HILLSBOROUGH TOWNSHIP SCHOOL DISTRICT

MATHEMATICS CURRICULUM

Grade 7

July, 2020

Course Overview
Grade 7

The grade seven mathematics program emphasizes the following content strands as they align with the grade seven New Jersey Student Learning Standards (NJSLS) in mathematics: Ratios and Proportional Relationships, The Number System, Expressions and Equations, Geometry, and Statistics and Probability. The New Jersey Student Learning Standards for Mathematical Practice: make sense of problems and persevere in solving them; reason abstractly and quantitatively; construct viable arguments and critique the reasoning of others; model with mathematics, use appropriate tools strategically; attend to precision; look for and make use of structure; and look for and express regularity in repeated reasoning are embedded in the daily teaching and learning. The content is presented using a problem solving approach designed to develop critical thinking skills while embedding the mathematical processes into the daily teaching and learning. Practice of basic skills is ongoing through a variety of routines and activities. Topics are revisited regularly and practice is distributed over time to facilitate full concept development. Activities explore a wide variety of content with opportunities for students to apply basic fact skills to geometry, measurement and algebra. Program implementation and assessment offers enrichment and reinforcement based on individual student needs. The grade seven mathematics program prepares students to take the New Jersey Student Learning Assessment 7 or any new generation assessment developed. Successful completion of the seventh grade mathematics program prepares students for entry into either the eighth grade mathematics program or algebra 1.

Hillsborough Township Public Schools
Grade 7 Mathematics Curriculum

Unit Title: Unit 1 Number Sense and Rational Numbers	**Time Frame/Pacing:** 40 Days

Essential Questions

- What happens when we operate on rational numbers?

Enduring Understandings

- There are patterns to rational numbers and therefore when we operate on them there are predictable outcomes.

Standards Taught and Assessed

■ Major Cluster

- 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.
  - a. Describe situations in which opposite quantities combine to make 0. For example, in the first round of a game, Maria scored 20 points. In the second round of the same game, she lost 20 points. What is her score at the end of the second round?
  - 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.
  - 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.
  - 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 of fractions to multiply and divide rational numbers.
  - 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.
  - 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.
  - c. Apply properties of operations as strategies to multiply and divide rational numbers.
  - 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.

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Highlighted Interdisciplinary Connections

- 6.2.8.D.1.a Demonstrated an understanding of pre-agricultural and post-agrarian periods in terms of relative length of time.

Highlighted Career Ready Practices and 21st Century Themes and Skill

- 9.1.8.CDM.1: Compare and contrast the use of credit cards and debit cards for specific purchases and the advantages and disadvantages of using each.
- 9.1.8.CR.2: Compare various ways to give back through strengths, passions, goals, and other personal factors

Social Emotional Learning Competencies

- 2.1.8.EH.2: Analyze how personal attributes, resiliency, and protective factors support mental and emotional health.
- 2.1.8.SSH.2: Develop a plan for the school to promote dignity and respect for people of all genders, gender identities, gender expressions, and sexual orientations in the school community.
- 2.1.8.PGD.4: Analyze the relationship between healthy behaviors and personal health.

Pre-Assessment

- 7.NS.A.1.d
- 7.NS.A.2.c
- 7.NS.A.3

Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)

- extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

Student Learning Objectives: We are learning to/that...	Student Strategies (Mathematical Practices)	Formative Assessment	Activities and Resources	Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)
■ 7.NS.A.1 Understand absolute values and ordering of rational numbers.	SMP 7 Look for and make use of structure	Order the numbers from least to greatest: $2.6,\ |-3.1|,\ -1.5,\ 4\frac{1}{2},\ |1.$	Interactive Number Line Using a Number Line Exploration Tutorial Example Tutorial Example (modeling)	Number line, interactive number line, clarify directions, vocabulary usage, small group work, one one one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations and/or modifications per a student's IEP or 504 plans,

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

■ 7.NS.A.1.b Find sums of integers.	SMP 7 Look for and make use of structure	Evaluate the expression. $-6+(-4)$ $7+(-3)$	Using Integer Counters to Find Sums Exploration: Using a Number Line Tutorial Example Tutorial Example (modeling)	Use integer chips, number line, clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations and/or modifications per a student's IEP or 504 plans
■ 7.NS.A.1.d Find sums of rational numbers.	SMP 8 Look for and express regularity in repeated reasoning	Find the sum. $4\frac{1}{3}+\left(-5\frac{1}{8}\right)$	Exploration: Adding Rational Numbers Tutorial Example Tutorial Example (modeling)	Clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations and/or modifications per a student's IEP or 504 plans
■ 7. NS.A.1.c Find differences of integers.	SMP 7 Look for and make use of structure structure.	Find the difference. $9-(-5)$ $-1-3$	Exploration: Using Integer Counters to Subtract Integers Tutorial Example Tutorial Example (modeling)	Number line model,integer chips, clarify direction, small group work, one one one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations and/or modifications per a student's IEP or 504 plans
■ 7. NS.A.1.d Find differences of rational numbers and find distances between numbers on a number line.	SMP 8 Look for and express regularity in repeated reasoning	Find the difference in temperature from a low of -12 degrees to high of 37 degrees.	Exploration: Finding Distances on a Number Line Tutorial Example Tutorial Example (modeling)	Clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations and/or modifications per a student's IEP or 504 plans

Key: ■ Major Cluster ☐ Supporting Cluster ◎ Additional Cluster

■ 7. NS.A.2.a Find products of integers.	SMP 7 Look for and make use of structure	Find the product: $-3 \cdot -6$ $5(-8)$	Exploration: Understanding Products Involving Negative Integers Tutorial Example Tutorial Example (modeling)	Multiplication chart, clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations and/or modifications per a student's IEP or 504 plans
■ 7. NS.A.2.b Find quotients of integers.	SMP 7 Look for and make use of structure	Find the quotient: $\frac{(-20)}{2}$ $-49 \div 7$	Exploration: Understanding Quotients Involving Negative Integers Tutorial Example Tutorial Example (modeling)	Multiplication chart,Clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■ 7. NS.A.2.d Convert between different forms of rational numbers.	SMP 7 Look for and make use of structure	Write -0.76 as a fraction in simplest form. Write a rational number in fraction form that would convert to a repeating decimal..	Exploration: Exploring Decimal Representations Tutorial Example Tutorial Example (modeling)	Place value chart, clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■ 7. NS.A.2.c Find products of rational numbers.	SMP 8 Look for and express regularity in repeated reasoning	Find the product: $-1.2 \cdot 0.3$	Exploration: Finding Products of Rational Numbers Tutorial Example Tutorial Example (modeling)	Clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

<table>
<tr>
<td>■ 7. NS.A.2.c Find quotients of rational numbers.</td>
<td>SMP 8 Look for and express regularity in repeated reasoning</td>
<td>Find the quotient:
$-\frac{1}{2} \div -\frac{3}{5}$</td>
<td>Exploration: Finding Quotients of Rational Numbers
Tutorial Example
Tutorial Example (modeling)</td>
<td>Clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans</td>
</tr>
<tr>
<td colspan="2">Benchmark Assessment
• Benchmark 1</td>
<td colspan="3" rowspan="2">Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)
• extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan</td>
</tr>
<tr>
<td colspan="2">Summative Assessment(s)
• Unit 1 Check-in 1
○ 7.NS.A.1.a
○ 7.NS.A.1.b
• Unit 1 Check-in 2
○ 7.NS.A.1.c
○ 7.NS.A.1.d
• Unit 1 Check-in 3
○ 7.NS.A.2.a
○ 7.NS.A.2.b
○ 7.NS.A.2.c
• Unit 1 Check-in 4
○ 7..NS.A.2.d
○ 7.NS.A.3
• Unit 1 Performance Task 1
○ 7.NS.A.1
○ 7.NS.A.3
• Unit 1 Performance Task 2
○ 7.NS.A.2
○ 7.NS.A.3</td>
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Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Hillsborough Township Public Schools
Grade 7 Mathematics Curriculum

Unit Title: Unit 2 **Equations & Expressions**	**Time Frame/Pacing:** 37 Days

Essential Questions

- How can we use mathematical models as tools to best describe and help explain real-life situations?

Enduring Understandings

- Real-life situations can be represented with mathematical models.

Standards Taught and Assessed

■ Major Cluster

- 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. *For example, $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by 1.05."*
- 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. *For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*
- 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.
    - 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. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*
    - 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. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.*

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Highlighted Interdisciplinary Connections

- MS-LS1-6. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

Highlighted Career Ready Practices and 21st Century Themes and Skill

- 9.1.8.CDM.1: Compare and contrast the use of credit cards and debit cards for specific purchases and the advantages and disadvantages of using each.
- 9.1.8.CR.2: Compare various ways to give back through strengths, passions, goals, and other personal factors

Social Emotional Learning Competencies

- 2.1.8.EH.2: Analyze how personal attributes, resiliency, and protective factors support mental and emotional health.
- 2.1.8.SSH.2: Develop a plan for the school to promote dignity and respect for people of all genders, gender identities, gender expressions, and sexual orientations in the school community.
- 2.1.8.PGD.4: Analyze the relationship between healthy behaviors and personal health.

Pre-Assessment

- 7.EE.A.1
- 7.EE.B.3
- 7.EE.B.4

Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)

- extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

Student Learning Objectives: We are learning to/that...	Student Strategies (Mathematical Practices)	Formative Assessment	Activities and Resources	Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)
■ 7.EE.A.1 Simplify algebraic expressions.	SMP 7 Look for and make use of structure	Simplify the expressions: $-3.4z + 1.1 - 2.3z - 8.2$ $-\frac{1}{3}x - 6 + \frac{2}{3}x - 3$	Exploration: Simplifying Algebraic Expressions Tutorial Example Tutorial Example (modeling)	Visual diagrams, vocabulary usage, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

Key: ■ Major Cluster ☐ Supporting Cluster ◎ Additional Cluster

■ 7.EE.A.1 Find sums and differences of linear expressions.	SMP 7 Look for and make use of structure	Simplify each expression: $\left(\frac{1}{2}x - 12\right) + \left(\frac{1}{8}x - 3\right)$ $\left(\frac{3}{4}x - 1\right) - \left(\frac{1}{2}x - 9\right)$	Exploration: Using Algebra Tiles Interactive Algebra Tiles Tutorial Example Tutorial Example (modeling)	Number line, visual diagrams, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■ 7.EE.A.2 Apply the Distributive Property to generate equivalent expressions, by factoring or expanding.	SMP 7 Look for and make use of structure	Simplify each expression: $\frac{1}{6}(18x - 30) + 9x$ $-2.5(p + 4) + 8.1$ Factor $\frac{1}{5}$ out of: $\frac{1}{5}x - \frac{3}{5}$ Factor using the GCF: $34x + 17y$	Exploration: Using Models to Write Expressions Exploration: Finding Dimensions Tutorial Example Tutorial Example (modeling)	Visual diagrams, multiplication chart, clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■ 7.EE.B.3 and EE.B.4.a Write and solve one-step equations	SMP 4 Model with mathematics SMP 7 Look for and make use of structure	Solve for x: $x + \frac{3}{4} = 6$ The perimeter of the triangle is 20.6 centimeters. The two given side lengths are 6.3 centimeters and 8.4 centimeters. What is the unknown side length?	Exploration: Using Algebra Tiles to Solve Equations - Example 1 Exploration: Using Algebra Tiles to Solve Equations - Example 2 Interactive Algebra Tiles Tutorial Example Tutorial Example (modeling)	Visual diagram, number line, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

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■7.EE.B.3 and 7.EE.B.4.a Write and solve two-step equations.	SMP 2 Reason abstractly and quantitatively SMP4 Model with mathematics.	Solve for x: $\frac{x}{20} + \frac{3}{4} = -\frac{1}{4}$ It costs $23.50 to enter an amusement park and $0.25 to ride a ride. You have $24. Write an equation that represents the number *r* of rides you can ride.	Exploration: Using Algebra Tiles to Solve Equations Interactive Algebra Tiles Tutorial Example Tutorial Example (modeling)	Visual diagram, multiplication chart, number line, clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■7.EE.B.4.b Write inequalities and represent solutions of inequalities on number lines.	SMP 4 Model with mathematics.	A rock climber's sleeping bag is recommended for temperatures no less than −15°C. Write and graph an inequality that represents the recommended temperatures for the sleeping bag.	Exploration: Understanding Inequality Statements Tutorial Example Tutorial Example (modeling)	Vocabulary usage, visual diagrams, number line, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■7.EE.B.4.b and 7 EE.B.3 Write and solve one-step inequalities.	SMP 3 Construct a viable argument and critique the reasoning of others	Graph the solution of each inequality: $x - 3 < 5$ $-8x \geq 24$ Write an inequality that you can solve using the	Exploration: Writing Inequalities Tutorial Example Tutorial Example (modeling)	Visual diagrams, number line, multiplication chart, clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's

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		Division Property of Inequality where the direction of the inequality symbol must be reversed.		IEP or 504 plans
■ 7.EE.B.4.b and 7 EE.B.3 Write and solve two-step inequalities.	SMP 2 Reason abstractly and quantitatively	Solve the inequality and graph the solution. $7z + 5 - 9z < 18 + 7$	Exploration: Using Algebra Tiles to Solve Inequalities Tutorial Example Tutorial Example (modeling)	Visual diagrams, multiplication chart, clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

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Benchmark Assessment • Not applicable	**Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)** • extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

Summative Assessment(s)
• Unit 2 Check-in 1
  ○ 7.EE.A.1
  ○ 7.EE.A.2
• Unit 2 Check-in 2
  ○ 7.EE.A.1
  ○ 7.EE.A.2
• Unit 2 Check-in 3
  ○ 7.EE.B.3
  ○ 7. EE.B.4.a
• Unit 2 Check-in 4
  ○ 7.EE.B.3
  ○ 7.EE.B.4.b
• Unit 2 Performance Task 1
  ○ 7.EE.B3
  ○ 7.EE.B4.a
• Unit 2 Performance Task 2
  ○ 7.EE.B4.b
	Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)
	• extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

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Hillsborough Township Public Schools
Grade 7 Mathematics Curriculum

Unit Title: Unit 3 Ratios and Proportions	**Time Frame/Pacing:** 39 days

Essential Questions

- How can change be best represented mathematically?

Enduring Understandings

- Patterns and relationships can be represented graphically, numerically, symbolically, or verbally.

Standards Taught and Assessed

■ Major Cluster

- 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. *For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.*
- 7.RP.A.2 Recognize and represent proportional relationships between quantities.
  - 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.
  - b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
  - c. Represent proportional relationships by equations. *For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as $t = pn$.*
  - 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.
- 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. *For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*

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◎ Additional Cluster

- 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.

Highlighted Interdisciplinary Connections

- 6.2.8.B.2.b Compare and contrast physical maps of ancient river valley civilizations and their modern counterparts, and determine the geopolitical impact of these civilizations, then and now.
- MS-ESS1-1: Develop and use a model of the Earth-Sun-Moon system to describe the cyclic patterns of lunar phases, eclipses of the sun

Highlighted Career Ready Practices and 21st Century Themes and Skill

- 9.1.8.CDM.2: Demonstrate an understanding of the terminology associated with different types of credit (e.g., credit cards, installment loans, mortgages, lines of credit) and compare and calculate the interest rates associated with each
- • 9.4.8.CI.1: Assess data gathered on varying perspectives on causes of climate change (e.g., cross cultural, gender-specific, generational), and determine how the data can best be used to design multiple potential solutions

Social Emotional Learning Competencies

- 2.1.8.EH.2: Analyze how personal attributes, resiliency, and protective factors support mental and emotional health.
- 2.1.8.SSH.2: Develop a plan for the school to promote dignity and respect for people of all genders, gender identities, gender expressions, and sexual orientations in the school community.
- 2.1.8.PGD.4: Analyze the relationship between healthy behaviors and personal health.

Pre-Assessment

- 7.RP.A.1
- 7.RP.A.2.a
- 7.RP.A.2.b
- 7.RP.A.2.c
- 7.RP.A.3

Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)

- extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

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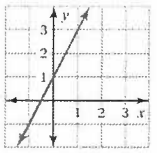
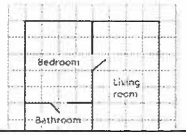
Hillsborough Township Public Schools
Grade 7 Mathematics Curriculum

Student Learning Objectives: We are learning to/that...	Student Strategies (Mathematical Practices)	Formative Assessment	Activities and Resources	Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)
■ 7.RP.A.1 and 7..RP.A.2.a Understand ratios of rational numbers and use ratio tables to represent equivalent ratios.	SMP 2 Reason abstractly and quantitatively	A recipe uses ¼ cup of water and 2 cups of flour. Write the ratio of water to flour. Then find the value of the ratio. Find the missing values in the ratio table. Then write the equivalent ratios. Miles | 24 | 8 | Hours | ¾ | | ½	Exploration: Describing Ratio Relationships Exploration: Completing Ratio Tables Tutorial Tutorial (modeling)	Vocabulary usage, visual diagrams, clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations and/or modifications per a student's IEP or 504 plans
■ 7.RP.A.1 Understand rates involving fractions and use unit rates to solve problems.	MP1 Make sense of problems and persevere in solving them.	A person jogs 1/7 mile in 1/42 hour. What is the person's speed in miles per hour? You hike up a mountain trail at a rate of ¼ mile every 10 minutes. You hike 5 miles every 2 hours on the way down the trail. How much farther do you hike in 3 hours on the way down than in 3 hours on	Exploration: Writing Rates Tutorial Tutorial (modeling)	Vocabulary usage, clarify directions ,calculator, small group work, one one one instruction, differentiated lessons, enrichment activities,manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

Key: ■ Major Cluster ☐ Supporting Cluster ◎ Additional Cluster

		the way up?		
■ 7.RP.A.2.a 7.RP.A.2.b 7.RP.A.2.c 7.RP.A.2.d Determine whether two quantities are in a proportional relationship using graphs and equations.	M3 Construct viable arguments and critique the reasoning of others.	 Your friend uses the graph and determines that x and y are proportional. Is your friend correct? Explain your reasoning. Tell whether x and y are proportional. If so, identify the constant of proportionality. Explain your reasoning. $8 = xy$	Exploration: Determining Proportional Relationships Tutorial Tutorial (modeling)	Graphs, visual diagrams, clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities,manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■ 7.RP.A.3 Use proportions to solve ratio problems.	MP2 Reason abstractly and quantitatively.	A person who weighs 120 pounds on Earth weighs 20 pounds on the Moon. How much does a 93-pound person weigh on the Moon? Use a proportion to complete the statement. Round to the nearest hundredth if necessary. 6 km ≈ ____ mi	Exploration: Writing and Solving Proportions Tutorial Tutorial (modeling)	Calculator, visual diagrams, clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities,manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■ 7.RP.A.3 and	MP6 Attend to precision	 In a blueprint, each	Exploration: Creating a Scale Drawing	Real life examples, calculator, visual diagrams, clarify directions, small group work,

Key: ■ Major Cluster ☐ Supporting Cluster ◎ Additional Cluster

◎7.G.A.1 Solve problems involving scale drawings.		square has a side-length of ¼ inch. Ceramic tile costs $5 per square foot. How much does it cost to tile the bathroom?	Tutorial example Tutorial example (modeling)	one one one instruction, differentiated lessons, enrichment activities,manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■7.RP.A.3 Use the percent proportion or the percent equation to find missing quantities.	MP7 Look for and make use of structure.	You purchase 2 action figures per week. You have 48 action figures, which is 75% of the total number of action figures you need to complete your collection. How many weeks until your collection is complete?	Exploration: Using Percent Models Tutorial example (proportion) Tutorial example (equation) Tutorial example (modeling)	Calculator, visual diagram, clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities,manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
■7.RP.A.3 Find percents of change in quantities.	MP7 Look for and make use of structure.	Identify the percent of change as an increase or a decrease. Then find the percent of change. 8 feet to 24 feet Last week, you finished Level 2 of a video game in 32 minutes. Today, you finish Level 2 in 28 minutes. What is the percent of change?	Exploration: Exploring Percent of Change Tutorial example Tutorial example (modeling)	Calculator, visual diagram, clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities,manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

■.RP.A.3 Solve percent problems involving discounts, markups and interest.	MP7 Look for and make use of structure.	A store sells memory cards for $25 each. a. The markup for each memory card is 25%. How much did the store pay for 50 memory cards? b. The store offers a discount when a customer buys two or more memory cards. A customer pays $47.50 for two memory cards. What is the percent of discount? You deposit $800 in an account. The account earns $360 simple interest in 3 years. What is the annual interest rate?	Exploration: Comparing Discounts Tutorial example 1 Tutorial example 2 Tutorial example (modeling)	Calculator, real life examples, visual diagram, vocabulary usage, clarify directions, small group work, one one one instruction, differentiated lessons, enrichment activities,manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
Benchmark Assessment • Benchmark 2 • Mid-Year Assessment		**Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)** • Calculator, extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan		

Summative Assessment(s)
• Unit 3 Check-in 1
  ○ 7.RP.A.1
  ○ 7.RP.A.2.a
  ○ 7.RP.A.2.b
  ○ 7.RP.A.3
• Unit 3 Check-in 2
  ○ 7.RP.A.2.a
		Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)
		• Calculator, extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan		

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

○ 7.RP.A.2.b ○ 7.RP.A.2.c ○ 7.RP.A.2.d ○ 7.RP.A.3 ○ 7.G.A.1 • Unit 3 Check-in 3 ○ 7.EE.B.3 ○ 7.RP.A.3 • Unit 3 Check-in 4 ○ 7.RP.A.3 ○ 7.EE.B.3 • Unit 3 Performance Task 1 ○ 7.RP.A.1 ○ 7.RP.A.2.a • Unit 3 Performance Task 2 ○ 7.RP.A.3	

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Hillsborough Township Public Schools
Grade 7 Mathematics Curriculum

Unit Title: Unit 4 Geometry	**Time Frame/Pacing:** 34 days

Essential Questions

- How can spatial relationships be described by careful use of geometric language?

Enduring Understandings

- Geometric properties can be used to construct figures and these relationships provide a means to make sense of a variety of phenomena.

Standards Taught and Assessed

◎ Additional Cluster

- 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.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. 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.
- 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.

Highlighted Interdisciplinary Connections

- 8.1.8.DA.1: Organize and transform data collected using computational tools to make it usable for a specific purpose.
- L.8.6:Acquire and use grade-appropriate general academic and domain specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.
- MS-ESS1-1: Develop and use a model of the Earth-Sun-Moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes and Skill

- 9.4.8.CI.4: Explore the role of creativity and innovation in career pathways and industries
- 9.4.8.TL.5: Compare the process and effectiveness of synchronous collaboration and asynchronous collaboration.

Social Emotional Learning Competencies

- 2.1.8.EH.2: Analyze how personal attributes, resiliency, and protective factors support mental and emotional health.
- 2.1.8.SSH.2: Develop a plan for the school to promote dignity and respect for people of all genders, gender identities, gender expressions, and sexual orientations in the school community.
- 2.1.8.PGD.4: Analyze the relationship between healthy behaviors and personal health.
- 2.1.8.CHSS.8: Analyze difficult situations that might lead to feelings sadness, anxiety and or depression and identify individuals, agencies or places in the community where assistance may be available

Pre-Assessment

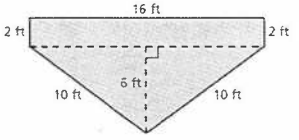
- 7.G.B.4
- 7.G.B.5
- 7.G.B.6

Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)

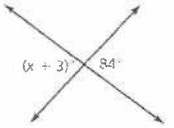
- extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

Student Learning Objectives: We are learning to/that...	Student Strategies (Mathematical Practices)	Formative Assessment	Activities and Resources	Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)
◎ 7.G.B.4 Find the area and circumference of a circle.	SMP 2 Reason abstractly and quantitatively	Find the area and circumference of a circle that has a diameter of 44m.	Exploration: Exploring Diameter and Circumference Tutorial example Tutorial example (modeling)	Provide formulas, visual diagrams, vocabulary usage, clarify directions, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

Key: ■ Major Cluster ☐ Supporting Cluster ◎ Additional Cluster

◎7.G.B.4 and 7.G.B.6 Find perimeters and areas of composite figures.	SMP 7 Make sense or problems and persevere to solve them	You put a barrier around the garden and cover it with a layer of mulch. The barrier costs $1.25 per foot. One bag of mulch covers 8 square feet and costs $4. How much do you spend? 	Exploration: Submitting a Bid Tutorial example Tutorial example (modeling)	Provide formulas, visual diagrams, vocabulary usage, clarify directions, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
◎7.G.A.2 Construct a polygon with given measures.	MP 5 Use appropriate tools strategically	A triangular pen has fence lengths of 6 feet, 8 feet, and 10 feet. Create a scale drawing of the pen.	Exploration: Using Technology to Construct Polygons Tutorial example 1 Tutorial example 2 Tutorial example (modeling)	Vocabulary usage, visual diagrams, protractor, clarify directions, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
◎7.G.B.5 Use facts about angle relationships to find unknown angle measures.	SMP 3 Construct a viable argument and critique the reasoning of others	Find the value of x.	Exploration: Using Rules about Angles Tutorial example Tutorial example (modeling)	Vocabulary usage, clarify directions, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

		 An angle is twice the measure of its complement. What is the measure of the angle?		student's IEP or 504 plans
◎ 7.G.B.6 Find the surface area of prisms, cylinders and pyramids.	SMP7 Look for and make use of structure	A cube-shaped satellite has side lengths of 10 cm. What is the least amount of aluminum needed to cover the satellite? You are given the height of a cylinder and the circumference of its base. Describe how to find the surface area of the cylinder. The base of the lampshade is a regular hexagon with side lengths of 8 inches and a slant height of 10 inches. Estimate the amount of glass needed to make the lampshade.	Exploration: Surface Area of a Prism Exploration: Finding the Surface Area of a Cylinder Exploration: Making a Scale Model (pyramids) Tutorial example Tutorial example (modeling)	Calculator formula, vocabulary usage, visual diagrams, clarify directions, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

◎ 7.G.B.6 Find the volume of prisms and pyramids.	SMP 3 Construct a viable argument and critique the reasoning of others	Do the two solids have the same volume? Explain.  	Exploration: Volume of Prisms Exploration: Finding a Formula for the Volume of a Pyramid Tutorial example Tutorial example (modeling)	Calculator formula, vocabulary usage, visual diagrams, clarify directions, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
◎ 7.G.A.3 Describe the cross-sections of three-dimensional figures.	SMP3 Construct viable arguments and critique the reasoning of others	You slice a square prism. Which cross section does not belong with the other three? Explain your reasoning. • Circle • Square • Triangle • Rectangle	Exploration: Describing Cross Sections Tutorial example Tutorial example (modeling)	Vocabulary usage, visual diagrams, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Benchmark Assessment

- Benchmark 3

Summative Assessment(s)

- Unit 4 Check-in 1
  - 7.G.B.4
  - 7.G.B.6
- Unit 4 Check-in 2
  - 7.G.A.2
  - 7.G.B.5
- Unit 4 Check-in 3
  - 7.G.B.6
  - 7.G.B.4
- Unit 4 Check-in 4
  - 7.G.B.6
  - 7.G.A.3
- Unit 4 Performance Task 1
  - 7.G.B.4
    7.G.B.6
- Unit 4 Performance Task 2
  - 7.G.B.6

Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)

- Calculator, extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Hillsborough Township Public Schools
Grade 7 Mathematics Curriculum

Unit Title: Unit 5 Statistics & Probability	**Time Frame/Pacing:** 30 days

Essential Questions

- How can experimental and theoretical probabilities be used to make predictions and draw conclusions?

Enduring Understandings

- The results of a statistical investigation can be used to support or refute an argument.

Standards Taught and Assessed

☐ Supporting Cluster

- 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. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.
- 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. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.
- 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.
- 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. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.
- 7.SP.C.7.B Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

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- 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. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?

◎ Additional Cluster

- 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. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.
- 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. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.

Highlighted Interdisciplinary Connections

- MS-LS1-5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms
- 8.1.8.DA.1: Organize and transform data collected using computational tools to make it usable for a specific purpose.
- 8.1.8.CS.1: Recommend improvements to computing devices in order to improve the ways users interact with the devices.

Highlighted Career Ready Practices and 21st Century Themes and Skill

- 9.4.8.CI.1: Assess data gathered on varying perspectives on causes of climate change (e.g., cross cultural, gender-specific, generational), and determine how the data can best be used to design multiple potential solutions
- 9.4.8.DC.8: Explain how communities use data and technology to develop measures to respond to effects of climate change
- 9.4.8.GCA.2: Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal

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Social Emotional Learning Competencies

- 2.1.8.EH.2: Analyze how personal attributes, resiliency, and protective factors support mental and emotional health.
- 2.1.8.SSH.2: Develop a plan for the school to promote dignity and respect for people of all genders, gender identities, gender expressions, and sexual orientations in the school community.
- 2.1.8.PGD.4: Analyze the relationship between healthy behaviors and personal health.
- 2.1.8.CHSS.8: Analyze difficult situations that might lead to feelings sadness, anxiety and or depression and identify individuals, agencies or places in the community where assistance may be available.

Pre-Assessment

- 7.SP.A.2
- 7.SP.C.5
- 7.SP.C.6
- 7.SP.C.8.A
- 7.SP.C.8.B

Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)

- extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

Student Learning Objectives: We are learning to/that...	Student Strategies (Mathematical Practices)	Formative Assessment	Activities and Resources	Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)
☐ 7.SP.C.5 and 7.SP.C.6 Understand how the probability of an event indicates its likelihood.	SMP 3 Construct viable arguments & critique the reasoning of others	The probability of an event is 84%. Describe the likelihood of the event.	Exploration: Determining Likelihood Tutorial Example Tutorial Example (modeling)	Probability chart, Vocabulary usage, one on one instruction, differentiated lessons, enrichment activities, manipulatives, and specific other accommodations/ modifications per a student's IEP or 504 plans
☐ 7.SP.C.6; 7.SP.C.7a and 7.SP.C.7b Develop probability models using	SMP 4 Model with mathematics	On a game show, a contestant randomly draws a chip from a bag and replaces it. Each chip says	Exploration: Conducting Experiments Tutorial Example (experimental)	Vocabulary usage, on one one instruction, differentiated lessons, enrichment activities,

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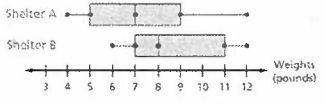
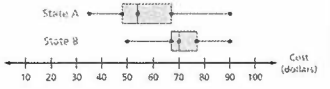
experimental and theoretical probability.		either win or lose. The theoretical probability of drawing a winning chip is 3/10. The bag contains 9 winning chips. a. How many chips are in the bag? b. Out of 20 contestants, how many do you expect to draw a winning chip?	Tutorial Example (theoretical) Tutorial Example (modeling)	manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
☐ 7.SP.C.8a and 7.SP.C.8b Find sample spaces and probabilities of compound events.	SMP 1 Make sense of problems and persevere in solving them	You choose between red or yellow wallpaper, and orange, red, green, blue, or purple carpet. Find the total number of possible outcomes when you select one color of wallpaper and one color of carpet.	Exploration: Comparing Combination Locks Tutorial Example Tutorial Example (modeling)	Vocabulary usage, visual diagrams, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
☐ 7.SP.C.8a and 7.SP.C.8c Design and use simulations to find probabilities of compound events.	SMP 4 Model with mathematics	A baseball team wins 70% of the time. Design and use a simulation to estimate the probability that the team wins the next three games.	Exploration: Designing a Simulation Tutorial Example Tutorial Example (modeling)	Clarify directions, differentiated lessons, enrichment activities, manipulatives, and specific other accommodations/ modifications per a student's IEP or 504 plans
☐ 7.SP.A.1 and 7.SP.A.2 Understand how to use random samples to make	SMP 3 Construct viable arguments & critique the reasoning of others	How can you use samples to draw conclusions about the populations from which they are selected?	Exploration: Using Samples of Populations Tutorial Example Tutorial Example (modeling)	Vocabulary usage, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other

Key: ■ Major Cluster ☐ Supporting Cluster ◎ Additional Cluster

conclusions about a population.				accommodations/ modifications per a student's IEP or 504 plans
☐ 7.SP.A.2 Understand variability in samples of a population.	SMP 2 Reason abstractly and quantitatively	Write a survey question about a topic that interests you. How can you choose people to survey so that you can use the results to make a valid conclusion?	Exploration: Exploring Variability in Samples Tutorial Example Tutorial Example (modeling)	Clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
◎ 7.SP.B.3 Compare populations using measures of center and variation.	SMP 4 Model with mathematics.	The double box-and-whisker plot represents the weights of cats at two shelters. Are the cats significantly heavier at one shelter than at the other? Explain. 	Exploration: Comparing Two Data Distributions Tutorial Example Tutorial Example (modeling)	Vocabulary usage, visual diagrams, calculator, clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, manipulatives modeling, and specific other accommodations/ modifications per a student's IEP or 504 plans
☐ 7.SP.A.2 ◎ 7.SP.B.4 Use random samples to compare populations.	SMP 3 Construct viable arguments & critique the reasoning of others	The double box-and-whisker plot represents the medians of 50 random samples of 10 speeding tickets issued in two states. Compare the costs of speeding tickets in the two states.	Exploration: Using Random Samples Tutorial Example Tutorial Example (modeling)	Clarify directions, small group work, one on one instruction, differentiated lessons, enrichment activities, manipulatives, modeling, and specific other accommodations/ modifications per a student's

Key: ■ Major Cluster ☐ Supporting Cluster ◎ Additional Cluster

				IEP or 504 plans

Benchmark Assessment

- End-of-Year Assessment

Summative Assessment(s)

- Unit 5 Check-in 1
  - 7.SP.C.5
  - 7.SP.C.6
- Unit 5 Check-in 2
  - 7.SP.C.7.a
  - 7.SP.C.7.b
  - 7.SP.C.8.a
  - 7.SP.C.8.b
  - 7.SP.C.8.c
- Unit 5 Check-in 3
  - 7.SP.A.1
- Unit 5 Check-in 4
  - 7.SP.A.2
  - 7.SP.B.3
  - 7.SP.B.4
- Unit 5 Performance Task 1
  - 7.SP.C.5
  - 7.SP.C.6
  - 7.SP.C.7
- Unit 5 Performance Task 2
  - 7.SP.A.1
  - 7.SP.A.2
  - 7.SP.B.4

Modifications/Accommodations (ELL, Special Education, Gifted, At-Risk of Failure, 504)

- Calculator, extended time, scribe, speech to text, challenge questions, and specific other accommodations/modifications per a student's IEP or 504 plan

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Bibliography
Grade 7

Supplemental Materials/Resources:

Larson, R. and Boswell, L. (2019). *Big ideas math: Modeling in real life*. Big Ideas Learning: Erie, Pennsylvania.

Digital Resources:

bigideaslearning.com - all print materials are also available digitally along with digital only resources