Louisiana Guide to Implementing Illustrative Mathematics
Grade 7

To assist teachers with the implementation of the Illustrative Mathematics curriculum for Grade 7, this document provides multiple layers of guidance regarding how Illustrative Mathematics lessons correlate with the Louisiana Student Standards for Mathematics (LSSM). Illustrative Mathematics is a focused, coherent math curriculum that provides ample instructional guidance for teachers. This Louisiana Guide to Implementing Illustrative Mathematics 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 7 Suggested Implementation Calendar

Grade 7	Unit	Approximate Number of Days	Number of Lessons
Weeks 1-3	Unit 1: Scale Drawings	15-16 Days	13 Lessons
Weeks 4-7	Unit 2: Introducing Proportional Relationships	17-18 Days	15 Lessons
Weeks 8-10	Unit 3: Measuring Circles	13-14 Days	11 Lessons
Weeks 11-14	Unit 4: Proportional Relationships and Percentages	18-19 Days	16 Lessons
Weeks 15-18	Unit 5: Rational Number Arithmetic	19-20 Days	17 Lessons
Weeks 19-23	Unit 6: Expressions, Equations, and Inequalities	26-27 Days	22 Lessons
Weeks 24-27	Unit 7: Angles, Triangles, and Prisms	18 Days	17 Lessons
Weeks 28-32	Unit 8: Probability and Sampling	24-25 Days	22 Lessons
Weeks 33-35	Unit 9: Putting It All Together *(Optional Unit)*	0-13 Days	13 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 7: Standards by Unit								
Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**	**Unit 7**	**Unit 8**	**Unit 9**
7.G.A.1	7.RP.A	7.RP.A.2	7.RP.A.1	7.NS.A	7.EE.A.1	7.EE.A	7.RP.A	7.EE.A.1
7.G.B.6	7.RP.A.1	7.RP.A.2.a	7.RP.A.2	7.NS.A.1	7.EE.A.2	7.EE.B.4	7.NS.A.2.d	7.EE.B
	7.RP.A.2	7.RP.A.2.c	7.RP.A.3	7.NS.A.1.a	7.EE.B.3	7.NS.A.1	7.SP.B	7.EE.B.4
	7.RP.A.2.a	7.RP.A.3	7.NS.A.2.d	7.NS.A.1.b	7.EE.B.4	7.RP.A	7.SP.B.3	7.EE.B.4.a
	7.RP.A.2.b	7.EE.B.3		7.NS.A.1.c	7.EE.B.4.a	7.G.A	7.SP.B.4	7.NS.A.2.d
	7.RP.A.2.c	7.G.A		7.NS.A.1.d	7.EE.B.4.b	7.G.A.2	7.SP.A	7.NS.A.3
	7.RP.A.2.d	7.G.A.1		7.NS.A.2	7.NS.A.1	7.G.A.3	7.SP.A.1	7.RP.A
	7.G.A.1	7.G.A.2		7.NS.A.2.a	7.NS.A.1.c	7.G.B	7.SP.A.2	7.RP.A.1
	7.G.B.6	7.G.B		7.NS.A.2.b		7.G.B.5	7.SP.C	7.RP.A.2
		7.G.B.4		7.NS.A.2.c		7.G.B.6	7.SP.C.5	7.RP.A.3
		7.G.B.6		7.NS.A.2.d			7.SP.C.6	7.G.A
				7.NS.A.3			7.SP.C.7	7.G.A.1
				7.RP.A			7.SP.C.7.a	7.G.B
				7.RP.A.2			7.SP.C.7.b	7.G.B.4
				7.EE.B.3			7.SP.C.8.a	7.G.B.6
				7.EE.B.4			7.SP.C.8.b	7.SP.B.4
				7.EE.B.4.a			7.SP.C.8.c	

Prerequisite Standards: ■ 3.NF.A.3 ■ 5.NBT.A.3 ■ 5.NBT.B.6 ■ 5.NBT.B.7 ■ 5.NF.B.4 ■ 5.NF.B.5 ■ 6.NS.A.1 ■ 6.NS.B.2 ■ 6.NS.B.3 ■ 6.RP.A.3.b ■ 6.RP.A.3.d ○ 6.G.A.1 □ 2.MD.A	Prerequisite Standards: ■ 4.OA.C.5 ■ 5.NBT.B.7 ■ 5.NF.B ■ 5.OA.B ■ 6.NS.C.8 ■ 6.RP.A ■ 6.RP.A.2 ■ 6.RP.A.3 ■ 6.EE.A.2 ○ 5.G.A □ 5.MD.A.1	Prerequisite Standards: ■ 5.OA.A ■ 6.RP.A.3.c □ 2.MD.A □ 6.SP.B.5.c	Prerequisite Standards: ■ 5.NBT.B.7 ■ 5.NF.B ■ 6.NS.A.1 ■ 6.RP.A ■ 6.RP.A.3 ■ 6.RP.A.3c ■ 6.EE.A.2.b ■ 6.EE.A.3 ■ 7.RP.A.1 ○ 7.G.A.1 □ 2.MD.A.2	Prerequisite Standards: ■ 6.NS.C ■ 6.RP.A.3.b ■ 6.EE.A.2.b ■ 6.EE.B ■ 6.EE.B.5 ■ 6.EE.B.7 ■ 7.NS.A ■ 7.NS.A.1	Prerequisite Standards: ■ 6.EE.A.2.c ■ 6.EE.A.4 ■ 6.EE.A.5 ■ 6.EE.B.5 ■ 7.NS.A ■ 7.NS.A.1.c ■ 7.RP.A.2 ■ 7.RP.A.2.a ■ 7.EE.A.1 ■ 7.EE.B	Prerequisite Standards: ■ 7.EE.B.4 ○ 6.G.A.4 □ 3.MD.C.5 □ 3.MD.D.8 □ 4.MD.C □ 4.MD.C.6 □ 4.MD.C.7	Prerequisite Standards: ■ 5.NBT.A.2 ■ 5.NBT.A.3 ■ 5.OA.A.1 ■ 6.EE.A.2.b ■ 7.NS.A.2.d □ 6.SP.B.5.c □ 6.SP.B.5.d □ 6.SP.A.3 □ 6.SP.B.4 □ 6.SP.B.5.c	Prerequisite Standards: ■ 7.RP.A.2 ■ 7.RP.A.3 ○ 7.G.B.4 □ 2.MD.A.1 □ 4.MD.A.2

Standards by Lesson

Grade 7: Standards by Lesson	
Unit 1 Lessons	**Standards**
1	7.G.A.1
2	7.RP.A.2, 7.G.A.1
3	7.RP.A.2, 7.G.A.1
4	7.G.A.1
5	7.RP.A.2, 7.G.A.1
6	7.RP.A.2.a, 7.G.A.1, 7.G.B.4, 7.G.B.6
7	7.G.A.1
8	7.RP.A, 7.RP.A.2.b 7.G.A.1
9	7.G.A.1
10	7.RP.A, 7.RP.A.3 7.G.A.1, 7.G.B.6
11	7.G.A.1
12	7.G.A.1
13	7.G.A.1
Unit 2 Lessons	**Standards**
1	7.G.A.1, 7.RP.A
2	7.RP.A.2, 7.RP.A.2.a, 7.RP.A.2.b
3	7.RP.A.2, 7.RP.A.2.a, 7.RP.A.2.b
4	7.RP.A.2, 7.RP.A.2.c
5	7.RP.A, 7.RP.A.2, 7.RP.A.2.b, 7.RP.A.2.c
6	7.RP.A.2, 7.RP.A.2.c
7	7.RP.A.1, 7.RP.A.2
8	7.RP.A.1, 7.RP.A.2 7.G.B.6
9	7.RP.A, 7.RP.A.2
10	7.RP.A.2, 7.RP.A.2.a
11	7.RP.A, 7.RP.A.2, 7.RP.A.2.d
12	7.RP.A.1, 7.RP.A.2
13	7.EE.A, 7.RP.A.2
14	7.RP.A, 7.RP.A.2
15	7.RP.A.2
Unit 3 Lessons	**Standards**
1	7.RP.A.2.a, 7.RP.A.3 7.G.B.4
2	7.G.A, 7.G.A.2, 7.G.B.4
3	7.RP.A.2, 7.RP.A.2.a 7.G.B.4
4	7.G.B.4
5	7.RP.A.2.a, 7.RP.A.2.c, 7.RP.A.3 7.G.B.4
6	7.G.A.1, 7.G.B, 7.G.B.6

7	■7.RP.A.2.a, ○7.G.A, ○7.G.B, ○7.G.B.4
8	○7.G.B.4
9	○7.G.B.4
10	○7.G.B.4
11	■7.EE.B.3, ○7.G.A.1, ○7.G.B.4
Unit 4 Lessons	**Standards**
1	■ 7.RP.A, ■7.RP.A.1, ■7.RP.A.2.a
2	■7.RP.A, ■7.RP.A.1
3	■7.RP.A.1, ■7.RP.A.2
4	■7.EE.A.1, ■7.RP.A.2, ■7.RP.A.3
5	■7.NS.A.2.d, ■7.RP.A.2, ■7.RP.A.3
6	■7.RP.A.3
7	■7.RP.A.3

8	■7.RP.A.3
9	■7.RP.A.3
10	■7.RP.A.3
11	■7.RP.A.3
12	■7.RP.A.3
13	■7.RP.A.3
14	■7.RP.A.3
15	■7.RP.A.3
16	■7.RP.A.3
Unit 5 Lessons	**Standards**
1	■ 7.NS.A.1, ■7.NS.A.1.b, ■7.NS.A.1.c, ■7.NS.A.2.d
2	■7.NS.A.1, ■7.NS.A.1.a, ■7.NS.A.1.b
3	■7.NS.A.1.a, ■7.NS.A.1.b, ■7.NS.A.1.c, ■7.NS.A.1.d
4	■7.NS.A.1

5	■7.NS.A.1, ■7.NS.A.1.c
6	■7.NS.A.1, ■7.NS.A.1.c
7	■7.EE.B.4, ■7.NS.A.1.c, ■7.NS.A.3
8	■7.NS.A.2.a, ■7.RP.A
9	■7.NS.A.2, ■7.NS.A.2.a, ■ 7.NS.A.2.c, ■7.RP.A.2
10	■7.EE.B, ■7.NS.A.2.c
11	■7.EE.B.4.a, ■7.NS.A.2, ■7.NS.A.2.b
12	■7.EE.B.3, ■7.NS.A.3, ■7.RP.A.2
13	■7.NS.A, ■7.NS.A.3
14	■7.EE.B.4.a, ■7.NS.A.3, ■7.RP.A.2
15	■7.EE.B, ■7.EE.B.4, ■7.EE.B.4.a, ■7.NS.A.3
16	■7.EE.B.4.a, ■7.NS.A.3
17	■7.EE.B.3, ■7.NS.A.3

Unit 6 Lessons	Standards
1	7.EE.B, 7.EE.B.4, 7.EE.B.4.a
2	7.EE.B.3, 7.EE.B.4
3	7.EE.B.3, 7.EE.B.4
4	7.EE.B.3, 7.EE.B.4.a
5	7.EE.B.3, 7.EE.B.4, 7.EE.B.4.a
6	7.EE.B.3, 7.EE.B.4.a
7	7.EE.B.4.a
8	7.EE.B.4.a
9	7.EE.B.4, 7.EE.B.4.a
10	7.EE.B.4.a
11	7.EE.B.3, 7.EE.B.4, 7.EE.B.4.a
12	7.EE.A.2, 7.EE.B.3, 7.EE.B.4, 7.EE.B.4.a
13	7.EE.B.4, 7.EE.B.4.b
14	7.EE.B.4.b
15	7.EE.B.4, 7.EE.B.4.b
16	7.EE.B.4.b
17	7.EE.B.4.b
18	7.EE.A.1, 7.NS.A.1, 7.NS.A.1.c
19	7.EE.A.1
20	7.EE.A.1
21	7.EE.A.1
22	7.EE.A.1

Unit 7 Lessons	Standards
1	7.G.A, 7.G.B, 7.G.B.5
2	7.G.B, 7.G.B.5
3	7.EE.A, 7.G.B.5
4	7.G.A, 7.G.B, 7.G.B.5
5	7.EE.B.4, 7.G.B.5
6	7.NS.A.1, 7.G.A.2
7	7.G.A.2
8	7.G.A.2
9	7.G.A, 7.G.A.2
10	7.G.A.2
11	7.G.A.3, 7.G.B.6
12	7.G.B.6
13	7.G.A.3, 7.G.B.6
14	7.G.B.6
15	7.G.B, 7.G.B.6
16	7.RP.A, 7.G.B, 7.G.B.6
17	7.G.A.2, 7.G.B.6

Unit 8 Lessons	Standards
1	7.SP.C.6
2	7.SP.C.5

3	7.SP.C.5, 7.SP.C.6, 7.SP.C.7, 7.SP.C.7.a
4	7.RP.A 7.SP.C.5, 7.SP.C.6, 7.SP.C.7, 7.SP.C.7.b
5	7.SP.C.5, 7.SP.C.6, 7.SP.C.7, 7.SP.C.7.b
6	7.SP.C, 7.SP.C.5, 7.SP.C.6, 7.SP.C.7.b, 7.SP.C.8.c
7	7.RP.A 7.SP.C.8.c
8	7.SP.C.8.b
9	7.SP.C.8.a, 7.SP.C.8.b
10	7.SP.C.8.c
11	7.SP.B, 7.SP.B.3
12	7.SP.A.1, 7.SP.B
13	7.SP.A, 7.SP.A.1, 7.SP.A.2
14	7.SP.A.1, 7.SP.A.2,

	7.SP.C.7
15	7.SP.A.1, 7.SP.A.2, 7.SP.B.4
16	7.NS.A.2.d, 7.RP.A 7.SP.A, 7.SP.A.1, 7.SP.A.2, 7.SP.B.4
17	7.SP.A, 7.SP.A.2
18	7.SP.B, 7.SP.B.3, 7.SP.B.4
19	7.SP.B.4
20	7.RP.A 7.SP.A, 7.SP.A.1, 7.SP.A.2, 7.SP.B.4, 7.SP.C.7.a

Unit 9 Lessons	Standards
1	7.RP.A.3
2	7.RP.A.3
3	7.EE.B.4, 7.NS.A.3, 7.RP.A.2, 7.RP.A.3,

	7.SP.B.4
4	7.NS.A.2.d, 7.RP.A.3 7.G.A.1, 7.G.B.4, 7.G.B.6
5	7.RP.A.1, 7.RP.A.2 7.G.B.6,
6	7.NS.A.3, 7.RP.A, 7.RP.A.3 7.G.B
7	7.EE.A.1, 7.EE.B.4.a
8	7.EE.B, 7.RP.A.3
9	7.G.B.6
10	7.RP.A
11	7.RP.A 7.G.B.4
12	7.RP.A 7.G.B.4
13	7.RP.A, 7.RP.A.3 7.G.A.1

Louisiana Alignment		
Standard Code	Standard Language	Aligned Lessons
7.RP.A.1	Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks ½ mile in each ¼ hour, compute the unit rate as the complex fraction ½/¼ miles per hour, equivalently 2 miles per hour.*	Unit 2: Lesson 8, Unit 2: Lessons 2, 3 Unit 2: Lesson 5
7.RP.A.2	Recognize and represent proportional relationships between quantities.	Unit 2: Lessons 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 Unit 3: Lesson 3 Unit 4: Lessons 3, 4, 5 Unit 5: Lessons 9, 12, 14 Unit 9: Lessons 3, 5
7.RP.A.2a	Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin	Unit 2: Lessons 2, 3, 10 Unit 3: Lessons 1, 3, 5, 7
7.RP.A.2b	Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin	Unit 2: Lessons 2, 3, 5
7.RP.A.2c	Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.	Unit 2: Lessons 4, 5, 6 Unit 3: Lesson 5
7.RP.A.2d	Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn	Unit 2: Lesson 11

7.RP.A.3	Use proportional relationships to solve multi-step ratio and percent problems of simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, and percent error.	Unit 3: Lesson 5 Unit 4: Lessons 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 Unit 9: Lessons 1, 2, 3, 4, 6, 8, 13
7.NS.A.1	Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Unit 5: Lessons 1, 4, 6 Unit 6: Lesson 18 Unit 7: Lesson 6
7.NS.A.1a	Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.	Unit 5: Lessons 2, 3
7.NS.A.1b	Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.	Unit 5: Lessons 1, 2, 3
7.NS.A.1c	Understand subtraction of rational numbers as adding the additive inverse, p – q = p + (– q). Show that the distance between two rational numbers on the number line is the absolute value of their difference and apply this principle in real world contexts	Unit 5: Lessons 1, 3, 5, 6, 7 Unit 6: Lesson 18
7.NS.A.1d	Apply properties of operations as strategies to add and subtract rational numbers.	Unit 5: Lesson 3
7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	Unit 5: Lessons 9, 11
7.NS.A.2a	Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.	Unit 5: Lessons 8, 9

7.NS.A.2b	Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with nonzero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real-world contexts.	Unit 5: Lesson 11
7.NS.A.2c	Apply properties of operations as strategies to multiply and divide rational numbers.	Unit 5: Lessons 9, 10
7.NS.A.2d	Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.	Unit 4: Lesson 5 Unit 5: Lesson 1 Unit 8: Lesson 16 Unit 9: Lesson 4
7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers.	Unit 5: Lessons 7, 12, 13, 14, 15, 16, 17 Unit 9: Lessons 3, 6
7.EE.A.1	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	Unit 7: Lesson 3
7.EE.A.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients to include multiple grouping symbols (e.g., parentheses, brackets, and braces).	Unit 6: Lessons 18, 19, 20, 21, 22 Unit 9: Lesson 7
7.EE.A.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, a + 0.05a = 1.05a means that “increase by 5%” is the same as “multiply by 1.05.”	Unit 6: Lesson 12

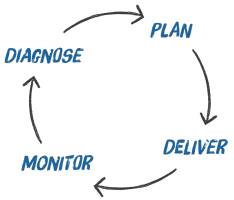
7.EE.B.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.*	Unit 3: Lesson 11 Unit 5: Lessons 12, 17 Unit 6: Lessons 2, 3, 4, 5, 6, 11, 12
7.EE.B.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Unit 5: Lesson 15 Unit 6: Lessons 5, 9, 11, 12, 13, 15 Unit 7: Lesson 5 Unit 9: Lesson 3
7.EE.4.a	Solve word problems leading to equations of the form $px+q=r$ and $p(x+q)=r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*	Unit 5: Lessons 15, 16 Unit 6: Lessons 4, 5, 7, 8, 9, 10, 11, 12 Unit 9: Lesson 7
7.EE.4.b	Solve word problems leading to inequalities of the form $px+q>r$, $px + q \geq r$, $px + q < r$, or $px + q \leq r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.	Unit 6: Lessons 14, 16, 17
7.G.A	Draw, construct, and describe geometrical figures and describe the relationships between them.	Unit 3: Lessons 2, 7 Unit 7: Lessons 1, 4, 9

7.G.A.1	Solve problems involving scale drawings of geometric figures, such as computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Unit 1: Lessons 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 Unit 2: Lesson 1 Unit 3: Lessons 6, 11 Unit 9: Lessons 4, 13
7.G.A.2	Draw (freehand, with ruler and protractor, or with technology) geometric shapes with given conditions. (Focus is on triangles from three measures of angles or sides, noticing when the conditions determine one and only one triangle, more than one triangle, or no triangle.).	Unit 3: Lessons 2, 7 Unit 7: Lessons 7, 8, 9, 10, 17
7.G.A.3	Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.	Unit 7: Lessons 11, 13
7.G.B	Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	Unit 3: Lessons 6, 7 Unit 7: Lessons 1, 2, 4, 15, 16 Unit 9: Lesson 6
7.G.B.4	Know the formulas for the area and circumference of a circle and solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Unit 3: Lessons 3, 4, 5, 7, 8, 9, 10, 11 Unit 9: Lessons 4, 11, 12
7.G.B.5	Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.	Unit 7: Lessons 2, 3, 4, 5
7.G.B.6	Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms. (Pyramids limited to surface area only.)	Unit 1: Lesson 6 Unit 2: Lesson 8 Unit 3: Lesson 6 Unit 7: Lessons 12, 13, 14, 15, 16, 17 Unit 9: Lessons 4, 5, 9

7.SP.A	Use random sampling to draw inferences about a population.	Unit 8: Lessons 13, 16, 17, 20
7.SP.A.1	Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.	Unit 8: Lessons 12, 13, 14, 15, 20
7.SP.A.2	Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions*. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*	Unit 8: Lessons 13, 14, 15, 16, 17, 20
7.SP.B	Draw informal comparative inferences about two populations.	Unit 8: Lessons 11, 12
7.SP.B.3	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities using quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	Unit 8: Lessons 11, 18
7.SP.B.4	Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.	Unit 8: Lessons 15, 16, 18, 19, 20 Unit 9: Lesson 3
7.SP.C	Investigate chance processes and develop, use, and evaluate probability models.	Unit 8: Lesson 6
7.SP.C.5	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around ½ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.	Unit 8: Lessons 2, 3, 4, 5, 6

7.SP.C.6	Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.	Unit 8: Lessons 1, 3, 4, 5, 6
7.SP.C.7	Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.	Unit 8: Lessons 3, 4, 5, 14
7.SP.C.7a	Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.*	Unit 8: Lessons 3, 20
7.SP.C.7b	Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?*	Unit 8: Lessons 4, 5, 6
7.SP.C.8a	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.	Unit 8: Lesson 9
7.SP.C.8b	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.	Unit 8: Lessons 8, 9
7.SP.C.8c	Design and use a simulation to generate frequencies for compound events. *For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?*	Unit 8: Lessons 6, 7, 10

Acceleration in Mathematics within the context of Illustrative Mathematics

Diagnose	**Check Your Readiness Assessments and Teacher Guides** • assess prerequisite standards; • provide guidance to support planning for learning acceleration; • offer varied problem types; and • are available in two versions of each pre-unit assessment. 
Plan	**Check Your Readiness** gives cues as to when the prerequisite knowledge will be needed. **Adaptation Packs** provide guidance on whole-group acceleration supports **Accelerate Math Materials** are designed for small groups and address prerequisite knowledge standards.
Deliver	During the **Deliver** phase, follow through on the plan. Remember that the plan is not a commitment in the strictest sense. Teachers should feel empowered to adjust as you move through the plan and engage in the acceleration cycle at the lesson level and implement just-in-time supports designed for alignment to your high-quality resource.
Monitor	**To Monitor,** use daily student work from tasks embedded in the curriculum and student work from the support session. Use information gained about student understanding to plan next instructional steps. IM provides suggestions in the form of Cool down guidance to assist teachers in interpreting the urgency of students daily unfinished learning. Each Cool-down is classified in one of three ways: ● **More Chances** suggests to the teacher that there is no need to stop and reteach at this point. There are additional lessons and examples *coming next to support the skill* and the standard should not yet be secure in student knowledge. ● **Points to Emphasize** is the label for cool downs that have key details, definitions, or steps that should be noted. If students struggle with these items, the teacher is guided on where in the next couple lessons to *emphasize* the details and support the unfinished learning. ● A **Press Pause** cool down is a stopping point within the unit where the skill should be retaught and supported with additional examples. *Future lessons are dependent* on students being confident in these items.