Louisiana Guide to Implementing Ready Classroom
Grade 8

To assist teachers with the implementation of the Ready Classroom curriculum for Grade 8, this document provides multiple layers of guidance regarding how Ready Classroom lessons correlate with the Louisiana Student Standards for Mathematics (LSSM). Ready Classroom is a focused, coherent math curriculum that provides ample instructional guidance for teachers. This Louisiana Guide to Implementing Ready Classroom goes a step further to point out places in which teachers may need to make strategic decisions considering student needs and time availability by offering a suggested pacing calendar, highlighting the prerequisite standards and grade level standards by unit, detailing standards by lesson, and showcasing the alignment to the Louisiana Student Standards for Mathematics.

The guidance document is considered a “living” document. We believe that educators will find ways to make improvements to the guidance document as they use it. Please send feedback to STEM@la.gov.

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Grade 8 Suggested Implementation Calendar

Grade 8	Unit	Approximate Number of Days	Number of Lessons
Weeks 1-4	Unit 1: Geometric Figures: Rigid Transformation and Congruence	20 Days	3 Lessons
Weeks 5-8	Unit 2: Geometric Figures: Transformations, Similarity, and Angle Relationships	18 Days	4 Lessons
Weeks 9-13	Unit 3: Linear Relationships: Slope, Linear Equations, and Systems	32 Days	7 Lessons
Weeks 14-17	Unit 4: Functions: Linear and Non-Linear Relationships	19 Days	4 Lessons
Weeks 18-21	Unit 5: Integer Exponents: Properties and Scientific Notation	20 Days	4 Lessons
Weeks 22-26	Unit 6: Real Numbers: Rational Numbers, Irrational Numbers, and the Pythagorean Theorem	26 Days	6 Lessons
Weeks 27-30	Unit 7: Statistics: Two-Variable Data and Fitting a Linear Model	19 Days	4 Lessons

Alignment to Louisiana Student Standards for Mathematics

Focus in the Standards

Not all content at given grades is emphasized equally in the standards. Some clusters require greater emphasis than others based on the depth of ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. More time in these areas is also necessary for students to meet the Louisiana Standards for Mathematical Practices. To say that some things have greater emphasis is not to say that anything in the standards can safely be neglected in instruction. Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade. Students should spend the large majority of their time on the major work on the grade (■). Supporting work(□) and, where appropriate, additional work (○) can engage students in the major work of the grade.

Grade 8: Standards by Unit						
Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**
8.G.A.1 8.G.A.1a 8.G.A.1b 8.G.A.1c 8.G.A.3 8.G.A.2 8.G.A.3	8.G.A.3 8.G.A.4 8.G.A.5	8.EE.B.5 8.EE.B.6 8.EE.B.7 8.EE.B.7a-b 8.EE.B.7a-c	8.EE.B.5 8.F.A.1 8.F.A.2 8.F.A.3 8.F.B.4 8.F.B.5	8.EE.A.1 8.EE.A.3 8.EE.A.4	8.EE.A.2 8.EE.A.2 8.G.B.6 8.G.B.7 8.G.B.8 8.G.C.9 8.NS.A.1 8.NS.A.2	8.SP.A.1 8.SP.A.2 8.SP.A.3 8.SP.A.4

Standards by Lesson

Grade 8: Standards by Lesson	
Unit 1 Lessons	**Standards**
1	8.G.A.1, 8.G.A.1a, 8.G.A.1b, 8.G.A.1c
2	8.G.A.3
3	8.G.A.2, 8.G.A.3
Unit 2 Lessons	**Standards**
4	8.G.A.4
5	8.G.A.3, 8.G.A.4
6	8.G.A.5
7	8.G.A.5
Unit 3 Lessons	**Standards**
8	8.EE.B.5, 8.EE.B.6
9	8.EE.B.6
10	8.EE.C.7, 8.EE.C.7b
11	8.EE.C.7, 8.EE.C.7a
12	8.EE.C.8, 8.EE.C.8a, 8.EE.C.8b
13	8.EE.C.8, 8.EE.C.8b
14	8.EE.C.8, 8.EE.C.8c
Unit 4 Lessons	**Standards**
15	8.F.A.1, 8.F.A.3
16	8.F.B.4
17	8.EE.B.5, 8.F.A.2
18	8.F.B.5
Unit 5 Lessons	**Standards**
19	8.EE.A.1
20	8.EE.A.1
21	8.EE.A.3
22	8.EE.A.4
Unit 6 Lessons	**Standards**
23	8.EE.A.2
24	8.NS.A.1
25	8.EE.A.2, 8.NS.A.1, 8.NS.A.1
26	8.G.B.6
27	8.G.B.7, 8.G.B.8
28	8.G.C.9
Unit 7 Lessons	**Standards**
29	8.SP.A.1, 8.SP.A.2
30	8.SP.A.3
31	8.SP.A.4
32	8.SP.A.2

Louisiana Alignment		
Standard Code	Standard Language	Aligned Lessons
8.NS.A.1	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually. Convert a decimal expansion which repeats eventually into a rational number by analyzing repeating patterns.	Unit 6: Lessons 24, 25
8.NS.A.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). *For example, by truncating the decimal expansion of, show that is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations to the hundredths place*.	Unit 6: Lesson 25
8.EE.A.1	Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.	Unit 5: Lesson 19
8.EE.A.2	Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that is irrational.	Unit 5: Lesson 20 Unit 6: Lessons 23, 25
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*.	Unit 5: Lesson 21
8.EE.A.4	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	Unit 5: Lesson 22

8.EE.B.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*	Unit 3: Lesson 8 Unit 4: Lesson 17
8.EE.B.6	Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b.	Unit 3: Lessons 8, 9
8.EE.C.7	Solve linear equations in one variable.	Unit 3: Lessons 10, 11
8.EE.C.7a	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).	Unit 3: Lesson 11
8.EE.C.7b	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	Unit 3: Lesson 10
8.EE.C.8	Analyze and solve pairs of simultaneous linear equations.	Unit 3: Lessons 12, 13, 14
8.EE.C.8a	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.	Unit 3: Lesson 12
8.EE.C.8b	Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6*.	Unit 3: Lessons 12, 13
8.EE.C.8c	Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair*.	Unit 3: Lesson 14

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 this grade level.)	Unit 4: Lesson 15
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 a linear function represented by an algebraic expression, determine which function has the greater rate of change*.	Unit 4: Lesson 17
8.F.A.3	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; categorize functions as linear or nonlinear when given equations, graphs, or tables. *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*.	Unit 4: Lesson 15
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.	Unit 4: Lesson 16
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.	Unit 4: Lessons 17, 18
8.G.A.1	Verify experimentally the properties of rotations, reflections, and translations:	Unit 1: Lesson 1
8.G.A.1a	Lines are taken to lines, and line segments to line segments of the same length.	Unit 1: Lesson 1
8.G.A.1b	Angles are taken to angles of the same measure.	Unit 1: Lesson 1
8.G.A.1c	Parallel lines are taken to parallel lines.	Unit 1: Lesson 1

8.G.A.2	Explain that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. (Rotations are only about the origin and reflections are only over the *y*-axis and *x*-axis in Grade 8.)	Unit 1: Lesson 3
8.G.A.3	Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates. (Rotations are only about the origin, dilations only use the origin as the center of dilation, and reflections are only over the *y*-axis and *x*-axis in Grade 8.)	Unit 1: Lessons 2, 3 Unit 2: Lesson 5
8.G.A.4	Explain that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. (Rotations are only about the origin, dilations only use the origin as the center of dilation, and reflections are only over the *y*-axis and *x*-axis in Grade 8.)	Unit 2: Lesson 4, 5
8.G.A.5	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so*.	Unit 2: Lessons 6, 7
8.G.B.6	Explain a proof of the Pythagorean Theorem and its converse using the area of squares.	Unit 6: Lesson 26
8.G.B.7	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	Unit 6: Lesson 27
8.G.B.8	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	Unit 6: Lesson 27
8.G.C.9	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Unit 6: Lesson 28

8.SP.A.1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	Unit 7: Lesson 29
8.SP.A.2	Know that straight lines are widely used to model 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.	Unit 7: Lesson 29
8.SP.A.3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *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*.	Unit 7: Lesson 30
8.SP.A.4	Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*	Unit 7: Lessons 31, 32

i-Ready Classroom Mathematics

Core Support for Louisiana Acceleration

START A week or so before teaching a lesson, identify the prerequisite lessons using the Lesson Pacing Guide in the Teacher's Guide. In the Teacher Toolbox, go to the grade and lesson identified. Continue with *Diagnose*.

Use these prerequisites from the Lesson Pacing Guide at the beginning of the lesson in the Teacher Resource

PREPARE

Ready Prerequisite Lessons

Grade 3

- Lesson 8 Use Order and Grouping to Multiply
- Lesson 9 Use Place Value to Multiply
- Lesson 12 Multiplication and Division Facts

DIAGNOSE

1. Go to the prerequisite grade and lessons in the Toolbox. Open the Teacher's Guide and go to the REFINE session.
2. Have students complete the Start question from the LAST REFINE session for all prerequisite lessons.

Start

The rectangular front lawn of a house is 10 meters long and 4 meters wide.

What is the area of the lawn?

PLAN

Use any relevant data to identify unfinished learning students may have and plan tutoring sessions (extra support time) for groups of 1–3 students with common needs.

1. **Needs In-Depth Support:** These students need to start with teacher-led instruction.

   Use Teacher-led Resources

2. **Needs Some Support:** These students should work with a partner first.

   Use Partner Resources

3. **Needs Minimal Support:** These students can work on their own.

   Use Independent Resources

DELIVER

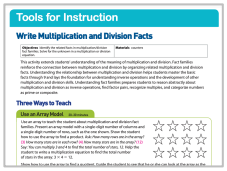
Additional resources may be assigned if students need additional support or practice with prerequisites.

Teacher-led Resources (Toolbox)

- Tools for Instruction

Additional

- Center Activities
- Fluency and Skills Practice (Develop)

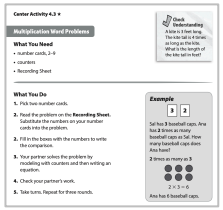


Partner Resources (Toolbox)

- Center Activities

Additional

- Interactive Practice
- Fluency and Skills Practice (Develop)

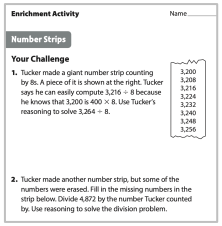


Independent Resources (Toolbox)

- Enrichment Activities

Additional

- Fluency and Skills Practice (Develop)
- Center Activities (Above level)



MONITOR

To assess student understanding of prerequisites, have students complete these questions and show their work:

- Use the CLOSE: EXIT TICKET for the LAST REFINE session.

Close: Exit Ticket

Show how you can make a ten to find 8 + 6.

- If students need reteaching or reinforcement, assign digital Interactive Practice or Learning Games.

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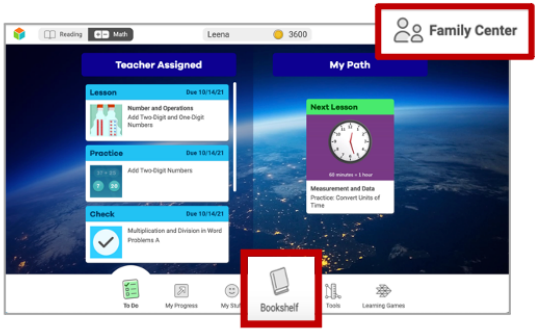
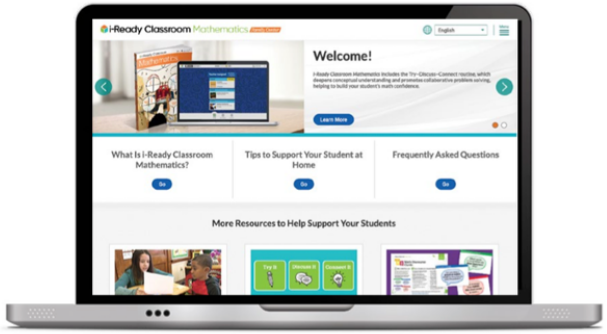
Ready Classroom Mathematics Family Resources

1. Families go to the Student Dashboard to access resources.
   - Families can access the **Family Center** in the top right corner of the dashboard. This provides general program support.
   - Families can access lesson videos in **My Videos** and the lesson-specific **Family Resources** by clicking on the Bookshelf icon in the bottom channel and then clicking on the image of the book.



2. The **Family Center** is in the top right corner of the student dashboard. It provides resources that introduces the *i-Ready Classroom Mathematics* program, provides tips to support students at home, answers common questions, and more.



3. After families select the Bookshelf icon and click on the picture of the book, there are two tabs at the top: **My Videos** and **Family Resources**.

My Videos Tab

My Videos

Access videos of virtual instruction if students miss class, need support, or families want to see explanations.

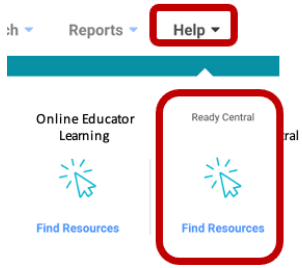
Family Resources Tab

Unit Flow & Progression Videos

Watch the videos for a visual overview of the mathematics strategies used throughout each unit.

Family Letters

Learn about the mathematics of each lesson as well as activities to do at home with students. Available in several languages.

Educator Resources in Support of Families

Go to the Help section of the Teacher Dashboard to access Success Central. Search for "families" to find additional materials you can share with families.