Quinton Township School District
Mathematics
Grade 7 Accelerated
Pacing Chart/Curriculum MAP

Marking Period:	1	Unit Title:	Integers	Pacing:	8 Days

Unit Summary: This unit will expose 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.

Objectives:Students will be able to:
- define the absolute value of a number.
- find absolute values of numbers. Add integers.
- show that the sum of a number and its opposite is 0.
- subtract integers.
- multiply integers. Divide integers.
- solve real-life problems.

Essential Questions:
- How can you use integers to represent the velocity and the speed of an object?
- Is the sum of two integers positive, negative, or zero? How can you tell?
- How are adding integers and subtracting integers related?
- Is the product of two integers positive, negative, or zero? How can you tell?
- Is the quotient of two integers positive, negative, or zero? How can you tell?

Common Core State Standards/Learning Targets:
- 7.NS.A.1: Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.
    - 7.NS.A.1.A: Describe situations in which opposite quantities combine to make 0.
    - 7.NS.A.1.B: Understand $p + q$ as the number located a distance $|q|$ from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
    - 7.NS.A.1.C: Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
    - 7.NS.A.1.D: Apply properties of operations as strategies to add and subtract rational numbers.
- 7.NS.A.2: Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
    - 7.NS.A.2.A: Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.
    - 7.NS.A.2.B: Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.
    - 7.NS.A.2.C: Apply properties of operations as strategies to multiply and divide rational numbers.
    - 7.NS.A.2.D: Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.
- 7.NS.A.3: Solve real-world and mathematical problems involving the four operations with rational numbers.

Interdisciplinary Connections/Including 21st Century Themes and Skills:

21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy

21st Century Skills: Critical Thinking and Problem Solving

21st Century Life and Career Standards:

9.1.8.B.8 Develop a system for keeping and using financial records.

21st Century Career Ready Practices

CRP3 Attend to personal health and financial well‑being

CRP4 Communicate clearly and effectively and with reason

CRP6 Demonstrate creativity and innovation

CRP8 Utilize critical thinking to make sense of problems and persevere in solving them

Interdisciplinary Connections:

Science,Real world applications,Business applications,Banking, Construction, and Architecture

Science: 1.1 - Students examine the freezing points of a solid. 1.2 Exercise 40 - A lithium atom has positively charged protons and negatively charged electrons. The sum of the charges represents the charge of the lithium atom. Find the charge of the atom.

History: 1.2 Exercise 49-The emperor Yu-Huang was a legendary figure in China, in the same sense that King Arthur was a legendary figure in Europe. He was called the Jade Emperor, and there are many stories about him. In addition to the story of the magic square and the turtle, the Jade Emperor is credited with creating the Chinese Zodiac in which each sequence of 12 years is given the name of an animal, such as the "Year of the Snake" or the "Year of the Rat."

Social Studies: 1.3 - Finding which continent has a greater elevation

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
1.1 Integers and Absolute Value **1.2** Adding Integers **1.3** Subtracting Integers **1.4** Multiplying Integers	Curriculum Map Teacher's Guide Chapter 1 p. 1-41 Big Ideas website Desmos.com	Student Textbook p.1-41 Record and Practice Journal	- Smart Board Applications - Google Applications - Big ideas math website-student

1.5 Dividing Integers	IXL	p. 1-22
		
		 Integer Chips
			assignments
			 ● Desmos
			 ● Row Row Integer Song
			 ● IXL:
			   ○ B.1-B.6
			   ○ C.1-C.9

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit* **Final Assessment/Benchmark/Project:** 1.1-1.3 Mid Quiz 1.4-1.5 End Quiz Chapter 1 Test Chapter 1 Standards Assessment Integer Rules- Pumpkin Project Fall MAP Benchmark Assessment Integer Google slide project-word problem for each operation **Suggested skills to be assessed:** Understanding of absolute value of a number. Adding integers.Understanding the difference between opposites and absolute value. Subtracting integers. Multiplying integers. Dividing integers. Solving real-life problems.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-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).

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Utilize auditory reminders as deemed necessary.** ● **Provide breaks to allow for refocusing as necessary.** ● **Establish a consistent and daily routine.**			

Quinton Township School District
Mathematics
Grade 7 Accelerated
Pacing Chart/Curriculum MAP

Marking Period:	1	**Unit Title:**	**Rational Numbers**	**Pacing:**	8 Days

Unit Summary: In this unit students will apply and extend previous understandings of fractions to add, subtract, multiply, and divide rational numbers. Using horizontal and vertical number line diagrams, students will discover and apply the rules for the four operations with rational numbers to solve real world problems. Students will also be able to convert between fractions, decimals, and percents.

Objectives: Students will be able to:
- understand that a rational number is an integer divided by an integer.
- convert rational numbers to decimals.
- add rational numbers.
- subtract rational numbers.
- multiply and divide rational numbers.
- solve real-life problems.

Essential Questions:
- How can you use a number line to order rational numbers?
- How can you use what you know about adding integers to add rational numbers?
- How can you use what you know about subtracting integers to subtract rational numbers?
- Why is the product of two negative rational numbers positive?

Common Core State Standards/Learning Targets:
- 7.NS.A.1: Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.
  - 7.NS.A.1.A: Describe situations in which opposite quantities combine to make 0.
  - 7.NS.A.1.B: Understand $p + q$ as the number located a distance $|q|$ from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
  - 7.NS.A.1.C: Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
  - 7.NS.A.1.D: Apply properties of operations as strategies to add and subtract rational numbers.
- 7.NS.A.2: Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
  - 7.NS.A.2.A: Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.
  - 7.NS.A.2.B: Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.
  - 7.NS.A.2.C: Apply properties of operations as strategies to multiply and divide rational numbers.
  - 7.NS.A.2.D: Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.
- 7.NS.A.3: Solve real-world and mathematical problems involving the four operations with rational numbers.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy

21st Century Skills: Critical Thinking and Problem Solving
21st Century Life and Career Standards:
9.1.8.A.6 Explain how income affects spending decisions.
9.1.8.B.8 Develop a system for keeping and using financial records.
21st Century Career Ready Practices
CRP3 Attend to personal health and financial well‑being
CRP4 Communicate clearly and effectively and with reason
CRP6 Demonstrate creativity and innovation
CRP8 Utilize critical thinking to make sense of problems and persevere in solving them
Interdisciplinary Connections:
Science, Real world applications,Business applications,Banking, Construction, and Architecture
Science: 2.1 - Elevations of four sea creatures will be discussed.
Financial Literacy: 2.2 - Discuss gains and losses of a financial company. 2.3 - Students balance a checkbook. 2.4 - Find average change of a stock.
Geography: 2.3 - Fractional amounts for distances on a map.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
2.1 Rational Numbers **2.2** Adding Rational Numbers **2.3** Subtracting Rational Numbers **2.4** Multiplying and Dividing Rational Numbers	Curriculum Map Teacher's Guide Chapter 2 p.42-77 Big Ideas website Desmos.com IXL	Student Textbook p.42-77 Record and Practice Journal p. 23-40	- Smart Board Applications - Google Applications - Big ideas math website-student assignments - Desmos

			● IXL
			○ H.1-H.9

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 2.1-2.2 Mid Quiz 2.3-2.4 End Quiz Chapter 2 Test Chapter 2 Standards Assessment Fraction/ Decimal/ Percent Benchmarks Quiz **Suggested skills to be assessed:** Understand that a rational number is an integer divided by an integer. Convert rational numbers to decimals. Add rational numbers. Subtract rational numbers. Multiply and divide rational numbers. Solve real-life problems.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
● 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 amount 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	● RTI ● Speech/Language Therapy ● Rosetta Stone ● Hold high expectations ● Provide English/Spanish Dictionary for use ● Place with Spanish speaking teacher/paraprofessional as available ● Learn/Utilize/Display some words in the students' native language ● Invite student to after school tutoring sessions ● Basic Skills Instruction ● 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 and daily routine	● RTI Tiered Interventions following RTI framework ● Support instruction with RTI intervention resources ● Provide after school tutoring services ● Basic Skills Instruction ● Hold high expectations ● Utilize Go Math! RTI strategies ● Fountas and Pinnell Phonics ● Hold parent conferences fall and spring ● 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 and daily routine.	● 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 and growth. ● Provide for the development of self-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).

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	1	Unit Title:	Expressions and Equations	Pacing:	17 Days

Unit Summary: This unit is one of the most important units to prepare the students for Algebra. They extend their knowledge of solving one-step equations from sixth grade to solving multi-step equations by using properties of operations to generate equivalent expressions. Students will solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Objectives: Students will be able to:
- apply properties of operations to simplify algebraic expressions.
- apply properties of operations to add and subtract linear expressions.
- factor linear expressions.
- write simple equations.
- solve equations using addition or subtraction.
- solve equations using multiplication or division.
- solve two-step equations.
- solve real-life problems.
- use inverse operations to solve multi-step equations.
- use the Distributive Property to solve multi-step equations.
- solve equations with variables on both sides.

- determine whether equations have no solution or infinitely many solutions.
- rewrite equations to solve for one variable in terms of the other variable(s).

Essential Questions:
- How can you simplify an algebraic expression?
- How can you use algebra tiles to add or subtract algebraic expressions?
- How can you use algebra tiles to solve addition or subtraction equations?
- How can you use multiplication or division to solve equations?
- How can you use algebra tiles to solve a two-step equation?
- How can you use inductive reasoning to discover rules in mathematics?
- How can you test a rule?
- How can you solve a multi-step equation?
- How can you check the reasonableness of your solution?
- How can you solve an equation that has variables on both sides?
- How can you use a formula for one measurement to write a formula for a different measurement?

Common Core State Standards/Learning Targets:
- 7.EE.A.1: Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
- 7.EE.A.2: Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.
- 7.EE.B.4: Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
  - 7.EE.B.4.A: Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.
- 8.EE.C.7: Solve linear equations in one variable.

- 8.EE.C.7.A: Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
- 8.EE.C.7.B: Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Life and Career Standards:
9.1.8.A.6 Explain how income affects spending decisions.

9.2.8.B.1:Research careers within the 16 Career Clusters® and determine attributes of career success.
21st Century Career Ready Practices
CRP3 Attend to personal health and financial well‑being
CRP4 Communicate clearly and effectively and with reason
CRP6 Demonstrate creativity and innovation
CRP8 Utilize critical thinking to make sense of problems and persevere in solving them
Financial Literacy: 3.2 - Buying and selling an item for profit.
Science: 3.3, 3.4 - Melting point of a solid. Equivalent results regardless of procedure.   Topic 3 - Rewrite the Celsius formula to a Fahrenheit formula.

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

		Materials	

3.1 Algebraic Expressions
3.2 Adding and Subtracting Linear Expressions
3.3 Solving Equations Using Addition or Subtraction
3.4 Solving Equations Using Multiplication or Division
3.5 Solving Two-Step Equations
Topic 1 Solving Multi-Step Equations
Topic 2 Solving Equations with Variables on Both Sides
Topic 3 Rewriting Equations and Formulas
	Curriculum Map
	Teacher's Guide Chapter 3 and Topics p.78-121, 763-777
	Big Ideas website
	Desmos.com
	IXL
		Student Textbook p. 78-121, 763-777
		
		Record and Practice Journal
		p. 41-64, 365-400
		
		Calculator
			● Smart Board Applications
			● Google Applications
			● Big ideas math website-student assignments
			● Desmos
			● IXL 7th:
			  ○ R.7, R.8, R.13,R.14, R.15 R.16, S.2, S.5, S.6
			● IXL 8th:
			  ○ W.2
			  ○ W.6-W.10
			  ○ W.14
			  ○ W.15

Formative Assessment Plan	**Summative Assessment Plan**
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 3.1-3.2 Mid Quiz 3.3-3.5 End Quiz Chapter 3 Test Chapter 3 Standards Assessment

Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	Topics Quiz Multi-Step Equations Webquest **Suggested skills to be assessed:** Apply properties of operations to simplify algebraic expressions. Apply properties of operations to add and subtract linear expressions. Factor linear expressions. Write simple equations. Solve equations using addition or subtraction. Solve equations using multiplication or division. Solve two-step equations. Solve real-life problems. Writing and solving multi-step equations. Writing and solving equations with variables on both sides. Rewriting equations and formulas to solve for one variable in terms of the other.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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.	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - Utilize formative assessments	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - Make modifications to instructional plans based on I and RS Plan. - Develop a record system to	- 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

• **Chunk tasks into smaller components** • **Provide step by step instructions** • **Model and use visuals as often as possible** • **Utilize extended time and/or reduce amount 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 moments.** • **Utilize graphic organizers**	**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 and daily routine**	**encourage good behavior and completion of work.** • **Establish a consistent and daily routine.**	**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 and growth.** • **Provide for the development of self-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).**

• **Introduce/review study skills** • **Provide reading material at or slightly above students' reading levels.** • **Utilize manipulatives as necessary.** • **Establish a consistent and daily routine**			

Quinton Township School District
Mathematics
Grade 7 Accelerated
Pacing Chart/Curriculum MAP

Marking Period:	1	**Unit Title:**	Inequalities	**Pacing:**	12 Days

Unit Summary: In this unit, students will write inequalities and create graphs that represent the solutions to those inequalities. Extending their knowledge from solving equations, student will use properties of operations to simplify and solve inequalities. They will be able to solve real-life and mathematical problems using inequalities.

Objectives: Students will be able to:
- write and graph inequalities.
- use substitution to check whether a number is a solution of an inequality.
- solve inequalities using addition or subtraction.
- solve inequalities using multiplication or division.
- solve multi-step inequalities.
- solve real-life problems

Essential Questions:
- How can you use a number line to represent solutions of an inequality?
- How can you use addition or subtraction to solve an inequality?
- How can you use multiplication or division to solve an inequality?
- How can you use an inequality to describe the dimensions of a figure?

Common Core State Standards/Learning Targets:
- 7.EE.B.4: Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
  - 7.EE.B.4.B: Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Life and Career Standards:
9.2.8.B.1:Research careers within the 16 Career Clusters® and determine attributes of career success.
21st Century Career Ready Practices
CRP3 Attend to personal health and financial well‐being
CRP4 Communicate clearly and effectively and with reason
CRP6 Demonstrate creativity and innovation
CRP8 Utilize critical thinking to make sense of problems and persevere in solving them
Interdisciplinary Connections:
Science,Geography and Animal Science
Science: 4.2 - Investigation into supercooling.
Geography: 4.2 - Temperatures of continents.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
4.1 Writing and Graphing Inequalities **4.2** Solving Inequalities Using Addition or Subtraction	Curriculum Map Teacher's Guide Chapter 4 p.122-159 Big Ideas website	Student Textbook p.122-159	- Smart Board Applications - Google Applications

4.3 Solving Inequalities Using Multiplication or Division 4.4 Solving Two-Step Inequalities	Desmos.com IXL	Record and Practice Journal p. 65-82 Calculator	● Big ideas math website-student assignments ● Desmos ● IXL ○ T1-T7

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 4.1-4.2 Mid Quiz 4.3-4.4 End Quiz Chapter 4 Test Chapter 4 Standards Assessment **Suggested skills to be assessed:** Write and graph inequalities. Use substitution to check whether a number is a solution of an inequality. Solve inequalities using addition or subtraction. Solve inequalities using multiplication or division. Solve multi-step inequalities. Solve real-life problems.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-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).

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			

Marking Period:	2	**Unit Title:**	**Ratios and Proportions**	**Pacing:**	15 Days

Unit Summary: In this unit, 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. Proportional relationships will also be used to solve multi-step ratio and percent problems.

Objectives:Students will be able to:
- find ratios, rates, and unit rates.
- find ratios and rates involving ratios of fractions.
- use equivalent ratios to determine whether two ratios form a proportion.
- use the Cross Products Property to determine whether two ratios form a proportion.
- use graphs to determine whether two ratios form a proportion.
- interpret graphs of proportional relationships.
- write proportions. Solve proportions using mental math.
- solve proportions using multiplication or the Cross Products Property.
- use a point on a graph to write and solve proportions.
- find the slopes of lines. Interpret the slopes of lines as rates.
- identify direct variation from graphs or equations.
- use direct variation models to solve problems.

Essential Questions:
- How do rates help you describe real-life problems?
- How can proportions help you decide when things are "fair"?
- How can you write a proportion that solves a problem in real life?
- How can you use ratio tables and cross products to solve proportions?
- How can you compare two rates graphically?
- How can you use a graph to show the relationship between two quantities that vary directly?
- How can you use an equation?

Common Core State Standards/Learning Targets:
- 7.RP.A.1: Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.
- 7.RP.A.2: Recognize and represent proportional relationships between quantities.
  - 7.RP.A.2.A: Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
  - 7.RP.A.2.B: Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
  - 7.RP.A.2.C: Represent proportional relationships by equations.
  - 7.RP.A.2.D: Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.
- 7.RP.A.3: Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving

21st Century Life and Career Standards:

9.1.8.A.1:Explain the meaning and purposes of taxes and tax deductions and why fees for various benefits (e.g., medical benefits) are taken out of pay.

9.1.8.B.2:Construct a simple personal savings and spending plan based on various sources of income.

9.1.8.C.5:Calculate the cost of borrowing various amounts of money using different types of credit (e.g., credit cards, installment loans, mortgages).

9.1.8.D.2:Differentiate among various savings tools and how to use them most effectively.

9.1.8.D.3:Differentiate among various investment options.

9.1.8.D.4:Distinguish between income and investment growth.

9.1.8.E.5:Analyze interest rates and fees associated with financial services, credit cards, debit cards, and gift cards.

9.1.8.E.6:Compare the value of goods or services from different sellers when purchasing large quantities and small quantities.

21st Century Career Ready Practices

CRP3 Attend to personal health and financial well‑being

CRP4 Communicate clearly and effectively and with reason

CRP6 Demonstrate creativity and innovation

CRP8 Utilize critical thinking to make sense of problems and persevere in solving them

Interdisciplinary Connections: Science,Geography,Language Arts

Literacy: 5.5 - Students work with a partner to use an author's statement to complete a table. Ask a student to read the introduction. Ask students if any of them have read Gulliver's Travels.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
5.1 Ratios and Rates **5.2** Proportions **5.3** Writing Proportions **5.4** Solving Proportions **5.5** Slope	Curriculum Map Teacher's Guide Chapter 5 p.160-211 Big Ideas website Desmos.com IXL	Student Textbook p.160-211 Record and Practice Journal	• Smart Board Applications • Google Applications • Big ideas math website-student

5.6 Direct Variation		p. 83-110
		
		Calculator
			assignments
			● Desmos
			● IXL:
			   ○ J.1-J.11
			   ○ J.14
			   ○ V1-V.
			   ○ ,K.1-K.8

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 5.1-5.3 Mid Quiz 5.4-5.6 End Quiz Chapter 5 Test Chapter 5 Standards Assessment Constant of Proportionality Project-Find your weight on different planets Unit Rate-Grocery Store Project **Suggested skills to be assessed:** Find ratios, rates, and unit rates. Find ratios and rates involving ratios of fractions. Use equivalent ratios to determine whether two ratios form a proportion. Use the Cross Products Property to determine whether two ratios form a proportion. Use graphs to determine whether two ratios form a proportion. Interpret graphs of proportional

	relationships. Write proportions. Solve proportions using mental math. Solve proportions using multiplication or the Cross Products Property. Use a point on a graph to write and solve proportions. Find the slopes of lines. Interpret the slopes of lines as rates. Identify direct variation from graphs or equations. Use direct variation models to solve problems.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount of items given	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - Utilize formative assessments to drive instruction - Translate printed communications for parents in native language - Hold conferences with translator present - Utilize additional NJDOE resources/recommendations	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**	● **Review Special Education listing for additional recommendations** ● **Establish a consistent and daily routine**		growth. ● **Provide for the development of self-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).**

Quinton Township School District
Mathematics
Grade 7 Accelerated
Pacing Chart/Curriculum MAP

Marking Period:	2	Unit Title:	Percents	Pacing:	9 Days

Unit Summary: In this unit, students extend their knowledge of solving percent problems to include finding all parts of a percent problems; part, whole, or percent. Students start by converting, comparing and ordering decimals, fractions and percents. They are introduced to 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: Students will be able to:
- write percents as decimals.
- write decimals as percents.
- compare and order fractions, decimals, and percents.
- use the percent proportion to find parts, wholes, and percents.
- use the percent equation to find parts, wholes, and percents.
- find percents of increase.
- find percents of decrease.
- use percent of discounts to find prices of items.
- use percent of markups to find selling prices of items.

- use the simple interest formula to find interest earned or paid, annual interest rates, and amounts paid on loans.
- solve real-life problems.

Essential Questions:
- How does the decimal point move when you rewrite a percent as a decimal and when you rewrite a decimal as a percent?
- How can you order numbers that are written as fractions, decimals, and percents?
- How can you use models to estimate percent questions?
- How can you use an equivalent form of the percent proportion to solve a percent problem?
- What is a percent of decrease?
- What is a percent of increase?
- How can you find discounts and selling prices?
- How can you find the amount of simple interest earned on a savings account?
- How can you find the amount of interest owed on a loan?

Common Core State Standards/Learning Targets:
- 7.EE.B.3: Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.
- 7.RP.A.3: Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Life and Career Standards:

9.1.8.B.2 Construct a simple personal savings and spending plan based on various sources of income
9.1.8.B.8 Develop a system for keeping and using financial records
21st Century Career Ready Practices
CRP3 Attend to personal health and financial well‑being
CRP4 Communicate clearly and effectively and with reason
CRP6 Demonstrate creativity and innovation
CRP8 Utilize critical thinking to make sense of problems and persevere in solving them
Interdisciplinary Connections:
Science,Geography,Real world applications,Business applications,Banking
Science: 6.1 - Comparison of ultraviolet rays being reflected by four different surfaces.
Geography: 6.2 - Reading a population map.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
6.1 Percents and Decimals **6.2** Comparing and Ordering Fractions, Decimals, and Percents **6.3** The Percent Proportion **6.4** The Percent Equation **6.5** Percents of Increase and Decrease **6.6** Discounts and Markups **6.7** Simple Interest	Curriculum Map Teacher's Guide Chapter 6 p.212-267 Big Ideas website Teacher Desmos IXL	Student Textbook p.212-267 Record and Practice Journal p.111-140 Calculator	- Smart Board Applications - Google Applications - Big ideas math website-student assignments - Desmos - IXL - L.2-L.10 - M.11

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 6.1-6.4 Mid Quiz 6.5-6.7 End Quiz Chapter 6 Test Chapter 6 Standards Assessment Holiday Circular Project **Suggested skills to be assessed:** Write percents as decimals. Write decimals as percents. Compare and order fractions, decimals, and percents. Use the percent proportion to find parts, wholes, and percents. Use the percent equation to find parts, wholes, and percents. Find percents of increase. Find percents of decrease. Use percent of discounts to find prices of items. Use percent of markups to find selling prices of items. Use the simple interest formula to find interest earned or paid, annual interest rates, and amounts paid on loans. Solve real-life problems.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-understanding of one's relationships with people, societal institutions, nature and culture. - Continue to offer Accelerated

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			**Mathematics 7 (7th grade) and Algebra 1 (8th grade).**

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	2	Unit Title:	Constructions and Scale Drawings	Pacing:	8 Days

Unit Summary: In this unit, students will construct angles and two-dimensional figures. Students will identify types of angles and triangles. Students will classify types of quadrilaterals. An investigation of how to create proportional relationships to create similar figures will be conducted.

Objectives: Students will be able to:
- identify adjacent and vertical angles.
- find angle measures using adjacent and vertical angles.
- classify pairs of angles as complementary, supplementary, or neither.
- find angle measures using complementary and supplementary angles.
- construct triangles with given angle measures.
- construct triangles with given side lengths.
- understand that the sum of the angle measures of any triangle is 180°.
- find missing angle measures in triangles.
- understand that the sum of the angle measures of any quadrilateral is 360°.
- find missing angle measures in quadrilaterals.
- construct quadrilaterals.
- find scale factors.

- use scale drawings to find actual distances.
- use scale drawings to find actual perimeters and areas.
- recreate scale drawings at a different scale

Essential Questions:
- What can you conclude about the angles formed by two intersecting lines?
- How can you classify two angles as complementary or supplementary?
- How can you construct triangles?
- How can you classify quadrilaterals?
- How can you enlarge or reduce a drawing proportionally?

Common Core State Standards/Learning Targets:
- 7.G.A.1: Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
- 7.G.A.2: Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle..
- 7.G.B.5: Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Life and Career Standards:
9.1.8.E.4 Prioritize personal wants and needs when making purchases.
21st Century Career Ready Practices

CRP3 Attend to personal health and financial well-being
CRP4 Communicate clearly and effectively and with reason
CRP6 Demonstrate creativity and innovation
CRP8 Utilize critical thinking to make sense of problems and persevere in solving them
Interdisciplinary Connections:
Geography: 7.1- Using a map for an example of adjacent states like Maine and New Hampshire. 7.5 - Finding the actual distance between two cities in Michigan.
Art: 7.2 - Vanishing point of a road and the angle relationships created. 7.3 - Classifying shapes in a mosaic.
Science: 7.5 - Finding the distance of the Earth's liquid outer core
History: 7.5 - Finding the scale factor used to find the height of the Floyd Monument which memorializes Sgt. Charles Floyd the only man who died on the Lewis and Clark expedition.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
7.1 Adjacent and Vertical Angles **7.2** Complementary and Supplementary Angles **7.3** Triangles **7.4** Quadrilaterals **7.5** Scale Drawings	Curriculum Map Teacher's Guide Chapter 7 p.268-313 Big Ideas website Teacher Desmos IXL	Student Textbook p.268-313 Record and Practice Journal p.141-164 Calculator	- Smart Board Applications - Google Applications - Big ideas math website-student assignments - Desmos - IXL - W.3 - W.5 - W.7-W.8 - W.12 - J.7

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 7.1-7.3 Mid Quiz 7.4-7.5 End Quiz Chapter 7 Test Chapter 7 Standards Assessment **Suggested skills to be assessed:** Identify adjacent and vertical angles. Find angle measures using adjacent and vertical angles.Classify pairs of angles as complementary, supplementary, or neither. Find angle measures using complementary and supplementary angles.Construct triangles with given angle measures. Construct triangles with given side lengths.Understand that the sum of the angle measures of any triangle is 180°.Find missing angle measures in triangles.Understand that the sum of the angle measures of any quadrilateral is 360°. Find missing angle measures in quadrilaterals. Construct quadrilaterals. use scale drawings to find actual distances. Find scale factors. Use scale drawings to find actual perimeters and areas. Recreate scale drawings at a different scale

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-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).

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.**
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- **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**
- **Provide reading material at or slightly above students' reading levels.**
- **Utilize manipulatives as necessary.**
- **Establish a consistent and daily routine**

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	2	Unit Title:	Circles and Area	Pacing:	5 Days

Unit Summary: Area, perimeter and circumference are the major themes of this unit. Area will be calculated for circles and composite figures. The distance around circles and composite figures will also be calculated.

Objectives: Students will be able to:
- describe a circle in terms of radius and diameter.
- understand the concept of pi.
- find circumferences of circles and perimeters of semicircles.
- find perimeters of composite figures.
- find areas of circles and semicircles.
- find areas of composite figures by separating them into familiar figures.
- solve real-life problems.

Essential Questions:
- How can you find the circumference of a circle?
- How can you find the perimeter of a composite figure?
- How can you find the area of a circle?
- How can you find the area of a composite figure?

Common Core State Standards/Learning Targets:
- 7.G.B.4: Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
- 7.G.B.6: Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
2st Century Life and Career Standards:
9.1.8.E.4 Prioritize personal wants and needs when making purchases.
9.1.8.E.8 Recognize the techniques and effects of deceptive advertising.
9.2.8.B.1 Research careers within the 16 Career Clusters® and determine attributes of career success.
21st Century Career Ready Practices
CRP3 Attend to personal health and financial well‑being
CRP4 Communicate clearly and effectively and with reason
CRP6 Demonstrate creativity and innovation
CRP8 Utilize critical thinking to make sense of problems and persevere in solving them
Interdisciplinary Connections:
History, Literature,Science
History: 8.1- Research Archimedes and discovery of Pi.
Literature: 8.1 - *Sir Cumference and the First Round Table* by Cindy Neuschwander.
Science: 8.1 - Determine the distance around the world.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
8.1 Circles and Circumference	Curriculum Map	Student Textbook	- Smart Board

8.2 Perimeters of Composite Figures
8.3 Areas of Circles
8.4 Areas of Composite Figures
	Teacher's Guide Chapter 8 p.314-351
	Big Ideas website
	Teacher Desmos
	IXL
	Sir Cumference and the First Round Table by Cindy Neuschwander
		p.314-351
		
		Record and Practice Journal p.165-182
		
		Calculator
			Applications
			● Google Applications
			● Big ideas math website-student assignments
			● Desmos
			● IXL
			   ○ AA.5
			   ○ AA.12
			   ○ W.16

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Area of Circles Proof Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** Perimeter Quiz Area Quiz Chapter 8 Test Chapter 8 Standards Assessment **Suggested skills to be assessed:** Describe a circle in terms of radius and diameter. Understand the concept of pi. Find circumferences of circles and perimeters of semicircles. Find perimeters of composite figures. Find areas of

	circles and semicircles. Find areas of composite figures by separating them into familiar figures. Solve real-life problems.

Differentiation			

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount of items given for homework, quizzes, and tests. - Teach Tiers 1,2, and 3 words to assist students' understanding of	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-understanding of one's relationships with people,

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			societal institutions, nature and culture. ● **Continue to offer Accelerated Mathematics 7 (7th grade) and Algebra 1 (8th grade).**

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	2	Unit Title:	Surface Area and Volume	Pacing:	8 Days

Unit Summary: In this unit, students will work with figures in three-dimensions. Students will experiment to discover the formulas to find the surface area of prisms, pyramids, and cylinders. Formulas to find the volume of prisms and pyramids will be discussed and explored. Students will also identify cross sections of three-dimensional solids

Objectives:Students will be able to:
- use two-dimensional nets to represent three-dimensional solids.
- find surface areas of rectangular and triangular prisms.
- find surface areas of regular pyramids.
- find surface areas of cylinders.
- find volumes of prisms.
- find volumes of pyramids.
- describe the intersections of planes and solids.
- solve real-life problems.

Essential Questions:
- How can you find the surface area of a prism?
- How can you find the surface area of a pyramid?

- How can you find the surface area of a cylinder?
- How can you find the volume of a prism?
- How can you find the volume of a pyramid?

Common Core State Standards/Learning Targets:
- 7.G.A.3: Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.
- 7.G.B.4: Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
- 7.G.B.6: Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
2st Century Life and Career Standards:
9.1.8.E.4 Prioritize personal wants and needs when making purchases.
21st Century Career Ready Practices
CRP3 Attend to personal health and financial well‑being
CRP4 Communicate clearly and effectively and with reason
CRP6 Demonstrate creativity and innovation
CRP8 Utilize critical thinking to make sense of problems and persevere in solving them
Interdisciplinary Connections:
History: 9.2 - Finding the slant height of real-life pyramid along with information related to ancient Egypt. 9.5 - Volumes of real life pyramids.
Financial Literacy: 9.4 - Choosing the best popcorn bag size for a movie theater, comparing volume and cost.

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

9.1 Surface Areas of Prisms
9.2 Surface Areas of Pyramids
9.3 Surface Areas of Cylinders
9.4 Volumes of Prisms
9.5 Volumes of Pyramids
	Curriculum Map
	Teacher's Guide Chapter 9 p.352-397
	Big Ideas website
	Desmos
	IXL
		Student Textbook p.352-397
		
		Record and Practice Journal p.183-206
		
		Calculator
			● Smart Board Applications
			● Google Applications
			● Big ideas math website-student assignments
			● Desmos
			● IXL
			● 8th Grade:
			  ○ T.7 -T.8
			● 7th grade
			  ○ Z.4
			● 6th Grade:
			  ○ FF.15-FF.16

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** Surface Area Quiz

Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	Volume Quiz Chapter 9 Test Chapter 9 Standards Assessment Winter MAP Benchmark Assessment **Suggested skills to be assessed:** Use two-dimensional nets to represent three-dimensional solids. Find surface areas of rectangular and triangular prisms. Find surface areas of regular pyramids. Find surface areas of cylinders. Find volumes of prisms. Find volumes of pyramids. Describe the intersections of planes and solids. Solve real-life problems.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - Make modifications to instructional plans based on I	- 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

- 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 amount 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	- Basic Skills Instruction - 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 and daily routine	and RS Plan. - Develop a record system to encourage good behavior and completion of work. - Establish a consistent and daily routine.	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 and growth. - Provide for the development of self-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).

moments. ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	3	Unit Title:	Probability and Statistics	Pacing:	15 Days

Unit Summary: In this unit, 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. The method of sampling populations 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:Students will be able to:
- identify and count the outcomes of experiments.
- understand the concept of probability and the relationship between probability and likelihood.
- find probabilities of events. Find relative frequencies.
- use experimental probabilities to make predictions.
- use theoretical probabilities to find quantities.
- compare experimental and theoretical probabilities.
- use tree diagrams, tables, or a formula to find the number of possible outcomes.

- find probabilities of compound events. Identify independent and dependent events.
- use formulas to find probabilities of independent and dependent events.
- use simulations to find experimental probabilities.
- determine when samples are representative of populations.
- use data from random samples to make predictions about populations.
- use multiple samples to make predictions about populations.
- use measures of center and variation to compare populations.
- use random samples to compare populations.

Essential Questions:
- In an experiment, how can you determine the number of possible results?
- How can you describe the likelihood of an event?
- How can you use relative frequencies to find probabilities?
- How can you find the number of possible outcomes of one or more events?
- What is the difference between dependent and independent events?
- How can you determine whether a sample accurately represents a population?
- How can you compare data sets that represent two populations?

Common Core State Standards/Learning Targets:
- 7.SP.A.1: Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.
- 7.SP.A.2: Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.
- 7.SP.B.3: Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.
- 7.SP.B.4: Use measures of center and measures of variability for numerical data from random samples to draw informal

comparative inferences about two populations.
- 7.SP.C.5: Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.
- 7.SP.C.6: Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.
- 7.SP.C.7: Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
  - 7.SP.C.7.A: Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.
  - 7.SP.C.7.B: Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.
- 7.SP.C.8: Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.
  - 7.SP.C.8.A: Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
  - 7.SP.C.8.B: Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.
  - 7.SP.C.8.C: Design and use a simulation to generate frequencies for compound events.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
2st Century Life and Career Standards:
9.1.8.E.4 Prioritize personal wants and needs when making purchases.
21st Century Career Ready Practices
CRP3 Attend to personal health and financial well‑being
CRP4 Communicate clearly and effectively and with reason

CRP6 Demonstrate creativity and innovation

CRP8 Utilize critical thinking to make sense of problems and persevere in solving them

Interdisciplinary Connections:Science, Life Science, Social Studies

Science: 10.3 - Predicting weather patterns based on weather trends. 10.6 - Predicting a population based on sampling

Social Studies: 10.5 - Connection to the declaration of independence and choosing answers correctly on a multiple choice test about historical information. Correct answers will be discussed.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
10.1 Outcomes and Events **10.2** Probability **10.3** Experimental and Theoretical Probability **10.4** Compound Events **10.5** Independent and Dependent Events **10.6** Samples and Populations **10.7** Comparing Populations	Curriculum Map Teacher's Guide Chapter 10 p.398-463 Big Ideas website Desmos IXL	Student Textbook p.398-463 Record and Practice Journal p.207-242 Calculator Colored blocks and coins	- Smart Board Applications - Google Applications - Big ideas math website-student assignments - Desmos - IXL - DD.1 - DD.3-DD.6 - CC.6

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections Kahoot! Quizizz Desmos Big Ideas math online assessment tools Rubric-for projects Self-reflection	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 10.1-10.5 Mid Quiz 10.6-10.7 End Quiz Chapter 10 Test Chapter 10 Standards Assessment **Suggested skills to be assessed:** Identify and count the outcomes of experiments. Understand the concept of probability and the relationship between probability and likelihood. Find probabilities of events. Find relative frequencies. Use experimental probabilities to make predictions. Use theoretical probabilities to find quantities. Compare experimental and theoretical probabilities. Use tree diagrams, tables, or a formula to find the number of possible outcomes. Find probabilities of compound events. Identify independent and dependent events. Use formulas to find probabilities of independent and dependent events. Use simulations to find experimental probabilities.Determine when samples are representative of populations.Use data from random samples to make predictions about populations. Use multiple samples to make predictions about populations. Use measures of center and variation to compare populations. Use random samples to compare populations.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-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).

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	3	Unit Title:	Transformations	Pacing:	10 Days

Unit Summary: In this unit, 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 also discover the relationship between perimeters and areas of similar figures. They will use this relationship to determine missing values in similar figures.

Objectives: Students will be able to:
- name corresponding angles and corresponding sides of congruent figures.
- identify congruent figures.
- identify translations
- translate figures in the coordinate plane.
- identify reflections.
- reflect figures in the *x*-axis or the *y*-axis of the coordinate plane.
- identify rotations.
- rotate figures in the coordinate plane.
- use more than one transformation to find images of figures.
- name corresponding angles and corresponding sides of similar figures.
- identify similar figures.
- find unknown measures of similar figures.
- understand the relationship between perimeters of similar figures.

- understand the relationship between areas of similar figures.
- find ratios of perimeters and areas of similar figures.
- identify dilations.
- dilate figures in the coordinate plane.

Essential Questions:
- How can you identify congruent triangles?
- How can you arrange triangles to make a tessellation?
- How can you identify transformations using coordinate rules?
- What are three basic ways to move an object on a coordinate plane?
- How can you use proportions to determine if figures are the same shape?
- How do changes in dimensions of similar geometric figures affect the perimeters and areas of the figures?
- How can you enlarge or reduce a figure in the coordinate plane?

Common Core State Standards/Learning Targets:
- 8.G.A.1: Verify experimentally the properties of rotations, reflections, and translations:
  - 8.G.A.1.A: Lines are taken to lines, and line segments to line segments of the same length.
  - 8.G.A.1.B: Angles are taken to angles of the same measure.
  - 8.G.A.1.C: Parallel lines are taken to parallel lines.
- 8.G.A.2: Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.
- 8.G.A.3: Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
- 8.G.A.4: Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Career Ready Practices:
CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP6. Demonstrate creativity and innovation.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
Visual and Performing Arts: 11.2 - Students create a tessellation project. 11.3 - Student create a name reflection project. 11.4 - Students create a rotation project. 11.7 - Students create a dilation project with pumpkins.
History: 11.5 - Discuss the history of the Berlin Wall.

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

11.1 Congruent Figures
11.2 Translations
11.3 Reflections
11.4 Rotations
11.5 Similar Figures
11.6 Perimeters and Areas of Similar Figures
11.7 Dilations
	Curriculum Map
	Teacher's Guide Chapter 11
	p.464-523
	Big Ideas website
	Desmos.com
	IXL
		Student Textbook
		p.464-523
		
		Record and Practice Journal
		p. 243-272
		
		Calculator
		
		Graph Paper
			• Smart Board Applications
			• Google Applications
			• BigIdeasMath.com
			• IXL - 8th Grade:
			  ○ P.2-P.10
			  ○ Q.1-Q.5
			  ○ T.16
			• Billy Bug 2 Game

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Transformations Graphic Organizer Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections BigIdeasMath.com daily assessments Kahoot/Quizizz daily assessments	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 11.1-11.4 Mid Quiz 11.5-11.7 End Quiz Chapter 11 Test Chapter 11 Standards Assessment Geometry Portfolio **Suggested skills to be assessed:** Identifying congruent figures. Identifying parts of congruent figures. Performing translations, reflections, rotations, and dilations on a figure to produce an image. Performing more than one transformation on a figure. Identifying similar figures. Using similar figures to determine missing side lengths. Determining perimeters and areas of similar figures.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-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).

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			

Pacing Chart/Curriculum MAP

Marking Period:	3	Unit Title:	Angles and Triangles	Pacing:	10 Days

Unit Summary: This unit exposes students to the relationships in two-dimensional figures. Students discover the angle relationships formed when parallel lines are cut by a transversal. Using experimentation, students discover the interior and exterior angle sums of polygons and students use those sums to determine missing angle measures. Students will learn how to use indirect measurement to determine heights of objects that would be too difficult to measure.

Objectives: Students will be able to:
- identify the angles formed when parallel lines are cut by a transversal.
- find the measures of angles formed when parallel lines are cut by a transversal.
- understand that the sum of the interior angle measures of a triangle is 180°.
- find the measures of interior and exterior angles of triangles.
- find the sum of the interior angle measures of polygons.
- understand that the sum of the exterior angle measures of a polygon is 360°.
- find the measures of interior and exterior angles of polygons.
- understand the concept of similar triangles.
- identify similar triangles.
- use indirect measurement to find missing measures.

Essential Questions:
- How can you describe angles formed by parallel lines and transversals?
- How can you describe the relationships among the angles of a triangle?
- How can you find the sum of the interior angles and the exterior angles of a polygon?
- How can you use angles to tell whether triangles are similar?

Common Core State Standards/Learning Targets:
- 8.G.A.5: Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Life and Career Standards:
9.2.8.B.1 Research careers within the 16 Career Clusters® and determine attributes of career success.
21st Century Career Ready Practices:
CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP6. Demonstrate creativity and innovation.
CRP7. Employ valid and reliable research strategies.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
CRP11. Use technology to enhance productivity.
Science: 12.3 - Discuss a cloud system on Saturn that is in the approximate shape of a regular hexagon.

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

12.1 Parallel Lines and Transversals
12.2 Angles of Triangles
12.3 Angles of Polygons
12.4 Using Similar Triangles
	Curriculum Map
	Teacher's Guide Chapter 12
	p.524-563
	Big Ideas website
	Desmos.com
	IXL
		Student Textbook
		p.524-563
		
		Record and Practice Journal
		p. 273-290
		
		Protractor
		
		Calculator
			• Smart Board Applications
			• Google Applications
			• BigIdeasMath.com
			• IXL - 8th Grade:
			  ○ O.6-O.12
			  ○ Q.1
			• Banana Hunt Game

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Parallel Lines and Transversals Vocabulary Cards Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections BigIdeasMath.com daily assessments Kahoot/Quizizz daily assessments	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 12.1-12.2 Mid Quiz 12.3-12.4 End Quiz Chapter 12 Test Chapter 12 Standards Assessment City Map Project on Parallel Lines and Transversals

	Suggested skills to be assessed: Determine missing angles in parallel lines cut by a transversal. Determine missing interior and exterior angles of polygons using angle sums. Determine if triangles are similar based on their angles.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount of items given for homework, quizzes, and	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**	listing for additional recommendations ● **Establish a consistent and daily routine**		growth. ● **Provide for the development of self-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).**

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	3	**Unit Title:**	**Graphing and Writing Linear Equations**	**Pacing:**	10 Days

Unit Summary: This unit is one of the most important units for preparing the students for Algebra. The students are introduced to graphing equations and the meaning of the lines. Students determine the slope of a line and how it is used to write the equation of a line. By using the slope formula and the *x* and *y*-intercepts, students learn how to write equations in slope-intercept form, standard form, and point-slope form. This unit teaches students how to move between graphs and equations.

Objectives: Students will be able to:
- understand that lines represent solutions of linear equations.
- graph linear equations.
- find slopes of lines by using two points.
- find slopes of lines from tables.
- identify parallel and perpendicular lines.
- write and graph proportional relationships.
- find slopes and *y*-intercepts of graphs of linear equations.
- graph linear equations written in slope-intercept form.
- graph linear equations written in standard form.

- write equations of lines in slope-intercept form.
- write equations of lines using a slope and a point.
- write equations of lines using two points.

Essential Questions:
- How do you recognize a linear equation? How can you draw its graph?
- How can you use the slope of a line to describe the line?
- How can you describe the graph of the equation $y = mx$?
- How can you describe the graph of the equation $y = mx + b$?
- How can you describe the graph of the equation $ax + by = c$?
- How can you write an equation of a line when you are given the slope and the y-intercept of the line?
- How can you write an equation of a line when you are given the slope and a point on the line?

Common Core State Standards/Learning Targets:
- 8.EE.B.5: Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
- 8.EE.B.6: Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation y = mx for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b.
- 8.F.B.4: Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

Interdisciplinary Connections/Including 21st Century Themes and Skills:

21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy

21st Century Skills: Critical Thinking and Problem Solving

21st Century Life and Career Standards:

9.1.8.A.2 Relate how career choices, education choices, skills, entrepreneurship, and economic conditions affect income.

9.1.8.A.6 Explain how income affects spending decisions.

21st Century Career Ready Practices:

CRP2. Apply appropriate academic and technical skills.

CRP3. Attend to personal health and financial well-being.

CRP4. Communicate clearly and effectively and with reason.

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP11. Use technology to enhance productivity.

Science: 13.1 - Discuss when a tropical storm becomes a hurricane. Use a linear equation to determine how many hours until the storm becomes a hurricane. 13.3 - Use a proportional relationship to compare an object's weight on Titan, one of Saturn's moons, and Earth. Use the distance formula to compare speeds.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
13.1 Graphing Linear Equations **13.2** Slope of a Line **13.3** Graphing Proportional Relationships **13.4** Graphing Linear Equations in Slope-Intercept Form **13.5** Graphing Linear Equations in Standards Form	Curriculum Map Teacher's Guide Chapter 13 p.564-623 Big Ideas website Desmos.com IXL	Student Textbook p.564-623 Record and Practice Journal p. 291-322 Calculator	• Smart Board Applications • Google Applications • desmos.com • BigIdeasMath.com • IXL - 8th Grade: ○ Y.1-Y.13 • Slope-Intercept Form Basketball

13.6 Writing Equations in Slope-Intercept Form **13.7** Writing Equations in Point-Slope Form		Graph Paper	Game

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Slope Man Visual Slope Scavenger Hunt Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections BigIdeasMath.com daily assessments Kahoot/Quizizz daily assessments	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 13.1-13.3 Mid Quiz 13.4-13.7 End Quiz Chapter 13 Test Chapter 13 Standards Assessment Creating Initials on Desmos.com **Suggested skills to be assessed:** Graphing linear equations using a table. Determine the slope of a line by using the slope formula. Writing and graphing proportional relationships. Writing and graphing equations in slope-intercept form, standard form, and slope-intercept form.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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 amount 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-understanding of one's relationships with people, societal institutions, nature and culture. - Continue to offer Accelerated

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			**Mathematics 7 (7th grade) and Algebra 1 (8th grade).**

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	4	Unit Title:	Real Numbers and the Pythagorean Theorem	Pacing:	15 Days

Unit Summary: In this unit, students' understanding of types of numbers extends to irrational numbers. Students begin by determining perfect squares and perfect cubes. Students then determine the square roots of numbers that are not perfect squares, which are irrational. After examining a geometric proof of the Pythagorean Theorem, students can determine missing side lengths in right triangles. Students apply 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: Students will be able to:
- find the square roots of perfect squares.
- evaluate expressions involving square roots.
- use square roots to solve equations.
- find cube roots of perfect cubes
- evaluate expressions involving cube roots.
- use cube roots to solve equations.
- provide geometric proof of the Pythagorean Theorem.

- use the Pythagorean Theorem to find missing side lengths of right triangles.
- define irrational numbers.
- approximate square roots.
- approximate values of expressions involving irrational numbers.
- write a repeating decimal as a fraction.
- use the converse of the Pythagorean Theorem to identify right triangles.
- use the Pythagorean Theorem to find distances in a coordinate plane.
- solve real-life problems.

Essential Questions:
- How can you find the dimensions of a square when you are given its area?
- How is a cube root of a number different from the square root of a number?
- How are the lengths of the sides of a right triangle related?
- How can you find decimal approximations of square roots that are not rational?
- In what other ways can you use the Pythagorean Theorem?

Common Core State Standards/Learning Targets:
- 8.EE.A.2:Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
- 8.NS.A.1: Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
- 8.NS.A.2: Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2).
- 8.G.B.6: Explain a proof of the Pythagorean Theorem and its converse.
- 8.G.B.7: Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and

mathematical problems in two and three dimensions.
- 8.G.B.8: Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Career Ready Practices:
CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP7. Employ valid and reliable research strategies.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
History: 14.3 - Research Pythagoras

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
14.1 Finding Square Roots **14.2** Finding Cube Roots **14.3** The Pythagorean Theorem **14.4** Approximating Square Roots **14.5** Using the Pythagorean Theorem	Curriculum Map Teacher's Guide Chapter 14 p.224-269 Big Ideas website Desmos.com IXL	Student Textbook p.224-269 Record and Practice Journal p. 323-346 Calculator	- Smart Board Applications - Google Applications - BigIdeasMath.com - IXL - 8th Grade: - F.14 - F.16 - F.19-F.20 - R.1-R.5 - Algebra I: A.5

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards.	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.*
Suggested activities to assess student progress: Pythagorean Theorem Poster Real Numbers Diagram Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections BigIdeasMath.com daily assessments Kahoot/Quizizz daily assessments	**Final Assessment/Benchmark/Project:** 14.1-14.3 Mid Quiz Square Roots and Cube Roots Quiz 14.4-14.5 End Quiz Chapter 14 Test Chapter 14 Standards Assessment **Suggested skills to be assessed:** Evaluate expressions use square root and cube root. Determine the missing side length in a right triangle by using the Pythagorean Theorem. Classify real numbers. Approximate square roots. Determine if a triangle is a right triangle. Use the Distance Formula to determine the distance between any two points in the coordinate plane.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented

- 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 amount 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	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - 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 and daily routine	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - 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 and daily routine.	- 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 and growth. - Provide for the development of self-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).

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 moments.** ● **Utilize graphic organizers** ● **Introduce/review study skills** ● **Provide reading material at or slightly above students' reading levels.** ● **Utilize manipulatives as necessary.** ● **Establish a consistent and daily routine**			

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	4	Unit Title:	Volume and Similar Solids	Pacing:	15 Days

Unit Summary: In this unit, students' understand of volume extends to cylinders, cones, and spheres. Through experimentation, students develop the formulas to determine volumes of cylinders, cones, and spheres. Students will also determine missing dimensions when given the volume. Students also investigate the relationship between the volumes and surfaces areas of similar figures.

Objectives: Students will be able to:
- find the volumes of cylinders.
- find the heights of cylinders given the volumes.
- find the volumes of cones.
- find the heights of cones given the volumes.
- find the volumes of spheres.
- find the radii of spheres given the volumes.
- identify similar solids.
- use properties of similar solids to find missing measures.
- understand the relationship between surface areas of similar solids.

- understand the relationship between volumes of similar solids.
- solve real-life problems.

Essential Questions:
- How can you find the volume of a cylinder?
- How can you find the volume of a cone?
- How can you find the volume of a sphere?
- When the dimensions of a solid increase by a factor of 'k', how do the surface area and volume change?

Common Core State Standards/Learning Targets:
- 8.G.C.9: Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Life and Career Standards:
9.3.MN‑PPD.2 Research, design and implement alternative manufacturing processes to manage production of new and/or improved products.
9.3.ST‑ET.4 Apply the elements of the design process.
9.3.ST‑SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.
21st Century Career Ready Practices:
CRP2. Apply appropriate academic and technical skills.
CRP3. Attend to personal health and financial well-being.
CRP4. Communicate clearly and effectively and with reason.

CRP6. Demonstrate creativity and innovation.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

15.1 - Students design a candle using $20 worth a materials to make 8 candles. Students set a reasonable price to make a profit.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
15.1 Volumes of Cylinders **15.2** Volumes of Cones **15.3** Volumes of Spheres **15.4** Surface Areas and Volumes of Similar Solids	Curriculum Map Teacher's Guide Chapter 15 p.670-707 Big Ideas website Desmos.com IXL	Student Textbook p.670-707 Record and Practice Journal p.347-364 Calculator	- Smart Board Applications - Google Applications - BigIdeasMath.com - IXL - 8th Grade: - T.9-T.10 - T.13 - T.15

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:** Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:** 15.1-15.2 Mid Quiz 15.3-15.4 End Quiz Chapter 15 Test

BigIdeasMath.com daily assessments Kahoot/Quizizz daily assessments	Chapter 15 Standards Assessment **Suggested skills to be assessed:** Determine volumes of cylinders, cones, and spheres. Determine missing dimensions of cylinders, cones, and spheres given the volume. Determine surface areas and volumes of similar figures.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
• **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 amount of items given**	• **RTI** • **Speech/Language Therapy** • **Rosetta Stone** • **Hold high expectations** • **Provide English/Spanish Dictionary for use** • **Place with Spanish speaking teacher/paraprofessional as available** • **Learn/Utilize/Display some words in the students' native language** • **Invite student to after school tutoring sessions** • **Basic Skills Instruction** • **Utilize formative assessments to drive instruction** • **Translate printed communications for parents in native language** • **Hold conferences with translator present** • **Utilize additional NJDOE resources/recommendations**	• **RTI Tiered Interventions following RTI framework** • **Support instruction with RTI intervention resources** • **Provide after school tutoring services** • **Basic Skills Instruction** • **Hold high expectations** • **Utilize Go Math! RTI strategies** • **Fountas and Pinnell Phonics** • **Hold parent conferences fall and spring** • **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 and daily routine.**	• **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 and**

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 moments. ● Utilize graphic organizers ● Introduce/review study skills ● Provide reading material at or slightly above students' reading levels. ● Utilize manipulatives as necessary. ● Establish a consistent and daily routine.	● Review Special Education listing for additional recommendations ● Establish a consistent and daily routine		growth. ● Provide for the development of self-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).

Quinton Township School District
Mathematics
Grade 7 Accelerated

Pacing Chart/Curriculum MAP

Marking Period:	4	**Unit Title:**	**Exponents and Scientific Notation**	**Pacing:**	15 Days

Unit Summary: In this unit, students analyze the relationships between powers. They determine the Power Rules through experimentation and use those rules to simplify and evaluate expressions. Students are also introduced to scientific notation. They learn how to read and write values in scientific notation. They also investigate how to perform operations in scientific notation.

Objectives: Students will be able to:
- write expressions using integer exponents.
- evaluate expressions involving integer expressions.
- multiply powers with the same base.
- find a power of a power.
- find a power of a product.
- divide powers with the same base.
- simplify expressions involving the quotients of powers.
- evaluate expressions involving numbers with zero as an exponent.
- evaluate expressions involving negative integer exponents.

Essential Questions:
- How can you use exponents to write numbers?
- How can you use inductive reasoning to observe patterns and write general rules involving properties of exponents?
- How can you divide two powers that have the same base?
- How can you evaluate a nonzero number with an exponent of zero or a negative integer exponent?
- How can you read numbers that are written in scientific notation?
- How can you write a number in scientific notation?
- How can you perform operations with numbers that are written in scientific notation?

Common Core State Standards/Learning Targets:
- 8.EE.A.1: Know and apply the properties of integer exponents to generate equivalent numerical expressions.
- 8.EE.A.3: Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.
- 8.EE.A.4: Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

Interdisciplinary Connections/Including 21st Century Themes and Skills:
21st Century Theme: Financial, Economic, Business, and Entrepreneurial Literacy
21st Century Skills: Critical Thinking and Problem Solving
21st Century Career Ready Practices:
CRP2. Apply appropriate academic and technical skills.
CRP4. Communicate clearly and effectively and with reason.
CRP6. Demonstrate creativity and innovation.
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
Science: 16.5 - Students investigate the density of objects using scientific notation. 16.6 - Discuss the difference between an acid

and a base. Determine the pH levels of different liquids. Students create a scale model of the solar system. Students order three geologic eras from earliest to the most recent using scientific notation.

Overview of Activities	Teacher's Guide/ Resources	Core Instructional Materials	Technology Infusion
16.1 Exponents **16.2** Product of Powers Property **16.3** Quotient of Powers Property **16.4** Zero and Negative Exponents **16.5** Reading Scientific Notation **16.6** Writing Scientific Notation **16.7** Operations in Scientific Notation	Curriculum Map Teacher's Guide Chapter 16 p.708-761 Big Ideas website Desmos.com IXL	Student Textbook p.708-761 Record and Practice Journal p. 365-394 Calculator	- Smart Board Applications - Google Applications - BigIdeasMath.com - IXL - 8th Grade: - F.1-F.2 - F.4 - F.6-F.12 - G.1-G.4 - Powers Concentration Game

Formative Assessment Plan	Summative Assessment Plan
Formative assessment informs instruction and is on going through a unit to determine how students are progressing with the high expectations of standards. **Suggested activities to assess student progress:**	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.* **Final Assessment/Benchmark/Project:**

Scale Model of the Solar System Weekly Homework Completion Classwork & Basic Skill Practice Corrections & Reflections BigIdeasMath.com daily assessments Kahoot/Quizizz daily assessments	16.1-16.4 Mid Quiz 16.5-16.7 End Quiz Chapter 16 Test Chapter 16 Standards Assessment Spring MAP Benchmark Assessment **Suggested skills to be assessed:** Use Power Rules to simplify and evaluate expressions. Read and write in scientific notation. Evaluate expressions in scientific notation.

Differentiation

Special Education	ELL	At Risk	Gifted and Talented
- 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.	- RTI - Speech/Language Therapy - Rosetta Stone - Hold high expectations - Provide English/Spanish Dictionary for use - Place with Spanish speaking teacher/paraprofessional as available - Learn/Utilize/Display some words in the students' native language - Invite student to after school tutoring sessions - Basic Skills Instruction - Utilize formative assessments	- RTI Tiered Interventions following RTI framework - Support instruction with RTI intervention resources - Provide after school tutoring services - Basic Skills Instruction - Hold high expectations - Utilize Go Math! RTI strategies - Fountas and Pinnell Phonics - Hold parent conferences fall and spring - Make modifications to instructional plans based on I and RS Plan. - Develop a record system to	- 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

Chunk tasks into smaller components **Provide step by step instructions** **Model and use visuals as often as possible** **Utilize extended time and/or reduce amount 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 moments.** **Utilize graphic organizers**	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 and daily routine**	encourage good behavior and completion of work. **Establish a consistent and daily routine.**	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 and growth.** **Provide for the development of self-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).**

• **Introduce/review study skills** • **Provide reading material at or slightly above students' reading levels.** • **Utilize manipulatives as necessary.** • **Establish a consistent and daily routine**			