surface area - Find volume of 3-d figures
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	4	Unit Title:	Topic 11: Congruence and Similarity	Pacing:	16 Days
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Unit Summary: Topic 11 exposes students to relationships in two-dimensional figures. Students use experimentation to determine the rules for performing transformations in the coordinate plane. The resulting image will either be a congruent figure or a similar figure. Students discover the angle relationships formed when parallel lines are cut by a transversal. Using experimentation, students discover relationships between interior and exterior angles of a triangle.

Objectives:

- Translate a figure on a coordinate plane.
- Describe a translation.
- Understand and describe a reflection.
- Reflect two-dimensional figures.
- Identify and perform a rotation.
- Determine how a rotation affects a two-dimensional figure.
- Understand, describe, and perform a sequence of transformations.
- Explain congruence of figures using a series of transformations.
- Identify congruent figures.
- Understand dilations.
- Dilate to enlarge or reduce a figure in a coordinate plane.
- Understand similarity.
- Complete a similarity transformation.
- Identify similar figures.
- Understand the relationships of angles formed by parallel lines and a transversal.
- Find unknown angle measures.
- Understand the relationship of the interior angles of a triangle.
- Determine whether triangles are similar.
- Solve problems involving similar triangles.

Essential Questions:

- How does a translation affect the properties of a two-dimensional figure?
- How does a reflection affect the properties of a two-dimensional figure?
- How does a rotation affect the properties of a two-dimensional figure?
- How can you use a sequence of transformations to map a preimage to its image?
- How does a sequence of translations, reflections, and rotations result in congruent figures?
- What is the relationship between a preimage and its image after a dilation?
- How are similar figures related by a sequence of transformations?
- How are the interior and exterior angles of a triangle related?
- How can you use angle measures to determine whether two triangles are similar?

New Jersey Student Learning Standards

Mathematics Learning Targets: 8.G.A.1a, 8.G.A.1b, 8.G.A.1c, 8.G.A.2, 8.G.A.3, 8.G.A.4, 8.G.A.5

Mathematics Practices: MP.1, MP.2, MP.3, MP.4, MP.7, MP.8

Cross Curricular Standards: 9.4.8.TL.2, 9.4.8.TL.3: 8.1.8.DA.1: SL.PE.8.1

Overview of Activities

Teacher's Guide/ Resources

Core Instructional Materials

Technology Infusion

<p>11.1 - Analyze Translations 11.2 - Analyze Reflections 11.3 - Analyze Rotations 11.4 - Compose Transformations 11.5 - Understand Congruent Figures 11.6 - Describe Dilations 11.7 - Understand Similar Figures 11.8 - Angles, Lines, and Transversals 11.9 - Interior and Exterior Angles of Triangles 11.10 - Angle-Angle Triangle Similarity</p>	<p><i>enVision</i> Mathematics *Daily Review *Reteach to Build Understanding *Build Mathematical Literacy *Enrichment *<i>enVision</i> Stem Activity *Problem Solving Leveled Reading Mat *Problem-Solving Reading Activity *Digital Math Tools Activities *Language Support Handguide *Listen and Look For *Home-School Connection</p>	<p>Student Textbook Additional Practice Workbook Notebook Pen/Pencil Index Cards</p>	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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Formative Assessment Plan	Summative Assessment Plan
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 11 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Transform a figure in the coordinate plane to create similar or congruent figures - Identify congruent figures - Identify similar figures - Determine unknown angle measures using angles relationships created when a transversal intersects parallel lines - Determine unknown interior and exterior angles of a triangle - Solve problems involving similar triangles
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	4	Unit Title:	Topic 12: Understand and Apply the Pythagorean Theorem	Pacing:	10 Days
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Unit Summary: In Topic 12, students examine the Pythagorean Theorem and use it to find unknown side lengths of triangles and solids. Students can apply the converse of the Pythagorean Theorem to determine if a triangle is a right triangle, and they develop the distance formula for any two points in the coordinate plane.

Objectives:

- Understand and explain the Pythagorean Theorem.
- Given two side lengths of a right triangle, use the Pythagorean Theorem to find the length of the third side.
- Understand and explain why the Converse of the Pythagorean Theorem is true.
- Apply the Converse of the Pythagorean Theorem to identify right triangles.
- Use the Converse of the Pythagorean Theorem to analyze two-dimensional shapes.
- Apply the Pythagorean Theorem and its converse to solve real-world problems.
- Apply the Pythagorean Theorem to solve problems that involve three-dimensions.
- Apply the Pythagorean Theorem to find the distance between two points on a map or coordinate plane.
- Find the perimeter of a figure on a coordinate plane.
- Identify the coordinates of the third vertex of a triangle on the coordinate plane.

Essential Questions:

- How does the Pythagorean Theorem relate the side lengths of a right triangle?
- How can you determine whether a triangle is a right triangle?
- What types of problems can be solved using the Pythagorean Theorem?
- How can you use the Pythagorean Theorem to find the distance between two points?

New Jersey Student Learning Standards**Mathematics Learning Targets:** 8.G.B.6, 8.G.B.7, 8.G.B.8**Mathematics Practices:** MP.3, MP.4, MP.7, MP.8**Cross Curricular Standards:** 9.4.8.TL.2, 9.4.8.TL.3: 8.1.8.DA.1: SL.PE.8.1**Overview of Activities****Teacher's Guide/ Resources****Core Instructional Materials****Technology Infusion**

<p>12.1 - Understand the Pythagorean Theorem</p> <p>12.2 - Understand the Converse of the Pythagorean Theorem</p> <p>12.3 - Apply the Pythagorean Theorem to Solve Problems</p> <p>12.4 - Find Distance on the Coordinate Plane</p>	<p><i>enVision</i> Mathematics</p> <ul style="list-style-type: none"> *Daily Review *Reteach to Build Understanding *Build Mathematical Literacy *Enrichment *<i>enVision</i> Stem Activity *Problem Solving Leveled Reading Mat *Problem-Solving Reading Activity *Digital Math Tools Activities *Language Support Handguide *Listen and Look For *Home-School Connection 	<p>Student Textbook</p> <p>Additional Practice Workbook</p> <p>Notebook</p> <p>Pen/Pencil</p> <p>Index Cards</p>	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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<p>Formative Assessment Plan</p>	<p>Summative Assessment Plan</p>
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 12 Performance Task/Assessment - Lesson Quizzes <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Use Pythagorean Theorem to find missing sides in right triangles - Use the converse of the Pythagorean Theorem to determine if a triangle is a right triangle - Apply the Pythagorean Theorem to solve real-world problems - Use the Pythagorean Theorem to find the distance between two points on the coordinate plane.
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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**Quinton Township School District
Math
Grade 7 Accelerated**

Pacing Chart/Curriculum MAP

Key: Technology Careers Interdisciplinary Studies

Marking Period:	4	Unit Title:	Topic 13: Solve Problems Involving Surface Area and Volume	Pacing:	10 Days
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Unit Summary: In Topic 13, students extend their understanding of surface area to cylinders, cones, and spheres. They also examine the volume of cylinders, cones, and spheres. Through experimentation, students develop the formulas to determine the surface area or volume of a figure. Students will also calculate missing dimensions of a figure.

Objectives:

- Find the surface areas of cylinders, cones, and spheres.
- Recognize the relationship between the volume of a rectangular prism and the volume of a cylinder.
- Solve real-world problems involving the volume of a cylinder.
- Use the formula for the volume of a cylinder to find an unknown measure.
- Recognize the relationship between the volume of a cylinder and the volume of a cone.
- Use the Pythagorean Theorem when solving volume problems.
- Find the volume of a cone. Given the circumference of the base, find the volume of a cone.
- Recognize the relationship between the volume of a cone and the volume of a sphere.
- Find the volume of a sphere. Given the surface area, find the volume of a sphere.
- Find the volume of a composite figure.

Essential Questions:

- How are the areas of polygons used to find the surface area formulas for three-dimensional figures?
- How is the volume of a cylinder related to the volume of a rectangular prism?
- How is the volume of a cone related to the volume of a cylinder?
- How is the volume of a sphere related to the volume of a cone?

New Jersey Student Learning Standards**Mathematics Learning Targets:** 8.G.C.9**Mathematics Practices:** MP.5, MP.6, MP.7**Cross Curricular Standards:** [9.4.8.TL.2](#), [9.4.8.TL.3](#): [8.1.8.DA.1](#): [SL.PE.8.1](#)**Overview of Activities****Teacher's Guide/ Resources****Core Instructional Materials****Technology Infusion**

<p>13.1 -Find Surface Area of Three-Dimensional Figures</p> <p>13.2 - Find Volume of Cylinders</p> <p>13.3 - Find Volume of Cones</p> <p>13.4 - Find Volume of Spheres</p>	<p><i>enVision</i> Mathematics</p> <p>*Daily Review</p> <p>*Reteach to Build Understanding</p> <p>*Build Mathematical Literacy</p> <p>*Enrichment</p> <p>*<i>enVision</i> Stem Activity</p> <p>*Problem Solving Leveled-Reading Mat</p> <p>*Problem-Solving Reading Activity</p> <p>*Digital Math Tools Activities</p> <p>*Language Support Handguide</p> <p>*Listen and Look For</p> <p>*Home-School Connection</p>	<p>Student Textbook</p> <p>Additional Practice Workbook</p> <p>Notebook</p> <p>Pen/Pencil</p> <p>Index Cards</p>	<ul style="list-style-type: none"> ● Smart Board Applications ● Google Applications ● Interactive student edition ● Today's Challenge ● Adaptive Practice ● Desmos ● IXL
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<p>Formative Assessment Plan</p>	<p>Summative Assessment Plan</p>
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<p>Suggested activities to assess student progress:</p> <ul style="list-style-type: none"> - Topic Performance Task - Oral questioning - Using questioning strategies in TE - Reteach for Understanding - Classwork & Basic Skill Practice - Corrections & Reflections - Kahoot! - Quizizz - Desmos - Rubric-for projects - Self-reflection - Adaptive practice- on-line Savvas resources - Exit Slip - HW 	<p>Final Assessment/Benchmark/Project:</p> <ul style="list-style-type: none"> - Topic 13 Performance Task/Assessment - Lesson Quizzes - MAP Testing <p>Suggested skills to be assessed:</p> <ul style="list-style-type: none"> - Find surface areas of three dimensional figures - Find the volume of a cone, cylinder, or sphere - Determine missing dimensions of a cone, cylinder, or sphere when given the volume
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Differentiation			
Special Education	ELL	At Risk	Gifted and Talented

<ul style="list-style-type: none"> • RTI • Modify and accommodate as listed in student's IEP or 504 plan. • Utilize effective amount of wait time. • Hold high expectations. • Communicate directions clearly and concisely and repeat, reword, modify as necessary. • Utilize open-ended questioning techniques. • Utilize scaffolding to support instruction. • Chunk tasks into smaller components. • Provide step-by-step instructions. • Model and use visuals as often as possible. • Utilize extended time and/or reduce number of items given for homework, quizzes, and tests. • Teach Tiers 1,2, and 3 words to assist students' understanding of instructional texts. • Utilize a variety of formative assessments to drive next point of instruction/differentiated instructional practices. • Create rubrics/allow students to assist with task, so that all are aware of expectations. • Create modified assessments. • Allow students to utilize online books, when available, to listen to oral-recorded reading. • Provide individualized assistance as necessary. • Allow for group work (strategically selected) and collaboration as necessary. • Utilize homework recorder within SIS. • Allow for copies of notes to be shared out. • Utilize assistive technology as appropriate. • Provide meaningful feedback and utilize teachable 	<ul style="list-style-type: none"> • RTI • Basic Skills Instruction • Speech/Language Therapy • Rosetta Stone • Hold high expectations. • Provide English/Native Language Dictionary for use. • Place with native-language-speaking teacher/paraprofessional as available. • Learn/Utilize/Display some words in the students' native language. • Invite student to after-school tutoring sessions. • Utilize formative assessments to drive instruction. • Translate printed communications for parents in native language. • Hold conferences with translator present. • Utilize additional NJDOE resources/recommendations. • Review Special Education listing for additional recommendations. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • RTI Tiered Interventions following RTI framework • Basic Skills Instruction • Fountas and Pinnell Phonics • Support instruction with RTI intervention resources. • Provide after-school tutoring services. • Hold high expectations. • Hold fall and spring parent conferences. • Make modifications to instructional plans based on I and RS Plan. • Develop a record system to encourage good behavior and completion of work. • Establish a consistent daily routine. 	<ul style="list-style-type: none"> • Organize the curriculum to include more elaborate, complex, and in-depth study of major ideas and problems through compacting. • Allow for the development and application of productive thinking skills to enable students to re-conceptualize existing knowledge and/or generate new knowledge. • Enable students to explore continually changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world. • Encourage exposure to, selection and use of appropriate and specialized resources. • Promote self-initiated and self-directed learning for growth. • Provide for the development of self, an understanding of one's relationships with people, societal institutions, nature and culture. • Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).
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