

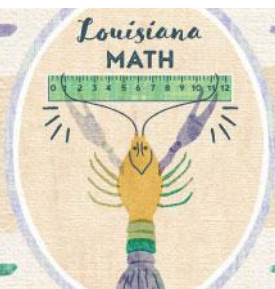
Fluency Resource Guidance

Purpose

Students fluent in grade-level mathematics can compute accurately, efficiently, and flexibly using appropriate strategies chosen from a bank of approaches when engaging with various operations. Fluency develops along a concrete to representational to abstract progression. Early learners use manipulatives to build understanding, progress to visual representations, and eventually move into abstractions as they develop automaticity. Students continuously move through the concrete-representational-abstract (CRA) progression while developing skills with more complex numbers. Movement through the progression is not always linear. Concrete and representational strategies become part of the tools students reference and use when challenged. Students build comfort in choosing a strategy by building confidence with multiple approaches.

All public school teachers in grades kindergarten through eight in the state of Louisiana received resources to use to support fluency in classrooms as a part of our Louisiana Math Refresh. The resources are listed in the chart below.

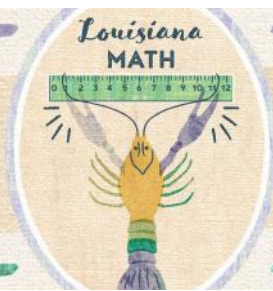
Grade(s)	Resource
Kindergarten	Ten Frame Hands on Student Pack
Grade 1	Mastering Addition Dominoes
Grade 2	Place Value Hands On Student Pack
Grade 3	Area & Perimeter Hands on Student Pack
Grade 4	Area & Perimeter Hands on Student Pack
Grade 5	Multiplying Fractions Hands on Student Pack
K-Grade 5	Lakeshore Double Dice
Grade 6	Multiplying Fractions Hands on Student Pack
Grade 7	Write & Wipe Graphing Boards with X-Y Axis -Set of 30
Grade 8	Integer Playing Cards - 12 Decks



Fluency Across the Grades

Students develop fluency as they build an understanding of the standards. As educators monitor and support students as fluent math learners, it is important to focus on the appropriate expectations at each grade level. The table below lists the topics at each grade where fluency is expected.

K	1	2	3	4	5	6	7	8
Counting								
Count to 100 by tens and ones Count to answer "how many?"	Given a two digit number, mentally find 10 more or 10 less than the number	Count within 100, skip count by 5s, 10s, and 100s Read and write numbers to 1000 Mentally add 10 or 100 to a given number 100-900 Measure to determine how much longer one object is than another						
Add and subtract within 20								
add and subtract within 5 compare numbers between 1 and 10 write numbers 0 to 20	Understand the meaning of the equal sign Determine unknown number in an addition or subtraction equation	Add and subtract within 20 using mental strategies						
			Add, subtract, multiply, and divide					
		Add and subtract within 100 using strategies	Multiply and divide within 100 Add and subtract within 1000	Add and subtract multi-digit whole numbers with sums less than or equal to 1,000,000	Multiply multi-digit whole numbers using the standard algorithm	Add, subtract, multiply, and divide multi-digit decimals using the standard algorithm		
						Fractions and Decimals		
					Interpret and compute quotients of fractions Solve real world problems involving division of fractions by fractions	Solve multi-step problems with rational numbers in any form Add, subtract, multiply, and divide rational numbers		
						Equations		
						Solve equations:	Solve linear equations Solve problems involving cones, cylinders, and spheres	



Fluency Resource Guidance Documents by Grade

The chart below contains all of the fluency resources that were sent out to Louisiana teachers along with a guidance document for each resource. Each guidance document has grade level appropriate fluency activities that use the fluency resources sent out to that grade level.

Grade Level	Resource	Guidance Document
Kindergarten	Lakeshore Double Dice	Link
Kindergarten	Ten Frame Hands on Student Pack	Link
Grade 1	Lakeshore Double Dice	Link
Grade 1	Mastering Addition Dominoes	Link
Grade 2	Lakeshore Double Dice	Link
Grade 2	Place Value Hands On Student Pack	Link
Grade 3	Lakeshore Double Dice	Link
Grade 3	Area & Perimeter Hands on Student Pack	Link
Grade 4	Lakeshore Double Dice	Link
Grade 4	Area & Perimeter Hands on Student Pack	Link
Grade 5	Lakeshore Double Dice	Link
Grade 5	Multiplying Fractions Hands on Student Pack	Link
Grade 6	Multiplying Fractions Hands on Student Pack	Link
Grade 7	Write & Wipe Graphing Boards with X-Y Axis -Set of 30	Link
Grade 8	Integer Playing Cards - 12 Decks	Link

See the [Foundational Lessons for Accelerating Math Education \(FLAME\)](#) for additional fluency support for your students.