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## 8th Grade Math Curriculum Map 2023-2024

# 8th Grade Curriculum Map 2023-2024

Standards for Mathematical Practice:	Literacy Skills for Mathematical Proficiency
<ul style="list-style-type: none"> <li>• <b>MP1:</b> Make sense of problems and persevere in solving them.</li> <li>• <b>MP2:</b> Reason abstractly and quantitatively.</li> <li>• <b>MP3:</b> Construct viable arguments and critique the reasoning of others.</li> <li>• <b>MP4:</b> Model with mathematics.</li> <li>• <b>MP5:</b> Use appropriate tools strategically.</li> <li>• <b>MP6:</b> Attend to precision.</li> <li>• <b>MP7:</b> Look for and make use of structure.</li> <li>• <b>MP8:</b> Look for and express regularity in repeated reasoning.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>MLS1:</b> Use multiple reading strategies.</li> <li>• <b>MLS2:</b> Understand and use correct mathematical vocabulary.</li> <li>• <b>MLS3:</b> Discuss and articulate mathematical ideas.</li> <li>• <b>MLS4:</b> Write mathematical arguments.</li> </ul>

### ACT Standards

N 604. Apply the facts that $\pi$ is irrational and that the square root of an integer is rational only if that integer is a perfect square	N 402. Write positive powers of 10 by using exponents A 511. Work with scientific	A 604. Solve systems of two linear equations	AF 503. Match linear equations with their graphs in the coordinate plane	AF 502. Build functions and write expressions, equations, or inequalities with a single variable for common prealgebra settings (e.g., rate and distance problems and problems that can be solved by using proportions)	G 601. Use relationships involving area, perimeter, and volume of geometric figures to compute another measure (e.g., surface area for a cube of a given volume and simple geometric probability)
A 509. Work with squares and square roots of numbers	A 510. Work with cubes and cube roots of numbers	A 406. Exhibit knowledge of slope	A 514. Determine the slope of a line from an equation	A 403. Solve routine first degree equations	sA 511. Work with scientific notation
G 508. Given the length of two sides of a right triangle, find the third when the lengths are Pythagorean triples	G 602. Use the Pythagorean theorem	G 301. Exhibit some knowledge of the angles associated with parallel lines	G 402. Exhibit knowledge of basic angle properties and special sums of angle measures (e.g., $90^\circ$ , $180^\circ$ , and $360^\circ$ )	G 407. Translate points up, down, left, and right in the coordinate plane	G 401. Use properties of parallel lines to find the measure of an angle
G 512. Find the coordinates of a point rotated $180^\circ$ around a given center point	G 607. Find the coordinates of a point reflected across a vertical or horizontal line or across $y = x$	G 608. Find the coordinates of a point rotated $90^\circ$ about the origin	G 703. Use scale factors to determine the magnitude of a size change	G 510. Determine the slope of a line from points or a graph	G 501. Use several angle properties to find an unknown angle measure
S 506. Recognize that when a statistical model is used, model values typically differ from actual values	S 404. Describe events as combinations of other events (e.g., using and, or, and not)	S 605. Recognize the concepts of conditional and joint probability expressed in real world contexts	A 601. Manipulate expressions and equations	F 505. Understand the concept of a function as having a well-defined output value at each valid input value	F 506. Understand the concept of domain and range in terms of valid input and output, and in terms of function graphs
F 601. Relate a graph to a situation described qualitatively in terms of faster change or slower change	F 503. Build functions and use quantitative information to identify graphs for relations that are proportional or linear	F 504. Attend to the difference between a function modeling a situation and the reality of the situation	A 512. Work problems involving positive integer exponents		



## 8th Grade Math Curriculum Map 2023-2024

# TCAP

## ASSESSMENT BLUEPRINT

### Mathematics

### Grade 8

This blueprint describes the content and structure of an assessment and defines the ideal percentage of operational test items by reporting category for the Tennessee Comprehensive Assessment Program (TCAP).

IDEAL PERCENTAGE OF ITEMS*	REPORTING CATEGORIES AND STANDARDS
<b>17-23%</b>	<b>Number Relationships</b> 8.NS.A                    The Number System 8.EE.A                    Expressions and Equations
<b>17-23%</b>	<b>Expressions and Equations</b> 8.EE.B                    Expressions and Equations 8.EE.C                    Expressions and Equations
<b>16-25%</b>	<b>Functions</b> 8.F.A                      Functions 8.F.B                      Functions
<b>31-38%</b>	<b>Geometry and Data</b> 8.G.A                      Geometry 8.G.B                      Geometry 8.G.C                      Geometry 8.SP.A                     Statistics and Probability 8.SP.B                     Statistics and Probability

**53-64 Total Items** (including embedded field test items)

\*The ranges shown indicate % of operational items on the assessment and are not a reflection of score points.



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### WIDA ELD STANDARD 3 Language for Mathematics

The **WIDA English Language Development (ELD) Standards Framework** provides a foundation for curriculum, instruction and assessment for multilingual learners in kindergarten through grade 12. The ELD Standards Framework is centered on equity and fosters the assets, contributions and potential of multilingual learners.

**ELD: MA.6-8 Explain: Interpretive:** Language Expectations: Multilingual learners will interpret mathematical explanations by identifying concepts or entities, analyzing possible ways to represent and solve a problem, and evaluating model and rationale for underlying relationships in selected problem-solving approaches.

**ELD: MA.6-8 Explain: Expressive:** Language Expectations: Multilingual learners will construct mathematical explanations that introduce concepts or entities, share solutions with others, describe data and/or problem-solving strategies, and state reasoning used to generate solutions.

#### **Introduce concepts or entities through...**

- Mathematical terms and phrases to describe concept, process, or purpose (this probability model, randomized sampling will provide more valid results)
- Relating verbs (belong to, are part of, be, have) to define or describe concept

#### **Share solutions with others through...**

- Generalized nouns to add precision to discussion (distributions, probability, frequencies)
- Language choices to reflect on completed and on-going process (we should have done this, we might be able to, what if we try)
- First person (I, We) to describe approach; third person to describe approach with neutral stance of authority
- Observational (notice, it appears, looks like) and comparative language (different from, similar to, the same) to share results (We notice our process was different, but we have the same solution.)
- Modality (verbs, adverbs, nouns, adjectives) to express opinions, degrees of certainty, or temper disagreement (It's a possibility, We have to do it this way, Maybe we could look at)



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### **Describe data and/or problem-solving strategy through...**

- Abstract, generalized, or multi-meaning noun groups to add precision to mathematical descriptions (randomized variation, proportional relationships, constituents)
- Visual data displays (tables, tree diagrams, simulations, data charts, manipulatives) to clarify approach and/or solution
- Connectors to link sentences and longer stretches of text signaling details of time (next, at the same time), causality (therefore, consequently, as a result), clarification (for example, as seen in the model)
  - Passive voice verbs to explain or analyze (The variable is given a value of six.)
  - Timeless present verbs to present generalizable truths (The hypotenuse is opposite the right angle.)

### **State reasoning used to generate solutions through...**

- Causal connectors to express reasoning (We took these steps to solve problems with the ratios because...)
- Conditional conjunctions to propose future options (if/so, if/then) and generalized relationships (if/will, if we follow the order of operations, we will show that...)

**ELD: MA.6-8 Argue: Interpretive:** Language Expectations: Multilingual learners will interpret mathematical arguments by comparing conjectures with previously established results, distinguishing commonalities among strategies used, and evaluating relationships between evidence and mathematical facts to create generalizations

**ELD: MA.6-8 Argue: Expressive:** Language Expectations: Multilingual learners will construct mathematical arguments by comparing conjectures with previously established results, distinguishing commonalities among strategies used, and evaluating relationships between evidence and mathematical facts to create generalizations

### **Create conjecture, using definitions and previously established results through...**

- Conditional conjunctions (if or when) to make and justify conjecture (If I add  $\frac{4}{5}$  and  $\frac{3}{4}$ , the result will be less than 2 because each fraction is less than a whole number.)
- Relating verbs (have, belong to, be) to define principles, operational theorems, and properties (for right angled triangles the Pythagorean formula is  $a^2 + b^2 = c^2$ )
- Adverbial phrases (qualities, quantities, frequencies) to add precision related to conjecture (For all integers, For every vote candidate A received, candidate B received three votes which means...)

### **Generalize logic across cases through...**

- Declarative statements to present generalizable processes (The expression  $4n-1$  can be used to find any value in the pattern.)



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- Verbs to apply mathematical principles (commands) (use, do, apply, divide) across cases (Use the distributive property when there is no common factor.)

### **Justify conclusions with evidence and mathematical facts through...**

- Conditional structures (if/then, when) to demonstrate conclusions (If it's a proportional relationship then the ratio between the 2 variables is always going to be the same thing.)
  - Technical nouns and noun groups to add precision and details (coordinate plane, one-variable equations, two- and three-dimensional shapes)
  - Models, drawings, graphs to demonstrate principles

### **Evaluate and critique others' arguments through...**

- Questions (what, how, why, do), requests (could, would) to request information, clarification, procedure (Could you show me how you got that answer? Why did you do...instead of...?)
- Causal connectors (so, because, therefore) to identify misconceptions (The pattern is multiplying by a factor of 2, so it can't be a linear function.)
- Negation (don't, doesn't, can't) and obligation modal verbs (have to, must, should, could, might) to engage with others (I don't think you can apply that theorem, I think you have to use this.)



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## **8th Grade Math Curriculum Map 2023-2024**



## 8th Grade Math Curriculum Map 2023-2024

### Chapter 1: Equations and Inequalities

#### Chapter 1 Standards

**8.EE.C.7** Solve linear equations in one variable.

a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form  $x = a$ ,  $a = a$ , or  $a = b$  results (where  $a$  and  $b$  are different numbers).

b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and combining like terms.

**Chapter 1 Pacing:** 14 Days (August 8 - August 25)

**Chapter Learning Target:** Understand Equations and Inequalities

#### Chapter Success Criteria

Identify key words and phrases to solve equations	Write word sentences as equations	WRite word sentences as inequalities
Explain how to solve equations	Model different types of equations to solve real-life problems	Graph and interpret inequalities

#### Chapter Vocabulary



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## 8th Grade Math Curriculum Map 2023-2024

Literal Equation	Inequality	Solution of an Inequality	Solution Set	Graph of an Inequality
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### Lessons:

1.1	Solving Simple Equations	★ How can you write and solve one-step equations?
1.2	Solving Multi-Step Equations	★ How can you write and solve multi-step equations?
1.3	Solving Equations with Variables on Both Sides	★ How can you write and solve equations with variables on both sides?
1.4	Determine Type of Solution for Multi-Step Equations (supplement from other resource)	★ How can you determine the type of solution to an equation?
1.5	Writing and Graphing Inequalities	★ How can you write inequalities and represent solutions of inequalities on number lines?
	Connecting Concepts	
	Chapter Review & Test	
	Cumulative Practice	

## Chapter 2: Transformations





### 8th Grade Math Curriculum Map 2023-2024

#### Chapter 2 Standards:

- 8.G.A.1** Describe the effect of translations, rotations, reflections, and dilations on two-dimensional figures using coordinates.
- a. Verify informally that lines are taken to lines, and determine when line segments are taken to line segments of the same length.
  - b. Verify informally that angles are taken to angles of the same measure.
  - c. Verify informally that parallel lines are taken to parallel lines.
  - d. Make connections between dilations and scale factors.

**Chapter 2 Pacing:** 17 Days ( August 28 - September 20)

**Chapter Learning Target:** Understand Transformations

#### Chapter Success Criteria

Identify a transformation	Describe a transformation
Describe a sequence of rigid motions between two congruent figures	Solve real-life problems involving transformations

#### Chapter Vocabulary

Transformation	image	Translation	Reflection	Line of Reflection	Rotation	Center of Rotation	Angle of Rotation	Rigid Motion
Congruent	Dilation	Congruent	Congruent	Center of	Scale	Similarity	Similar	



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## 8th Grade Math Curriculum Map 2023-2024

Figures		Angles	Sides	Dilation	Factor	Transformation	Figures	
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### Lessons:

2.1	Translations	★ How can you translate figures in the coordinate plane?
2.2	Reflections	★ How can you reflect figures in the coordinate plane?
2.3	Rotations	★ How can you rotate figures in the coordinate plane?
2.4	Congruent Figures	★ How can you understand congruent figures?
2.5	Dilations	★ How can you dilate figures in the coordinate plane?
2.6	Similar Figures	★ How can you understand similar figures?
	Connecting Concepts	
	Chapter Review & Test	
	Cumulative Practice	

### Chapter 3: Angles and Triangles

### Chapter 3 Standards:

**8.G.A.2** Use informal arguments to establish facts about the angle sum and exterior angle



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of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.

**Chapter 3 Pacing:** 11 Days (September 21 - October 4 ) **Benchmark Week:** September 29 - October 5

**Chapter Learning Target:** Understand Angles

### Chapter Success Criteria

Identify angle relationships	Find angle measurements
Compare angles	Apply angle relationships to solve real-life problems

### Chapter 3 Vocabulary

Transversal	Interior Angle	Exterior Angle	Interior Angles of a Polygon	Exterior Angles of a Polygon	Regular Polygon	Indirect Measurement
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### Lessons:

3.1	Parallel Lines and Transversals	★ How can you find missing angle measures created by the intersection of lines?
3.2	Angles of Triangles	★ How can you explain properties of interior and exterior angles of triangles?
3.3	Create and Solve Real World Problems (supplement using another resource)	★ How can I use angle properties to solve real word problems?
3.4	Using Similar Triangles	★ How can you use similar triangles to find missing measures?
	Connecting Concepts	
	Chapter Review & Test	
	Cumulative Practice	

### Chapter 4: Graphing and Writing Linear Equations and Inequalities

#### Chapter 4 Standards



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<b>8.EE.B.5</b> Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed
<b>8.EE.B.6</b> Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in the coordinate plane; know and apply the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at $b$ .
<b>8.EE.C.8</b> Analyze and solve systems of two linear equations graphically. a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. b. Estimate solutions by graphing a system of two linear equations in two variables. Identify solutions by inspecting graphs of a system of linear equations in two variables
<b>8.EE.C.9</b> By graphing on the coordinate plane or by analyzing a given graph, determine the solution set of a linear inequality in one or two variables.

**Chapter 4 Pacing:** 23 Days (October 5 - November 13 )

**Chapter Learning Target:** Understand Graphing Linear Equations and Inequalities

#### Chapter Success Criteria

Identify key features of a graph	Explain the meaning of different forms of linear equations	Interpret the slope and intercepts of a line
Create graphs of linear equations and inequalities	Solve systems of linear equations	

#### Chapter Vocabulary

Linear Equation	Solution of a Linear Equation	Slope	Rise	Run	X-Intercept	Y-Intercept	Slope-Intercept Form
Standard Form	Point-Slope Form	Linear Inequality in Two Variables	Solution of a Linear Inequality in Two Variables	Graph of a Linear Inequality	Half-Planes	Systems of Linear Equations	Solution of a System of Linear Equations



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### Lessons

4.1	Graphing Linear Equations	★ How do you graph linear equations?
4.2	Slope of a Line	★ How can you find and interpret the slope of a line?
4.3	Graphing Proportional Relationships	★ How can you graph proportional relationships?
4.4	Graphing Linear Equations in Slope Intercept Form	★ How can you graph linear equations in slope-intercept form?
4.5	Graphing Linear Equations in Standard Form	★ How can you graph linear equations in standard form?
4.6	Writing Equations in Slope-Intercept Form	★ How do you write equations of lines in slope-intercept form?
4.7	Comparing Linear Equations (supplement from another resource)	★ How can you compare linear equations from a graph, table, or equation?
4.8	Graphing Linear Inequalities In Two Variables	★ How do you graph linear inequalities in two variables?
4.9	Solving Systems of Linear Equations by Graphing	★ How do you solve systems of linear equations by graphing?
4.10	Solving Special Systems of Linear Equations	★ How do you solve systems with different numbers of solutions?
	Connecting Concepts	
	Chapter Review & Test	
	Cumulative Practice	

## Chapter 5: Probability, Data Analysis, and Displays

### Chapter 5 Standards

**8.SP.A.1** Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities.



### 8th Grade Math Curriculum Map 2023-2024

Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
<b>8.SP.A.2</b> Know that straight lines are widely used to model linear relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line and informally assess the model fit by judging the closeness of the data points to the line.
<b>8.SP.A.3</b> Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercepts. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.
<b>8.SP.B.4</b> Find probabilities of and represent sample spaces for compound events using organized lists, tables, tree diagrams, and simulation. <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>

**Chapter 5 Pacing:** 14 Days (December 11- January 18 )

**Chapter Learning Target:** Understand Probability and Data Displays

#### Chapter Success Criteria

Find probabilities of compound events	Use appropriate data display to represent a situation
Interpret a data set	Compare different data sets

#### Chapter 5 Vocabulary

Sample Space	Compound Event	Simulations	Scatter Plots	Line of Fit	Line of Best Fit
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### Lessons:

5.1	Compound Events	★ How do you find sample spaces and probabilities of compound events?
5.2	Simulations	★ How can you design and use simulations to find probabilities of compound events?
5.3	Scatter Plots	★ How do you use scatter plots to describe patterns and relationships between two quantities?
5.4	Lines of Fit	★ How can you use lines of fit to model data?
	Collect Data Activity	★ How ...
	Connecting Concepts	
	Chapter Review & Test	
	Cumulative Practice	

### Chapter 6: Functions

### Chapter 6 Standards:





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**8.F.A.1** Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. (Function notation is not required in 8th grade.)

**8.F.A.2** Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and another linear function represented by an algebraic expression, determine which function has the greater rate of change

**8.F.A.3** Know and interpret the equation  $y = mx + b$  as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function  $A = s^2$  giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.

**8.F.B.4** Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models and in terms of its graph or a table of values.

**8.F.B.5** Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

**Chapter 6 Pacing:** 14 Days (November 16 - December 8)

**Benchmark Week** (December 14 - 20)

**Chapter Learning Target:** Understand Functions

**Chapter Success Criteria**



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Identify functions	Represent functions in a variety of ways
Evaluate functions	Solve problems using function rules

### Chapter 6 Vocabulary

Input	Output	Relation	Mapping Diagrams	Functions	Function Rule	Linear Function	Nonlinear Function
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### Lessons:

6.1	Relations and Functions (must supplement from another resource)	★ How can you describe the concept of a function?
6.2	Representations of Functions (must supplement from another resource)	★ How can you represent functions in a variety of ways?
6.3	Linear Functions	★ How can you use functions to model linear relationships?
6.4	Comparing Linear and Nonlinear Functions	★ How do you recognize differences between linear and nonlinear functions?
6.5	Analyzing and Sketching Graphs	★ How do you use graphs of functions to describe relationships between quantities?
	Connecting Concepts	



## 8th Grade Math Curriculum Map 2023-2024

	Chapter Review & Test	
	Cumulative Practice	

### Chapter 7: Exponents and Scientific Notation

#### Chapter 7 Standards

**8.EE.A.1** Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example,  $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$ .

**8.EE.A.3** Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities and to express how many times as much one is than the other. For example, estimate the population of the United States as  $3 \times 10^8$  and the population of the world as  $7 \times 10^9$ , and determine that the world population is more than 20 times larger.

**8.EE.A.4** Using technology, solve real-world problems with numbers expressed in decimal and scientific notation. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading).

**Chapter 7 Pacing:** 17 Days (January 19 - February 2 )

**Chapter Learning Target:** Understand Exponents and Scientific Notation

**Chapter Success Criteria**



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## 8th Grade Math Curriculum Map 2023-2024

Write products using exponents	Describe the value of powers
Evaluate expressions	Compare quantities using scientific notation

### Chapter 7 Vocabulary

Power	Base	Exponent	Scientific Notation
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### Lessons:

7.1	Exponents	★ How do you use exponents to write and evaluate expressions?
7.2	Product of Powers Property	★ How can you generate equivalent expressions involving products of powers?
7.3	Quotient of Powers Property	★ How do you generate equivalent expressions involving quotients of powers?
7.4	Zero and Negative Exponents	★ How can you explain the concept of zero and negative exponents?
7.5	Estimating Quantities	★ How do you round numbers and write the results in the product of a single digit and a power of 10?
7.6	Scientific Notation	★ How do you explain the concept of scientific notation?
7.7	Operations in Scientific Notation	★ How do you perform operations with numbers written in scientific notation?
	Connecting Concepts	
	Chapter Review & Test	
	Cumulative Practice	



## 8th Grade Math Curriculum Map 2023-2024

### Chapter 8: Real Numbers and the Pythagorean Theorem

#### Chapter 8 Standards:

**8.EE.A.2** Use square root and cube root symbols to represent solutions to equations of the form  $x^2 = p$  and  $x^3 = p$ , where  $p$  is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes.

**8.G.B.3** Explain a model of the Pythagorean Theorem and its converse.

**8.G.B.4** Know and apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

**8.G.B.5** Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

**8.NS.A.1** Know that real numbers that are not rational are called irrational (e.g.,  $\pi$ ,  $\sqrt{2}$ , etc.). Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually or terminates, and convert a decimal expansion which repeats eventually or terminates into a rational number.

**8.NS.A.2** Use rational approximations of irrational numbers to compare the size of irrational numbers by locating them approximately on a number line diagram. Estimate the value of irrational expressions (such as  $\pi^2$ ). For example, by truncating the decimal expansion of  $\sqrt{2}$ , show that  $\sqrt{2}$  is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

**Chapter 8 Pacing:** 15 Days (February 5 - February 29 )



### 8th Grade Math Curriculum Map 2023-2024

**Chapter Learning Target:** Understand Square Roots

#### Chapter Success Criteria

Describe a square root	Find the square root(s) of a number
Approximate the value of the square root of a number	Explain the Pythagorean Theorem

#### Chapter 8 Vocabulary

Square Root	Perfect Square	Radical Sign	Radicand	Theorem	Legs
Hypotenuse	Pythagorean Theorem	Cube Root	Perfect Cube	Irrational Number	Real Numbers

#### Lessons:

8.1	Finding Square Roots	★ How can you explain the concept of a square root of a number?
8.2	The Pythagorean Theorem	★ How do you use the Pythagorean Theorem?
8.3	Finding Cube Roots	★ How do you find the cube root of a number?
8.4	Rational Numbers	★ How can you convert between different forms of rational numbers?
8.5	Irrational Numbers	★ How do you explain the concept of irrational numbers?
8.6	The Converse of the Pythagorean Theorem	★ How do you explain the converse of the Pythagorean Theorem?
	Connecting Concepts	



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	Chapter Review & Test	
	Cumulative Practice	

### Chapter 9: Volume

#### Chapter 9 Standards:

**8.G.C.6** Apply the formulas for the volumes of cones, cylinders, and spheres to solve real-world and mathematical problems.

**Chapter 9 Pacing:** 11 Days (March 25 - April 2 **\*\*Will most likely complete after spring break**)

**Benchmark Week: March 8 - March 14)**

**Chapter Learning Target:** Understand Volume

#### Chapter Success Criteria

Explain how to find the volumes of cylinders, cones, and spheres	Use formulas to find volumes of solids
Find missing dimensions of solids	Find surface areas and volumes of similar solids



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## 8th Grade Math Curriculum Map 2023-2024

### Chapter 9 Vocabulary

Cone	Sphere	Hemisphere	Similar Solids
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### Lessons:

9.1	Volumes of Cylinders	★ How do you find the volume of a cylinder?
9.2	Volumes of Cones	★ How do you find the volume of a cone?
9.3	Volumes of Spheres	★ How do you find the volume of a sphere?
	Connecting Concepts	
	Chapter Review & Test	
	Cumulative Practice	





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