7th Grade Mathematics Curriculum

Subject(s)	Mathematics
Grade/Course	7th Grade/Course 2
Unit of Study	Number Sense and Operations (Adding and Subtracting Rational Numbers)
Unit Type(s)	❏ Topical ❏ Skills-based ❏ Thematic
Pacing	Quarter 1

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ MP1. Make sense of problems and persevere in solving them.
- ✓ MP2. Reason both contextually and abstractly.
- ✓ MP3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ MP4. Connect mathematical ideas and real-world situations through modeling.
- ✓ MP5. Use a variety of mathematical tools effectively and strategically.
- ✓ MP6. Communicate mathematically and approach mathematical situations with precision.
- ✓ MP7. Identify and utilize structure and patterns.
- ✓ MP8. Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

Big Idea: Apply and extend previous understandings of operations to add, subtract, multiply, and divide rational numbers.
**Priority Essential Standard:
7.NS.A.1. Apply and extend previous understanding of numbers to add and subtract rational numbers.
***Supporting Essential Standard(s):
7.NS.A.1a. Add and subtract rational numbers.
7.NS.A.1b. Represent addition and subtraction on a horizontal and vertical number line.
7.NS.A.1c. Describe situations and show that a number and its opposite have a sum of 0 (additive inverse).
7.NS.A.1d. Understand subtraction of rational numbers as adding the additive inverse.
7.NS.A.1e. Determine the distance between two rational numbers on the number line is the absolute value of their differences.
7.NS.A.1f. Interpret sums and differences of rational numbers.
7.NS.A.3. Solve problems involving the four arithmetic operations with rational numbers.

"UNWRAPPED" Priority Standards

7.NS.A.1. Apply and extend previous understanding of numbers to add and subtract rational numbers.
The sum of p + q is the number located a distance |q| from p in the positive or negative direction, depending whether q is positive or negative.
Two numbers are opposites if they are the same distance from 0 on the number line, but in opposite directions (4 and −4). Opposites are also called additive inverses.
Subtracting an integer gives the same result as adding its additive inverse p − q = p + (−q).
The distance between two numbers on a number line is equal to the absolute value of their difference.
Number properties of addition work for all rational numbers, including integers, fractions, and decimals.

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level
Apply (7.NS.A.1.)	*Computation rules for whole numbers, fractions, and decimals to ALL RATIONAL NUMBERS (integers)*	1 (Recall)
Extend (7.NS.A.1.)	*Subtracting an integer gives the same result as adding its additive inverse p − q = p + (−q). *The distance between two numbers on a number line is equal to the absolute value of their difference.*	2 (Skill/Concept)
Add/Subtract (7.NS.A.1.)	*Same Signs/Add/Keep that Sign *Different Signs/Subtract/Leave Sign of higher Absolute Value*	2 (Skill/Concept)

Essential Questions
*How do I add and subtract fractions, decimals, and integers? *How do I plot and label rational numbers on a number line? *How do I use a number line to add and subtract rational numbers? *How is subtraction the same as adding the inverse (additive inverse)? *How do I use the associative property to evaluate a numerical expression? *How do I use the commutative property to evaluate a numerical expression? *How do I use the properties of addition to make true statements? *How do I extend my knowledge of rational numbers to real world problems?

Standardized Assessment Correlations (State, College and Career)
Missouri Assessment Program (MAP)

Unit Assessments	
Pre-Assessment	**Informal Progress Monitoring Checks**
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity
Post-Assessment	
STAR Math Assessment Triumph Online (Summative Assessment) Quiz (Adding & Subtracting Rational Numbers) Quiz (Multiplying & Dividing Rational Numbers) Unit Test (Adding & Subtracting Rational Numbers) Quiz (Conversions & Classifications of Numbers) Unit Test (Rational Numbers) Math Journal (Integer Enrichment) Math Journal (Can I Afford? Operations of Rational Numbers) Unit Test (Rational Numbers) https://docs.google.com/forms/d/1RpgEdvMm_1b_EuLAAg8GJFST_LpNoeide378x8JAUfI/edit Quarter 1 Benchmark (Rational Numbers)	

Engaging Learning Experiences	
Learning Activities Using Text or Program	**Authentic Performance Tasks**
*Big Ideas Course 2 *Cross -Walk Coach *Buckle Down CC *Common Core Support Coach *Saxon Course 2 Material *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Integer Football *Manage a Checking Account (Withdraw & Deposits) *Webquest (Properties of Operations) *Webquest (Classification of Number System) *Open Middle Challenge

Research-Based Effective Teaching Strategies	21st Century Learning Skills
Check all those that apply to the unit: ✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning ✓ Setting Objectives, Providing Feedback	Check all those that apply to the unit: ✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability ✓ Effective Oral and Written Communication

✓ Generating and Testing Hypotheses ✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials

Physical					Technology-Based
CCS	Crosswalk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas	Other Supplement Materials: *SBAC Sample Test *STAR Math Assessment *Triumph Online (Digital Coach) Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills, supporting standards, interdisciplinary connections, unit vocabulary terms, and extension/enrichment activities.
NS1	Pgs. 54-61			Chapter 1 (sections 1 & 2)	
N.A.1a	Pgs. 54-61	Pgs. 18-25		Pgs. 8-21	
NS.A.1b	Pgs. 33-39, 54-61	Pgs. 18-25		Pgs. 44-57	
NS.A.1c	Pgs. 54-61	Pgs. 18-25	Lesson 5/ Pgs. 44-53	Pgs. 80-82	
NS.A.1d	Pgs. 33-39, 54-61	Pgs. 26-29	Lesson 5/ Pgs. 44-53	Pgs. 14-19	
NS.A.3	Pgs. 33-47, 62-67	Pgs. 18-25, 30-37, 42-47	Lesson 8/ Pgs. 74-83	Chapter 1	

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Mixed Number & Improper Fraction, Equivalent Fraction, Integer, Rational Number, Common Denominator, Absolute Value, Opposites, Additive Identity, Additive Inverse, Associative Property of Addition, Commutative Property of Addition	*Extend concepts to understand real-world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)

Subject(s)	Mathematics
Grade/Course	7th Grade/Course 2
Unit of Study	Number Sense and Operations (Multiplying and Dividing Rational Numbers)
Unit Type(s)	❑ Topical ❑ Skills-based ❑ Thematic
Pacing	Quarter 1

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ MP1. Make sense of problems and persevere in solving them.
- ✓ MP2. Reason both contextually and abstractly.
- ✓ MP3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ MP4. Connect mathematical ideas and real-world situations through modeling.
- ✓ MP5. Use a variety of mathematical tools effectively and strategically.
- ✓ MP6. Communicate mathematically and approach mathematical situations with precision.
- ✓ MP7. Identify and utilize structure and patterns.
- ✓ MP8. Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

Big Idea: Apply and extend previous understandings of operations to add, subtract, multiply, and divide rational numbers.
**Priority Essential Standard:
7.NS.A.2. Apply and extend previous understanding of numbers to multiply and divide rational numbers.
***Supporting Essential Standard(s):
7.NS.A.2a. Multiply and divide rational numbers.
7.NS.A.2b. Determine that a number and its reciprocal have a product of 1 (multiplicative inverse).
7.NS.A.2c. Understand that every quotient of integers (with non-zero divisor) is a rational number.
7.NS.A.2d. Convert a rational number to a decimal.
7.NS.A.2e. Understand that all rational numbers can be written as fractions or decimal numbers that terminate or repeat.
7.NS.A.2f. Interpret products and quotients of rational numbers by describing real-world contexts.
7.NS.A.3. Solve Problems involving the four arithmetic operations with rational numbers.

"UNWRAPPED" Priority Standards

7.NS.A.2. Apply and extend previous understanding of numbers to multiply and divide rational numbers.

All rational numbers can be written as a fraction in which the numerator and denominator are integers, where the denominator is NOT 0. You can convert the fractional representation to a decimal by dividing the numerator by the denominator.
Rules for multiply and dividing integers: (1) the product/quotient of two positive integers is positive (2) the product/quotient of two negative integers is positive (3) the product/quotient of two integers with different signs is negative.
Number properties of multiplication work for all rational numbers, including integers, fractions, and decimals.

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level
Apply (7.NS.A.2.)	*Computation rules for whole numbers, fractions, and decimals to ALL RATIONAL NUMBERS (integers)*	1 (Recall)
Extend (7.NS.A.2.)	*Multiply a number and its reciprocal yields a product of 1. Example: $(3 \cdot \frac{1}{3} = 1)$*	2 (Skill/Concept)
Multiply/Divide (7.NS.A.2.)	*Same Signs Positive. Different Signs Negative.*	2 (Skill/Concept)

Essential Questions
*How do I multiply and divide decimal numbers? *How do I multiply and divide fractions? *How do I multiply and divide integers? *How is multiplying by the reciprocal the same as dividing? (multiplicative inverse) *How do I convert fractions to decimals? *How do I convert decimals to fractions? *How do I convert fractions and decimals to percents? *How do I order fractions, decimals, and percents using a number line *How do I use the associative property to evaluate a numerical expression? *How do I use the commutative property to evaluate a numerical expression? *How do I use the distributive property to simplify a numerical expression? *How do I extend my knowledge of rational numbers to real world problems? *How do I interpret answers as it pertains to real world problems?

Standardized Assessment Correlations (State, College and Career)	
Missouri Assessment Program (MAP)	

Unit Assessments	
Pre-Assessment	**Informal Progress Monitoring Checks**
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity
Post-Assessment	
STAR Math Assessment Triumph Online (Summative Assessment) Quiz (Multiplying & Dividing Rational Numbers) Quiz (Conversions & Classifications of Numbers) Unit Test (Rational Numbers) Unit Test (Rational Numbers): https://docs.google.com/forms/d/1RpgEdvMm_1b_EuLAAg8GJFST_LpNoeide378x8JAUfI/edit Quarter 1 Benchmark (Rational Numbers)	

Engaging Learning Experiences	
Learning Activities Using Text or Program	**Authentic Performance Tasks**
*Big Ideas Course 2 *Crosswalk Coach *Buckle Down CC *Common Core Support Coach *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Open Middle Challenge *Math Journal (Why is Multiplying by a Reciprocal the same as Dividing) *Math Journal (Can I Afford? Operations of Rational Numbers)

Research-Based Effective Teaching Strategies	21st Century Learning Skills
Check all those that apply to the unit: ✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning	Check all those that apply to the unit: ✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability

✓ Setting Objectives, Providing Feedback ✓ Generating and Testing Hypotheses ✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	✓ Effective Oral and Written Communication ✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials

Physical					Technology-Based
CCS	Crosswalk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas	Other Supplement Materials: *SBAC Sample Test *STAR Math Assessment *Triumph Online (Digital Coach) Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills, supporting standards, interdisciplinary connections, unit vocabulary terms, and extension/enrichment activities.
NS.A.2				Chapter 1 (sections 4 & 5)	
NS.A.2a	Pgs. 40-47, 62-67	Pgs. 30-41	Lesson 6/ Pgs. 54-63	Pgs. 22-33	
NS.A.2b	Pgs. 62-67	Pgs. 10-17, 30-37	Lesson 7/Pgs. 64-73	pgs. 64-69	
NS.A.2c	Pgs. 40-47, 62-67	Pgs. 38-41	Lesson 10/ Pgs. 94-103	Pgs. 46-49	
NS.A.2d	Pgs. 29-32	Pgs. 10-17		Pgs. 46-49	
NS.A.2e				Pgs. 46-49	
NS.A.2f					
NS.A.3	Pgs. 33-47, 62-67	Pgs. 18-25, 30-37, 42-47	Lesson 8/ Pgs. 74-83	Chapter 1 & 2	

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Complex Fraction, Improper Fraction, Mixed Number, Equivalent Fraction, Integer, Rational Number, Fraction, Decimal, Percent (conversions), Terminating Decimal, Repeating Decimal, Associative Property of Multiplication, Commutative Property of Multiplication, Multiplicative Identity, Distributive Property, Multiplicative Inverse	*Extend concepts to understand real-world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)

Subject(s)	Mathematics
Grade/Course	7th Grade/Course 2
Unit of Study	Ratio and Proportional Relationships
Unit Type(s)	❑ Topical ❑ Skills-based ❑ Thematic
Pacing	Quarter 2 (2 weeks into Quarter 3)

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ MP1. Make sense of problems and persevere in solving them.
- ✓ MP2. Reason both contextually and abstractly.
- ✓ MP3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ MP4. Connect mathematical ideas and real-world situations through modeling.
- ✓ MP5. Use a variety of mathematical tools effectively and strategically.
- ✓ MP6. Communicate mathematically and approach mathematical situations with precision.
- ✓ MP7. Identify and utilize structure and patterns.
- ✓ MP8. Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

*Big Idea: Analyze proportional relationships and use them to solve problems.
**Priority Essential Standard(s):
7.RP.A.3. Solve problems involving ratios, rates, percentages and proportional relationships
***Supporting Essential Standard(s):
7.RP.A.1. Compute unit rates, including those that involve complex fractions, with like or different units.

**Priority Essential Standard(s):
7.RP.A.2. Recognize and represent proportional relationships between quantities.
***Supporting Essential Standard(s):
7.RP.A.2a. Determine when two quantities are in a proportional relationship.
7.RP.A.2b. Identify and/or compute the constant of proportionality (unit rate).
7.RP.A.2c. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation.
7.RP.A.2d. Recognize that the graph of any proportional relationship will pass through the origin.

"UNWRAPPED" Priority Standards

7.RP.A.3. Solve problems involving ratios, rates, percentages and proportional relationships.
You can use cross-products to find missing values in proportions.
You can compare unit prices of similar products to find the better deal.
You will use proportional relationships to solve ratio and percent problems.
When given a verbal description of a proportional relationship, you can find the constant of proportionality by finding the unit rate.

7.RP.A.2. Recognize and represent proportional relationships between quantities.
Two quantities are directly proportional if their values increase or decrease together at the same ratio.
You can use tables, written descriptions, diagrams, and graphs to demonstrate a proportional relationship.
You will identify the constant of proportionality from tables, written descriptions, diagrams, and graphs.

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level
Solve (7.RP.A.3.)	*Compute unit rates. *Solve percent problems. *Solve problems involving the distance formula.	2 (Skill/Concept)
Recognize (7.RP.A.2.)	*Decide if two quantities are in a proportional relationship. *Identify the constant of proportionality.*Determine if the lengths of the corresponding sides of a figure (possibly similar) form a proportional relationship.	2 (Skill/Concept) 3 (Strategic Thinking)
Represent (7.RP.A.2.)	* The graph of any proportional relationship will pass through the origin (0, 0). *	1 (Recall) 2 (Skill/Concept)

Essential Questions
*How can I use ratios to calculate unit rates? *How do I find a unit rate when given a complex fraction? *How can I tell if two ratios form a proportional relationship? *How can I use proportions to find missing information in a real-world situation? *How can I solve a proportion using cross products? *How do I calculate unit price? *How can I determine which is a better buy? *How can I use the Distance Formula? *How can I represent a unit rate graphically? *How can I represent a proportional relationship with an equation? *How can I represent a proportional relationship with a table? *How can I represent a proportional relationship using similar figures? *How can I represent a proportional relationship on a coordinate plane? *How can I apply proportional reasoning in real-world situations? *How can I calculate sales tax and gratuity? *How can I calculate markups and markdowns? *How can I calculate percent of error? *How can I calculate simple interest?

Standardized Assessment Correlations (State, College and Career)
Missouri Assessment Program (MAP)

Unit Assessments	
Pre-Assessment	**Informal Progress Monitoring Checks**
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity

Post-Assessment
STAR Math Assessment Triumph Online (Summative Assessment) Quiz (Ratios, Rates, & Proportions) Quiz (Proportional Relationships, Slope, & Direct Variation) Unit Test (Proportional Relationships) Quarter 2 Benchmark: https://docs.google.com/forms/d/1ORn6pOmO3IshxgyVxVbl1h-aFGmC0DobVsxEQEKl0eM/prefill

Engaging Learning Experiences	
Learning Activities Using Text or Program	**Authentic Performance Tasks**
*Big Ideas *Crosswalk Coach *Buckle Down CC *Common Core Support Coach *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Open Middle Challenge *Map of Jeffco Activity (using a scale on a map) *Math Journal (Going Shopping Challenge with coupons and sales tax) *Math Journal (Bandana's Dinner Activity (calculating subtotal of menu items, coupon, sales tax, and gratuity)) Math Journal (Recipe Oopsy Activity (re-configuring a recipe to account for an overuse of one ingredient))

Research-Based Effective Teaching Strategies	21st Century Learning Skills
Check all those that apply to the unit: ✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning ✓ Setting Objectives, Providing Feedback ✓ Generating and Testing Hypotheses ✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	Check all those that apply to the unit: ✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability ✓ Effective Oral and Written Communication ✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials					
Physical					**Technology-Based**
CCS	Crosswalk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas	Other Supplement Materials: *SBAC Sample Test *STAR Math Assessment *Triumph Online (Digital Coach) Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills, supporting standards, interdisciplinary connections, unit vocabulary terms, and extension/enrichment activities.
RP.A.2a	Pgs. 79-94	Pgs. 59-75		Chapter 5/Pgs. 162-170	
RP.A.2b	Pgs. 84-94	Pgs. 59-75	Lesson 2/ Pgs. 14-23	Pgs. 162-169	
RP.A.2c	Pgs. 74-78, 89-94	Pgs. 59-66		Chapter 5/Pgs. 162-170	
RP.A.2d	Pgs. 89-94	Pgs. 67-75		Pgs. 176-177	
RP.A.1	Pgs. 48-53, 74-78	Pgs. 56-58	Lesson 1/ Pgs. 4-13	Chapter 5	

RP.A.3	Pgs. 16-28, 48-53, 84-88	Pgs. 76-86	Lesson 3/ Pgs. 24-33 Lesson 4/ Pgs. 34-43	Chapter 5	

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Ratio, Rate, Unit Rate, Complex Fraction, Proportion, Cross Products, Distance Formula, Constant of Proportionality, Unit Price, Better Buy, (x, y), Origin, Similar Figures, Sales Tax/Gratuities, Markup/Markdown, Commission/Fees, Interest Rate, Simple Interest, Percent of Increase/Percent of Decrease, Percent Error	*Extend concepts to understand real-world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)

Subject(s)	Mathematics
Grade/Course	7th Grade/Course 2
Unit of Study	Expressions
Unit Type(s)	❑ Topical ❑ Skills-based ❑ Thematic
Pacing	Quarter 2

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ MP1. Make sense of problems and persevere in solving them.
- ✓ MP2. Reason both contextually and abstractly.
- ✓ MP3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ MP4. Connect mathematical ideas and real-world situations through modeling.
- ✓ MP5. Use a variety of mathematical tools effectively and strategically.
- ✓ MP6. Communicate mathematically and approach mathematical situations with precision.
- ✓ MP7. Identify and utilize structure and patterns.
- ✓ MP8. Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

*Big Idea: Use properties of operations to generate equivalent expressions.
**Priority Essential Standard(s):
7.EEI.A.1. Apply properties of operations to simplify and to factor linear algebraic expressions with rational coefficients.
***Supporting Essential Standard(s):
7.EEI.A.2. Understand how to use equivalent expressions to clarify quantities in a problem.

*Big Idea: Solve Problems using numerical and algebraic expressions (and equations).
**Priority Essential Standard(s):
7.EEI.B.3. Solve multi-step problems posed with rational numbers.
***Supporting Essential Standard(s):
7.EEI.B.3a. Convert between equivalent forms of the same number.
7.EEI.B.3b. Assess the reasonableness of answers using mental computation and estimation strategies.

"UNWRAPPED" Priority Standards

7.EEI.A.1. Apply properties of operations to simplify and to factor linear algebraic expressions with rational coefficients.
You can simplify and combine expressions.
You can combine like terms by using the distributive property (expanding).
You can factor an expression means to express it as a product in which one of the factors is an expression or rational number.
For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."

7.EEI.B.3. Solve multi-step problems posed with rational numbers.
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.
For example, if you want to place a towel bar 9 ¾ inches long in the center of a door that is 27 ½ 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.

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level

Apply (7.EEI.A.1.)	*Follow computation rules.*	1 (Recall)
Simplify (7.EEI.A.1.)	*You can simplify an expression by combining like terms.*	2 (Skill/Concept)
Factor (7.EEI.A.1.)	*You can factor an expression means to express it as a product in which one of the factors is an expression or rational number.*	2 (Skill/Concept)
Solve (7.EEI.B.3.)	*An increase of 10% can also be expressed as x + 0.1x, which is equal to (1 + 0.1)x, or 1.1x.*	2 (Skill/Concept) 3 (Strategic Thinking)

Essential Questions
*How do I simplify a variable expression? *How do I convert between equivalent forms of the same number? *How do I use the distributive property to expand an expression? *How do I use the distributive property to factor an expression? *How do I write an expression to represent a real-world situation? *How do I write an expression to assist in a geometry themed problem? *How can I write an expression to assist in finding a percentage of increase or decrease? *How can I write an expression to find the perimeter of a shape? *How can I write two forms of an expression in order to show how quantities are related?

Standardized Assessment Correlations (State, College and Career)
Missouri Assessment Program (MAP)

Unit Assessments	
Pre-Assessment	Informal Progress Monitoring Checks
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity
Post-Assessment	

STAR Math Assessment
Triumph Online (Summative Assessment)
Quiz (Combining Like Terms, Distributive Property, & Factoring)
Unit Test (Expressions)
Quarter 2 Benchmark:
https://docs.google.com/forms/d/1ORn6pOmO3IshxgyVxVbl1h-aFGmC0DobVsxEQEKl0eM/prefill

Engaging Learning Experiences	
Learning Activities Using Text or Program	Authentic Performance Tasks
*Big Ideas *Crosswalk Coach *Buckle Down CC *Common Core Support Coach *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Given a real world problem, creating expressions *Open Middle Challenge *Math Journal (Prove how Factoring an Expression is related to the Distributive Property)

Research-Based Effective Teaching Strategies	21st Century Learning Skills
Check all those that apply to the unit: ✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning ✓ Setting Objectives, Providing Feedback ✓ Generating and Testing Hypotheses ✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	Check all those that apply to the unit: ✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability ✓ Effective Oral and Written Communication ✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials					
Physical					**Technology-Based**

CCS	Crosswalk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas	Other Supplement Materials: *SBAC Sample Test *STAR Math Assessment *Triumph Online (Digital Coach) Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills, supporting standards, interdisciplinary connections, unit vocabulary terms, and extension/enrichment activities.
EEI.A.1	Pgs. 105-116	Pgs. 94-101	Lesson 9/ Pgs. 84-93	Pgs. 79-92	
EEI.A.2	Pgs. 100-104, 117-121	Pgs. 94-101	Lesson 9/ Pgs. 84-93	Pgs. 79-92	
EEI.B.3	Pgs. 122-127	Pgs. 94-101, 105-111, 114-119	Lesson 11/ Pgs. 104-113	Pgs. 79-92	

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Variable, Expression, Term, Coefficient, Constant, Like terms, Distributive property, Expand, Distributive Property, Factor, Percent of Increase, Percent of Decrease	*Extend concepts to understand real-world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)

Subject(s)	Mathematics
Grade/Course	7th Grade/Course 2
Unit of Study	Equations and Inequalities
Unit Type(s)	❑ Topical ❑ Skills-based ❑ Thematic
Pacing	Quarter 2

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ MP1. Make sense of problems and persevere in solving them.
- ✓ MP2. Reason both contextually and abstractly.
- ✓ MP3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ MP4. Connect mathematical ideas and real-world situations through modeling.
- ✓ MP5. Use a variety of mathematical tools effectively and strategically.
- ✓ MP6. Communicate mathematically and approach mathematical situations with precision.
- ✓ MP7. Identify and utilize structure and patterns.
- ✓ MP8. Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

*Big Idea: Solve Problems using numerical and algebraic (expressions) and equations.
**Priority Essential Standard(s):
7.EEI.B.3. Solve multi-step problems posed with rational numbers.
***Supporting Essential Standard(s):
7.EEI.B.3a. Convert between equivalent forms of the same number.
7.EEI.B.3b. Assess the reasonableness of answers using mental computation and estimation strategies.

**Priority Essential Standard(s):
7.EEI.B.4. Write and/or solve linear equations and inequalities in one variable.
***Supporting Essential Standard(s):
7.EEI.B.4a. Write and/or solve equations of the form $x + p = q$ and $px = q$ in which p and q are rational numbers.
7.EEI.B.4b. Write and/or solve two-step equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are rational numbers, and interpret the meaning of the solution in the context of the problem.
7.EEI.B.4c. Write and/or graph inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are rational numbers.

"UNWRAPPED" Priority Standards

7.EEI.B.3. Solve multi-step problems posed with rational numbers.

7.EEI.B.4. Write and/or solve linear equations and inequalities in one variable.
Solve word problems leading to equations with the form $x + p = q$ and $px = q$ in which p and q are rational numbers.
Solve word problems leading to equations with the form $px + q = r$ OR $p(x + q) = r$, where p, q, and r are rational numbers.
Solve word problems leading to inequalities with the form $px + q > r$ or $px + q < r$, where p, q, and r are rational numbers.
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.

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level
Solve (7.EEI.B.3.)		2 (Skill/Concept)
Write (7.EEI.B.4.)	*In order to write, compare an algebraic solution to an arithmetic solution, identifying the sequence of operations used in each approach.	3 (Strategic Thinking)
Solve (7.EEI.B.4.)	* To solve equations, use inverse operations to isolate the variable on one side of the equation. *A two-step equation requires two inverse operations. *To solve inequalities, follow the	2 (Skill/Concept) 3 (Strategic Thinking)

	same processes that apply to equations.	

Essential Questions
*How can I write a linear equation from a real-world situation? *How can I translate a number sentence into a one or two step equation? *How can I use inverse operations to solve one and two step equations? *How do I solve equations having the distributive property on one or both sides? *How can I write a linear inequality from a real-world situation? *How can I translate a number sentence into a one or two step inequality? *How can I use inverse operations to solve one and two step inequalities? *How do I graph a solution to an inequality on a number line? *How do I graphically represent all of the solutions to a linear inequality? *How can I verify if a point is a solution to the inequality?

Standardized Assessment Correlations (State, College and Career)	
Missouri Assessment Program (MAP)	

Unit Assessments	
Pre-Assessment	**Informal Progress Monitoring Checks**
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity
Post-Assessment	
STAR Math Assessment Triumph Online (Summative Assessment) Qui (Solving single step & two step equations) Unit Test (Equations) Unit Test (Inequalities) Quarter 2 Benchmark: https://docs.google.com/forms/d/1ORn6pOmO3IshxgyVxVbl1h-aFGmC0DobVsxEQEKl0eM/prefill	

Engaging Learning Experiences	
Learning Activities Using Text or Program	**Authentic Performance Tasks**
*Big Ideas *Crosswalk Coach *Buckle Down CC *Common Core Support Coach *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Can You Write It? (translating word problems to equations) *Open Middle Challenge *Math Journal (Absolute Values within Equations) *Math Journal (Planning a Parade)

Research-Based Effective Teaching Strategies	21st Century Learning Skills
Check all those that apply to the unit: ✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning ✓ Setting Objectives, Providing Feedback ✓ Generating and Testing Hypotheses	Check all those that apply to the unit: ✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability ✓ Effective Oral and Written Communication

✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials	
Physical	**Technology-Based**

Physical table:

CCS	Crosswalk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas
EEI.B.4	Pgs. 100-104, 117-121	Pgs. 102-104, 112-113		Pgs. 96-113
EEI.B.4a	Pgs. 122-127	Pgs. 105-111	Lesson 12/ Pgs. 114-123	Pgs. 96-113
EEI.B.4b	Pgs. 128-134	Pgs. 114-119	Lesson 13/ Pgs. 124-133	Pgs.Pgs. 102-113
EEI.B.4c				Pgs. 146-151
EEI.B.3	Pgs. 122-127	Pgs. 94-101, 105-111, 114-119	Lesson 11/ Pgs. 104-113	

Technology-Based:

Other Supplement Materials:
*SBAC Sample Test
*STAR Math Assessment
*Triumph Online (Digital Coach)

Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills, supporting standards, interdisciplinary connections, unit vocabulary terms, and extension/enrichment activities.

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Equation, Operation Words, Variable, Inverse Operations, Distributive Property, Inequality, Greater than/Less than, Greater than or equal to/Less than or equal to	*Extend concepts to understand real-world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)

Subject(s)	Mathematics
Grade/Course	7th Grade/Course 2
Unit of Study	Geometry (include Circles)
Unit Type(s)	❏ Topical ❏ Skills-based ❏ Thematic
Pacing	Quarter 3

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ **MP1.** Make sense of problems and persevere in solving them.
- ✓ **MP2.** Reason both contextually and abstractly.
- ✓ **MP3.** Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ **MP4.** Connect mathematical ideas and real-world situations through modeling.
- ✓ **MP5.** Use a variety of mathematical tools effectively and strategically.
- ✓ **MP6.** Communicate mathematically and approach mathematical situations with precision.
- ✓ **MP7.** Identify and utilize structure and patterns.
- ✓ **MP8.** Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

*Big Idea: Draw and describe geometric figures and describe the relationships between them.
**Priority Essential Standard(s):
7.GM.A.1. Solve problems involving scale drawings of real objects and geometric figures, including computing actual lengths and areas from a scale drawing and reproducing the drawing at a different scale.
***Supporting Essential Standard(s):
7.GM.A.2. Use a variety of tools to construct geometric shapes.
7.GM.A.2a. Determine if provided constraints will create a unique triangle through construction.
7GM.A.2b. Construct special quadrilaterals given specific parameters.
7.GM.A.3. Describe two-dimensional cross sections of pyramids, prisms, cones and cylinders.

**Priority Essential Standard(s):
7.GM.A.4. Understand concepts of circles.
***Supporting Essential Standard(s):
7.GM.A.4a. Analyze the relationships among circumference, the radius, the diameter, the area and Pi in a circle.
7.GM.A.4b. Know and apply the formulas for circumference and area of circles to solve problems.

"UNWRAPPED" Priority Standards

7.GM.A.1. Solve problems involving scale drawings of real objects and geometric figures, including computing actual lengths and areas from a scale drawing and reproducing the drawing at a different scale.
To draw geometric figures to scale, use your knowledge of similar figures and proportional relationships. The ratios of corresponding side lengths of similar figures are equal to the scale factor, so the scale factor indicates how much larger or smaller to make each side length in the scale drawing.
Scaling of geometric figures preserves angle measures, so the corresponding angles are congruent.
If two figures are similar, the ratio of their areas is the square of the scale factor.
Maps are common examples of scale drawings where the distances on a map are proportional to the actual distances.

7.GM.A.4. Understand concepts of circles.
The length of the radius is half the length of the diameter, or d = 2r.
The circumference (C) is the distance around the circle.
The formulas for the circumference of a circle and the area of a parallelogram can be used to show how the formula for the area of a circle was developed.

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level
Solve (7.GM.A.1.)	*Make a scale drawing of a figure using a given scale factor.	3 (Strategic Thinking)/ 4 (Extended Thinking)
Understand (7.GM.A.4.)	*Radius is half the diameter. *Area = $A = \pi r^2$ * Circumference = Πd * Understand the impact of doubling the radius has on both area and circumference.	1 (Recall)

Essential Questions
*How can I use the scale of a drawing to construct a similar figure? *How can I use a scale on a map to calculate actual distance? *How do I use a protractor to measure an angle? *How can I construct a geometric figure using a protractor and a ruler? *How do I find the circumference and area of a circle? *How do I give an informal derivation of the relationship between the circumference and area of a circle? *How do I determine what the shape cross section of a 3-D figure will be?

Standardized Assessment Correlations (State, College and Career)
Missouri Assessment Program (MAP)

Unit Assessments	
Pre-Assessment	Informal Progress Monitoring Checks
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity

Post-Assessment
STAR Math Assessment Triumph Online (Summative Assessment) Map Interpretation Quiz (Scale Factor) Quiz (Circles) Quarter 3 Benchmark: https://docs.google.com/forms/d/1ZM6MggWzuj3PbwMnccNgOc_EsJliZ2voIx-jyCpBypA/prefill

Engaging Learning Experiences	
Learning Activities Using Text or Program	Authentic Performance Tasks
*Big Ideas *Crosswalk Coach *Buckle Down CC *Common Core Support Coach *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Math Journal (Walk the Building Circle Activity to prove circumference forumla) *Open Middle Challenge *Bedroom Scale Drawing Project *Map Interpretation (when given the scale & a ruler)

Research-Based Effective Teaching Strategies	21st Century Learning Skills

Check all those that apply to the unit:	Check all those that apply to the unit:
✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning ✓ Setting Objectives, Providing Feedback ✓ Generating and Testing Hypotheses ✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability ✓ Effective Oral and Written Communication ✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials

Physical					Technology-Based
CCS	Cross walk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas	Other Supplement Materials: *SBAC Sample Test *STAR Math Assessment *Triumph Online (Digital Coach) Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills, supporting standards, interdisciplinary connections, unit vocabulary terms, and extension/enrichment activities.
GM.A.1	Pgs. 140-152	Pgs. 156-162	Lesson 14/ Pgs. 134-143	Pgs. 298-305	
GM.A.2	Pgs. 153-158	Pgs. 128-133		Pgs. 282-283 & Pgs. 292-297	
GM.A.3	Pgs. 159-163	Pgs. 167-171		Pggs. 388-390	
GM.A.4	Pgs. 164-169	Pgs. 163-166	Lesson 15/Pgs. 144-153	Pgs. Pgs. 316-323 & Pgs. 332 - 337	

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Polygons, triangle, square, rectangle, parallelogram, trapezoid, regular polygon, irregular polygon Protractor, Acute, Right, Obtuse, Straight, Reflex Scale Drawing, Scale, Scale Factor, Similar Figure, Solid, Face, Edge, Vertex, Net, Base, Cross-section, Prism, Pyramid, Circle, Circumference, Radius, Diameter, Area, Pi	*Extend concepts to understand real-world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)

Subject(s)	Mathematics
Grade/Course	7ᵗʰ Grade/Course 2
Unit of Study	Measurement (Angle Measure, Area, and Volume)
Unit Type(s)	❏ Topical ❏ Skills-based ❏ Thematic
Pacing	Quarter 3 (2 weeks Quarter 4)

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ MP1. Make sense of problems and persevere in solving them.
- ✓ MP2. Reason both contextually and abstractly.
- ✓ MP3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ MP4. Connect mathematical ideas and real-world situations through modeling.
- ✓ MP5. Use a variety of mathematical tools effectively and strategically.
- ✓ MP6. Communicate mathematically and approach mathematical situations with precision.
- ✓ MP7. Identify and utilize structure and patterns.
- ✓ MP8. Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

*Big Idea: Apply and extend previous understanding of angle measure, area, and volume.
**Priority Essential Standard(s):
7.GM.B.6. Understand the relationship between area, surface area, and volume.
***Supporting Essential Standard(s):
7.GM.B.6a. Find the area of triangles, quadrilaterals, and other polygons composed of triangles and rectangles.
7.GM.B.6b. Find the volume and surface area of prisms, pyramids, and cylinders.
**Priority Essential Standard(s):
7.GM.B.5. Use angle properties to write and solve equations for an unknown angle.

"UNWRAPPED" Priority Standards

7.GM.B.6. Understand the relationship between area, surface area, and volume.
Area (A) is the measure of the region inside a two-dimensional figure.
Surface area (SA) is total area of the outside surfaces of a three-dimensional figure.
Volume (V) is the amount of space that a solid takes up.

7.GM.B.5. Use angle properties to write and solve equations for an unknown angle.
You can set up an equation to find a missing angle within a diagram by identifying angle relations.
For instance, if two angles are supplementary angles, you can use the following equation to find the missing angle (x+ 30° = 180).
For instance, if two angles are complementary angles, you can use the following equation to find the missing angle (x + 45· 90).

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level
Understand (7.GM.B.6.)	*To find surface area of an object, add up the areas on the outer surfaces.* *Use formula*	2 (Skill/Concept)
Use (7.GM.B.5.)	*Be able to recognize a pictorial example of: supplementary angles, complementary angles, vertical angles, corresponding angles, alternating interior angles, and alternating exterior angles.* *Understand the relationships formed by the transversal.*	2 (Skill/Concept) /3 (Strategic Thinking)
Write (7.GM.B.5.)	*(x + 45· = 90) or (x+ 30° = 180)*	3 (Strategic Thinking)

Essential Questions

*How do I find the area of a given shapes?
*How do I find the area of a composite shape*How do I determine when to sue surface area versus volume?
*How do I find the surface area and volume?
*How do I find the surface area volume of similar figures?
*How can I use given information to find missing angle measures within a figure?
*How do I create a linear equation to find a missing angle within a figure? *How can I use given information to find missing angle measures within a figure?
*How do I create a linear equation to find a missing angle within a figure?

Standardized Assessment Correlations (State, College and Career)	
Missouri Assessment Program (MAP)	

Unit Assessments	
Pre-Assessment	**Informal Progress Monitoring Checks**
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity
Post-Assessment	
STAR Math Assessment Triumph Online (Summative Assessment) Quiz (Angle Relationships) Quiz (Surface Area) Quiz (Volume & Cross Sectional Views) Quarter 3 Benchmark: https://docs.google.com/forms/d/1ZM6MggWzuj3PbwMnccNgOc_EsJliZ2voIx-jyCpBypA/prefill	

Engaging Learning Experiences	
Learning Activities Using Text or Program	**Authentic Performance Tasks**
*Big Ideas *Crosswalk Coach *Buckle Down CC *Common Core Support Coach *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Walk the Building Angle Activity *Math Journal (Finding Missing Angles Justification through vocabulary) *Open Middle Challenge *Wrapping a Gift (finding total surface area)

Research-Based Effective Teaching Strategies	21st Century Learning Skills
Check all those that apply to the unit: ✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning ✓ Setting Objectives, Providing Feedback ✓ Generating and Testing Hypotheses ✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	Check all those that apply to the unit: ✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability ✓ Effective Oral and Written Communication ✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials					
Physical					**Technology-Based**
CCS	Crosswalk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas	Other Supplement Materials: *SBAC Sample Test *STAR Math Assessment *Triumph Online (Digital Coach) Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills, supporting standards, interdisciplinary connections, unit vocabulary terms, and extension/enrichment activities.
GM.B.6	Pgs. 177-191	Pgs. 146-155, 172-180	Lesson 16/Pgs. 154-163	Pgs. 338-343 & Pgs. 354-387	
GM.B.5	Pgs. 170-176	Pgs. 134-145		Pgs. 270-294	

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Area, Area Formulas: triangle, square, rectangle, parallelogram, trapezoid, regular polygon, Apothem, Composite Shape, Surface Area, Volume, Rectangular Prism (SA = 2lw + 2lh +2 wh) Cube (SA= 6e²), Volume (V = Bh), Adjacent Angles, Complementary Angles, Supplementary Angles, Vertical Angles, Transversal, Interior Angles, Exterior Angles, Alternate Interior Angles, Alternate Exterior Angles, Corresponding Angles	*Extend concepts to understand real-world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)

Subject(s)	Mathematics
Grade/Course	7th Grade/Course 2
Unit of Study	Data Analysis (Sampling & Statistics)
Unit Type(s)	❏ Topical ❏ Skills-based ❏ Thematic
Pacing	Quarter 4

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ MP1. Make sense of problems and persevere in solving them.
- ✓ MP2. Reason both contextually and abstractly.
- ✓ MP3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ MP4. Connect mathematical ideas and real-world situations through modeling.
- ✓ MP5. Use a variety of mathematical tools effectively and strategically.
- ✓ MP6. Communicate mathematically and approach mathematical situations with precision.
- ✓ MP7. Identify and utilize structure and patterns.
- ✓ MP8. Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

*Big Idea: Use random sampling to draw inferences about a population.
**Priority Essential Standard(s):
7.DSP.A.1. Understand that statistics can be used to gain information about a population by examining a sample of the population.
***Supporting Essential Standard(s):
7.DSP.A.1a. Understand that a sample is a subset of a population.
7.DSP.A.1b. Understand that generalizations from a sample are valid only if the sample is representative of the population.
7.DSP.A.1c. Understand that random sampling is used to produce representative samples and support valid inferences.
7.DSP.A.2. Use data from multiple samples to draw inferences about a population and investigate variability in estimates of the characteristic of interest.

*Big Idea: Draw informal comparative inferences about two populations.
**Priority Essential Standard(s):
7.DSP.B.3. Analyze different data distributions using statistical measures.
***Supporting Essential Standard(s):
7.DSP.B.4. Compare the numerical measures of center, measures of frequency and measures of variability from two random samples to draw inferences about the population.

"UNWRAPPED" Priority Standards

7.DSP.A.1. Understand that statistics can be used to gain information about a population by examining a sample of the population.
A sample is a subset of a population.
Generalizations are only valid if sample is representative of the population.
A random sample is unbiased if every individually in the population has an equally likely change of being chosen.

7.DSP.B.3. Analyze different data distributions using statistical measures.
A measure of central tendency (mean, median, or mode) is a single digit used to represent all the value in a data set.
A dot plot is often used to display the spread of data (and quickly identity the mode or any clusters of data).
A stem-and-leaf plot is often used to display the frequency of certain data values.
A box-and-whisker plot is often used display the median, quartiles, and extremes of a data set on a number line to show the distribution of the data.
The mean absolute deviation indicated how the data varies, or differs, from the actual mean.

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level
Understand (7.DSP.A.1.)	*A random sample is unbiased if every individual in the population has an equal chance of being selected. When the sample size is large and random, the data gathered from that sample will better represent the entire population.	1 (Recall)
Examine (7.DSP.A.1.)	**If Jack wants to sample students to find out how many books they read over the summer, Jack would have to ask every tenth person in the lunchroom versus all the students in the library in order to have an unbiased sample.	2 (Skills/Concepts)
Analyze (7.DSP.B.3.)	*You can compare the measures of central tendency for two sets of data.* You can also use the mean absolute deviation to compare two data sets.	3 (Strategic Thinking)/

Essential Questions
*How can I make a generalization/prediction about a population using a sample?
*What impact does a non-representative sample have on the larger population?
*How can I identity an unbiased sample question?
*How can I change a biased sample question into an unbiased sample question?
*How can I calculate the mean, median, and mode of a data set?
*How can I determine which measure of central tendency is most representative of a data set?
*How can I compare two data displays?
*How can I use the box-and-whisker plot to draw conclusions about a data set?
*How do I find the percentile of a data set?
*How do I find the mean absolute deviation of a data set?
*How is an average impacted by an outlier?

Standardized Assessment Correlations (State, College and Career)
Missouri Assessment Program (MAP)

Unit Assessments	
Pre-Assessment	Informal Progress Monitoring Checks
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity

Post-Assessment
STAR Math Assessment Triumph Online (Summative Assessment) Quiz (Central Tendencies & MAD) Data Analysis Project (over student data from progress points) Unit Test (Data: central tendencies, box-and-whisker plots, comparing dot plots, absolute mean deviation) Quarter 4 Benchmark: https://docs.google.com/forms/d/1mWDcFYnuBFqs8U5iQyuIPQBueMHeoNG46bRZZEbSkdw/prefill

Engaging Learning Experiences	
Learning Activities Using Text or Program	**Authentic Performance Tasks**
*Big Ideas *Crosswalk Coach *Buckle Down CC *Common Core Support Coach *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Data Project (Students will analyze progress percentages throughout the course of the school year for a total of 12 data values) *Open Middle Challenge *Election Projection *Super Bowl Projection *Math JOurnal (Impact of Outlier (lowest test score) on Personal Test Average/ Class Average)

Research-Based Effective Teaching Strategies	21st Century Learning Skills
Check all those that apply to the unit: ✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning ✓ Setting Objectives, Providing Feedback ✓ Generating and Testing Hypotheses ✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	Check all those that apply to the unit: ✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability ✓ Effective Oral and Written Communication ✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials					
Physical					**Technology-Based**
CCS	Crosswalk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas	Other Supplement Materials: *SBAC Sample Test *STAR Math Assessment *Triumph Online (Digital Coach) Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills,
DSP.A.2	Pgs. 211-217, 241-245	Pgs. 205-207, 224-226	Lesson 17/ Pgs. 164-173	Pgs. 448-453	
DSP.A.1	Pgs. 211-217	Pgs. 205-207		Pgs 440-447	
DSP.B.4	Pgs. 218-233, 241-253	Pgs. 208-219, 224-231			
DSP.B.3	Pgs. 234-240, 246-253	Pgs. 220-223, 227-231		Pgs. 448-453	
DSP.B.4	Pgs. 218-233,	Pgs. 208-219, 224-231		Pgs. 448-453	

	241-253				supporting standards, interdisciplinary connections, unit vocabulary terms, and extension/enrichment activities.

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Population, Sample, Random Sample, Representative Sample, Unbiased Sample , Biased Sample, Prediction, Census, Mean, Median, Mode, Measure of Variation, Range, Quartile, Lower Quartile, Second Quartile, Upper Quartile, Interquartile Range, Percentile, Index, Box-and-Whisker Plot, Mean Absolute Deviation Stem-and-Leaf Plot, Line Plot, Dot Plot, Cluster, Box-and-Whisker Plot, Outlier	*Extend concepts to understand real-world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)

Subject(s)	Mathematics
Grade/Course	7th Grade/Course 2
Unit of Study	Probability (Probability Models)
Unit Type(s)	❑ Topical ❑ Skills-based ❑ Thematic
Pacing	Quarter 4

Standards for Mathematical Proficiency

Highlight all that apply to the unit:
- ✓ MP1. Make sense of problems and persevere in solving them.
- ✓ MP2. Reason both contextually and abstractly.
- ✓ MP3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
- ✓ MP4. Connect mathematical ideas and real-world situations through modeling.
- ✓ MP5. Use a variety of mathematical tools effectively and strategically.
- ✓ MP6. Communicate mathematically and approach mathematical situations with precision.
- ✓ MP7. Identify and utilize structure and patterns.
- ✓ MP8. Look for and express regularity in repeated reasoning.

Priority Essential Standards
Supporting Essential Standards

*__Big Idea:__ Develop, use and evaluate probability models
**__Priority Essential Standard(s):__
7.DSP.C.5. Investigate the probability of chance events.
***__Supporting Essential Standard(s):__
7.DSP.C.5a. Determine probabilities of simple events.
7.DSP.C.5b. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.

**__Priority Essential Standard(s):__
7.DSP.C.6. Investigate the relationship between theoretical and experimental probabilities for simple events.
***__Supporting Essential Standard(s):__
7.DSP.C.6a. Predict outcomes using theoretical probability.
7.DSP.C.6b. Perform experiments that model theoretical probability.
7.DSP.C.6c. Compare theoretical and experimental probabilities.
7.DSP.C7.   Explain possible discrepancies between a developed probability model and observed frequencies.
7.DSP.C.7a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.
7.DSP.C.7b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.

**__Priority Essential Standard(s):__
7.DSP.C.8. Find probabilities of compound events using organized lists, tables, tree diagrams and simulations.
***__Supporting Essential Standard(s):__
7.DSP.C.8a. Represent the sample space of a compound event.
7.DSP.C.8b. Design and use a simulation to generate frequencies for compound events.

"UNWRAPPED" Priority Standards

7.DSP.C.5. Investigate the probability of chance events.
Probability of flipping a head on a two-sided coin is ½.

7.DSP.C.6. Investigate the relationship between theoretical and experimental probabilities for simple events.
Theoretical probability is based on mathematical reasoning (number of possible outcomes).
Experimental probability is based on actual experiments (number of trials).

7.DSP.C.8. Find probabilities of compound events using organized lists, tables, tree diagrams and simulations.
Compound events involve two or more simple events.

Organized lists and tables visually list outcomes as ordered pairs.
Tree Diagrams use branches to show all the possible outcomes of an event.
Simulations is a method of solving a problem by carrying out an experiments that is similar to the problem you need to solve.
A table of random digits can be used as a simulation tool to solve problems with compound events.

"Unwrapped" Concepts (students need to know)	"Unwrapped" Skills (students need to be able to do)	Bloom's/ DOK Level
Investigate (7.DSP.C.5.)	*Flip a coin or spin a spinner once.	1 (Recall)
Investigate (7.DSP.C.6.)	*Theoretical Probability Example: P(2) on a number cube is 1/6. * Experimental Probability Example: David tossed a coin 15 times. What is the experimental probability of getting tails?	1 (Recall)/ 2 (Skill/Concept)
Find (7.DSP.C.8.)	*Two number cubes are rolled. Complete a table to list all the possible outcomes as ordered pairs.	3 (Strategic Thinking)

Essential Questions
*How can I predict the outcome of an event occurring using both theoretical probability and experimental probability? *What is the difference between theoretical probability and experimental probability? *How do I use experimental probability to make predictions about more trials? *What is the difference between independent and dependent events? *How do I interpret a tree diagram? *How do I use a simulation to find the probability of an event?

Standardized Assessment Correlations (State, College and Career)
Missouri Assessment Program (MAP)

Unit Assessments	
Pre-Assessment	Informal Progress Monitoring Checks
*STAR Math Assessment *Triumph Online *Warm-Ups	*Warm-Ups *Classroom Discussion *Homework Check *Quizizz Review Game *Edulastic Assessment *White Boards Activity

Post-Assessment
STAR Math Assessment Triumph Online (Summative Assessment) Quiz (Simple Probability & Compound Events) Unit Test (Probability) Quarter 4 Benchmark: https://docs.google.com/forms/d/1mWDcFYnuBFqs8U5iQyuIPQBueMHeoNG46bRZZEbSkdw/prefill

Engaging Learning Experiences	
Learning Activities Using Text or Program	**Authentic Performance Tasks**
*Big Ideas *Crosswalk Coach *Buckle Down CC *Common Core Support Coach *Pizzazz *Station Activities *White Boards	*Scholastic Math Activities (Nonfiction Articles) *Open Middle Challenge *Math Journal (Investigation of Comparing Theoretical Probability to Experimental Probability)

Research-Based Effective Teaching Strategies	21st Century Learning Skills
Check all those that apply to the unit: ✓ Identifying Similarities and Differences ✓ Summarizing and Note Taking ✓ Reinforcing Effort, Providing Recognition ✓ Homework and Practice ✓ Nonlinguistic Representations ✓ Cooperative Learning ✓ Setting Objectives, Providing Feedback ✓ Generating and Testing Hypotheses ✓ Cues, Questions, and Advanced Organizers ✓ Interdisciplinary Non-Fiction Writing	Check all those that apply to the unit: ✓ Teamwork and collaboration ✓ Initiative and Leadership ✓ Curiosity and Imagination ✓ Innovation and Creativity ✓ Critical Thinking and Problem Solving ✓ Flexibility and Adaptability ✓ Effective Oral and Written Communication ✓ Accessing and Analyzing Information

Differentiation Strategies (Additional Supports + Enrichment)	Intervention Strategies	Specially Designed Instruction for Special Education Students	Strategies for English Language Learners
*Flexible Groups *Pull-backs *Modified Tasks	*Peer-tutoring (high/low or medium/low) *After school tutoring *PAWS tutoring	*Refer to IEP/504 PLANS *Collaborate with SPED Teacher	*SDAIE Strategies *ELL Strategies *Collaborate w/ELL Specialists

Instructional Resources and Materials					
Physical					**Technology-Based**
CCS	Crosswalk Coach	Buckle Down CC	Common Core Support Coach	Big Ideas	Other Supplement Materials: *SBAC Sample Test *STAR Math Assessment *Triumph Online (Digital Coach) Locate INTERNET SITES and SOFTWARE that correspond with the "unwrapped" Priority Standard concepts and skills, supporting standards, interdisciplinary
DSP.C.5	Pgs. 199-204	Pgs. 190-197		Pgs. 400-411	
DSP.C.6	Pgs. 199-204	Pgs. 190-197	Lesson 18/ Pgs. 174-183	Pgs. 412-419	
DSP.C.7	Pgs. 199-204	Pgs. 190-197	Lesson 19/ Pgs. 184-193	Pgs. 428-437	
DSP.C.8a	Pgs. 205-210	Pgs. 198-204		Pgs. 420-427	
DSP.C.8b	Pgs. 205-210	Pgs. 198-204	Lesson 20/ Pgs. 194-203	Pgs. 4436-437	

	connections, unit vocabulary terms, and extension/enrichment activities.

Unit Vocabulary Terms	Enrichment / Extension	Interdisciplinary Connections
Probability, Uniform Probability Model, Theoretical Probability, Experimental Probability, Impossible, Unlikely, Equally unlikely to likely, Likely, Certain, Compound Events, Independent Events, Dependent Events, Tree Diagram/Counting Principle, Simulation	*Extend concepts to understand real–world situations. *Use various reference resources (newspaper, internet, etc.) *Solve problems incorporating various concepts.	*Science *Social Studies *Technology (digital coach) *ELA (nonfiction articles)