

## Grade 3: LearnZillion Pacing Guidance & Additional Supports 2017-2018 School Year

In Grade 3, instructional time should focus on four critical areas:

- Developing understanding of multiplication and division and strategies for multiplication and division within 100
- Developing understanding of fractions, especially unit fractions (fractions with numerator 1)
- Developing understanding of the structure of rectangular arrays and of area
- Describing and analyzing two-dimensional shapes.

Eugene School District 4J Elementary math curriculum is comprised of LearnZillion with Number Talks and selected math games integrated. The following document contains pacing and usage guidance for these three components.



**LearnZillion Pacing Guidance:** Use the following to ensure students are given opportunities to master grade-level content standards. The start of the year (☼), suggested unit (U#) launch dates, non-student (NS) contact days, and an additional assessment day per unit are provided. Note that some dates were intentionally left unassigned to account for transition to or from breaks and added flexibility for state testing requirements. In an effort to consider the unique characteristics of each school and classroom, pacing guidance is not meant to be rigid rather informed by standards and data driven. Use information about the major, supporting and additional work for your grade-level and your professional judgement when meeting the needs of students. Reach out to your school's Staff Development Specialist if clarification or support is needed.

**Number Talk Guidance:** Number Talks are an essential instructional routine provided to support development of mental math fluency and strategic number sense. This important routine should be incorporated outside of the 60-minute math block on a regular basis. A variety of Number Talks have been recommended for use at the start of school, fall, winter and spring. Use your professional judgement along with the collaborative efforts of building staff and Staff Development Specialists when meeting the needs of students.

**Game Resource Guidance:** It is critical to note that fluency requires a balance of conceptual understanding and computational procedures. Well-posed and engaging math games afford students excellent opportunities to develop this understanding. These games have been identified in Investigations and other resources and provided by unit to reinforce prior knowledge concepts or enhance the key concepts of a unit. Guidance is provided for when and how to integrate these games, however, use your professional judgement when meeting the needs of students.

# GRADE 3 PACING GUIDE

KEY:

Color by Domain	NF	OA	CC	GEO	NBT	MD
☼ = 1st day of school	U# = Unit launch day	NS = No student day	<span style="color: green;">■</span> Major Work	<span style="color: blue;">□</span> Supporting Work	<span style="color: orange;">●</span> Additional Work	

September				
Mon	Tue	Wed	Thu	Fri
				1
4	5	6 ☼	7	8
11	12	13	14 U1	15
18	19	20	21	22
25	26	27	28	29 U2

October				
Mon	Tue	Wed	Thu	Fri
2	3	4	5	6
9	10	11	12	13 NS
16	17 U3	18	19	20
23	24	25	26	27
30	31			

November				
Mon	Tue	Wed	Thu	Fri
		1	2	3
6	7	8 U4	9	10 NS
13	14	15	16	17
20	21	22	23 NS	24 NS
27	28	29	30	

Total LearnZillion Lessons: 144 + 14 Assessments\*

## Reporting Period 1: LearnZillion Units 1-6

**UNIT 1: Exploring equal groups as a foundation for multiplication and division**  
Lessons: 11 (10+assessment)

■ 3.OA.A.1, ■ 3.OA.A.2, ■ 3.OA.A.3,  
■ 3.OA.C.7

MP1 - Make sense of problems and persevere in solving them  
 MP2 - Reason abstractly and quantitatively  
 MP4 - Model with mathematics

**UNIT 2: Developing conceptual understanding of area**  
Lessons: 11 (10+assessment)

■ 3.MD.C.5, ■ 3.MD.C.5a, ■ 3.MD.C.5b,  
■ 3.MD.C.6, ■ 3.MD.C.7a

MP1 - Make sense of problems and persevere in solving them  
 MP2 - Reason abstractly and quantitatively  
 MP4 - Model with mathematics  
 MP6 - Attend to Precision

**UNIT 3: Developing strategies for addition and subtraction**  
Lessons: 16 (15+assessment)

● 3.NBT.A.1, ● 3.NBT.A.2, ● 3.MD.D.8

MP5 - Use appropriate tools strategically  
 MP7 - Look for and make use of structure  
 MP8 - Look for and express regularity in repeated reasoning

**UNIT 4: Understanding unit fractions**  
Lessons: 11 (10+assessment)

□ 3.G.A.2, ■ 3.NF.A.1

December				
Mon	Tue	Wed	Thu	Fri
				1 U5
4	5	6	7	8
11	12	13	14	15
18 NS	19 NS	20 NS	21 NS	22 NS
25 NS	26 NS	27 NS	28 NS	29 NS

MP3 - Construct viable arguments and critique the reasoning of others  
 MP4 - Model with mathematics  
 MP6 - Attend to Precision

**UNIT 5: Using fractions in measurement and data**  
 Lessons: 11 (10+assessment)  
 3.MD.B.4, 3.NF.A.2  
 MP2 - Reason abstractly and quantitatively  
 MP4 - Model with mathematics  
 MP5 - Use appropriate tools strategically  
 MP6 - Attend to Precision

January				
Mon	Tue	Wed	Thu	Fri
1 NS	2 NS	3	4 U6	5
8	9	10	11	12
15 NS	16	17	18	19
22 U7	23	24	25	26
29	30	31		

**UNIT 6: Solving addition and subtraction problems involving measurement**  
 Lessons: 11 (10+assessment)  
 3.MD.A.1, 3.MD.A.2  
 MP1 - Make sense of problems and persevere in solving them  
 MP4 - Model with mathematics  
 MP5 - Use appropriate tools strategically

**Winter Grade 3 Report Cards Notes:**

**Operations and Algebraic Thinking**

- Represent and solve problems involving multiplication and division.
  - 3.OA.4 (NOT YET TAUGHT)
- Understand properties of multiplication and the relationship between multiplication and division (NOT YET TAUGHT)
- Multiply and divide within 100 (INTRODUCED)
- Solve problems involving the four operations, and identify and explain problems in arithmetic (NOT YET TAUGHT)

**Numbers and Operations in Base Ten**

- Use place value understanding and properties of operations to perform multi-digit arithmetic.
  - 3.NBT.3 (NOT YET TAUGHT)

**Numbers and Operations - Fractions**

- Develop understanding of fractions as numbers
  - 3.NF.3 (NOT YET TAUGHT)

**Measurement and Data**

- Represent and interpret data.
  - 3.MD.3 (NOT YET TAUGHT)
  - 3.MD.4 (INTRODUCED)

**Geometry**

- Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
  - 3.MD.7bcd (NOT YET TAUGHT)
- Reason with shapes and their attributes.
  - 3.G.1 (NOT YET TAUGHT)

## Reporting Period 2: LearnZillion Units 7-14

February				
Mon	Tue	Wed	Thu	Fri
			1	2 NS
5	6	7 U8	8	9
12	13	14	15	16
19 NS	20	21	22	23 U9
26	27	28		

March				
Mon	Tue	Wed	Thu	Fri
			1	2
5	6	7	8	9
12 U10	13	14	15	16
19	20	21	22	23
26 NS	27 NS	28 NS	29 NS	30 NS

April				
Mon	Tue	Wed	Thu	Fri
2 NS	3	4	5 U11	6
9	10	11	12	13
16	17	18	19 U12	20
23	24	25	26	27
30				

### UNIT 7: Understanding the relationship between multiplication and division

Lessons: 11 (10+assessment)

■ 3.OA.A.1, ■ 3.OA.A.2, ■ 3.OA.A.3, ■ 3.OA.B.6

MP1 - Make sense of problems and persevere in solving them

MP7 - Look for and make use of structure

### UNIT 8: Investigating patterns in numbers and operations

Lessons: 11 (10+assessment)

■ 3.NBT.A.3, ■ 3.OA.D.8, ■ 3.OA.D.9, ■ 3.MD.B.3

MP3 - Construct viable arguments and critique the reasoning of others

MP7 - Look for and make use of structure

### UNIT 9: Developing strategies for multiplication and division

Lessons: 11 (10+assessment)

■ 3.OA.B.5, ■ 3.MD.C.7.c, ■ 3.MD.C.Y.d

MP5 - Use appropriate tools strategically

MP7 - Look for and make use of structure

MP8 - Look for and express regularity in repeated reasoning

### UNIT 10: Understanding equivalent fractions

Lessons: 11 (10+assessment)

■ 3.NF.A.3a, ■ 3.NF.A.3b, ■ 3.NF.A.3c

MP4 - Model with mathematics

MP6 - Attend to Precision

### UNIT 11: Comparing fractions

Lessons: 10 (9+assessment)

■ 3.NF.A.3d

MP3 - Construct viable arguments and critique the reasoning of others

MP5 - Use appropriate tools strategically

MP4 - Model with mathematics

MP6 - Attend to Precision

MP8 - Look for and express regularity in repeated reasoning

May				
Mon	Tue	Wed	Thu	Fri
	1	2	3	4 NS
7 U13	8	9	10	11
14	15	16	17	18
21	22 U14	23	24	25
28 NS	29	30	31	

June				
Mon	Tue	Wed	Thu	Fri
				1
4	5	6	7	8 NS
11	12	13	14	15 ☆
18	19	20	21	22
25	26	27	28	29

**UNIT 12: Solving problems involving area**  
 Lessons: 11 (10+assessment)

3.OA.A.3, 3.OA.A.4, 3.OA.B.5,  
 3.MD.C.7b

MP2 - Reason abstractly and quantitatively  
 MP6 - Attend to Precision  
 MP8 - Look for and express regularity in repeated reasoning

**UNIT 13: Solving problems involving shapes**  
 Lessons: 11 (10+assessment)

3.MD.D.8, 3.G.A.1

MP1 - Make sense of problems and persevere in solving them  
 MP3 - Construct viable arguments and critique the reasoning of others  
 MP4 - Model with mathematics  
 MP7 - Look for and make use of structure

**UNIT 14: Using multiplication and division to solve measurement problems**  
 Lessons: 11 (10+assessment)

3.OA.A.3, 3.MD.A.2

MP1 - Make sense of problems and persevere in solving them  
 MP2 - Reason abstractly and quantitatively  
 MP3 - Construct viable arguments and critique the reasoning of others  
 MP4 - Model with mathematics  
 MP5 - Use appropriate tools strategically  
 MP7 - Look for and make use of structure

**\* Supplemental Resources**

**UNIT 15: Demonstrating computational fluency in problem solving (10 lessons)**

3.NBT.A.2, 3.OA.C.7, 3.OA.D.8

MP2 - Reason abstractly and quantitatively  
 MP8 - Look for and express regularity in repeated reasoning

## Developing Math Fluency with Grade 3 Number Talks

Overview: Number Talks supports the development of students' procedural fluency from conceptual understanding. This instructional routine takes about 5-15 minutes. The routine structures classroom conversation around purposefully ordered computation problems that students solve mentally.

Recommended Number Talk Sets
<u>Introduction</u> (Establishing expectations for Number Talks)
<b>Grade 2 - Addition</b> <ul style="list-style-type: none"> <li>● Doubles/Near Doubles</li> <li>● Making Tens</li> </ul>
<u>Fall</u>
<b>Addition</b> <ul style="list-style-type: none"> <li>● Friendly Numbers</li> <li>● Breaking into Place Value</li> <li>● Adding Up in Chunks</li> </ul> <b>Subtraction</b> <ul style="list-style-type: none"> <li>● Adding Up</li> <li>● Removal</li> </ul>
<u>Winter</u>
<b>Addition</b> <ul style="list-style-type: none"> <li>● Compensation</li> </ul> <b>Subtraction</b> <ul style="list-style-type: none"> <li>● Counting Back</li> <li>● Place Value and Negative Numbers</li> </ul> <b>Multiplication</b> <ul style="list-style-type: none"> <li>● Friendly Numbers</li> <li>● Partial Products</li> </ul>
<u>Spring</u>
<b>Subtraction</b> <ul style="list-style-type: none"> <li>● Adjusting One Number to Create an Easier Problem</li> <li>● Constant Difference</li> </ul> <b>Multiplication</b> <ul style="list-style-type: none"> <li>● Doubling and Halving</li> <li>● Breaking Factors into Smaller Factors</li> </ul> <b>Division</b> <ul style="list-style-type: none"> <li>● Partial Quotients</li> <li>● Multiplying Up</li> </ul>

### Common Tools:

- Dots or Drawings
- Open Number line
- Hundreds Chart
- Place Value Charts
- Cubes, Tiles, Counters
- Base Ten
- Array or Area Models
- Groupings
- Real-life Context

### General Prompts:

- I agree with \_\_\_\_\_ because \_\_\_\_\_.
- I do not understand \_\_\_\_\_. Can you explain this again?
- I disagree with \_\_\_\_\_ because \_\_\_\_\_.
- How did you decide to \_\_\_\_\_?

## Practicing Math Fluency with Grade 3 Games

**Purpose:** Games provide additional practice to develop fluencies and opportunity to encourage a positive relationship with mathematics and peers. While teachers have identified 2-4 games per unit to support Operations and Algebraic Thinking, other game resources have been included in a Grade-level Games Binder. Teachers are encouraged to enhance standards with other materials or activities at their discretion. Game structures such as partners, small group, or differentiated review rely on a solid foundation of positive mathematical mindsets and clear community expectations. Unit 0 provides many instructional strategies to enhance such an environment.

Unit	Game Name	Source	Standard(s)
Unit 1	Factor Pairs Missing Factors Count and Compare Multiplication Trail Circle and Stars Target 300 Leftovers with 15	Investigations Investigations Investigations Other Resource Other Resource Other Resource Other Resource	3.OA - 5, 7, 3.MD - 6, 7b 3.OA - 1, 7, 3.MD - 6, 7b 3.OA - 1, 5, 7, 3.MD - 6, 7b 3.OA.C, 3.NBT.A 3.OA.A/B, 3.NBT.A 3.OA.A/B 3.OA.A/B
Unit 2	Factor Pairs Missing Factors Count and Compare Finding Factors Missing Factors Pathways Products Pathways: Ten Times	Investigations Investigations Investigations Other Resource Other Resource Other Resource Other Resource	3.OA - 5, 7, 3.MD - 6, 7b 3.OA - 1, 7, 3.MD - 6, 7b 3.OA - 1, 5, 7, 3.MD - 6, 7b 3.OA.A 3.OA.B, 3.NBT.A 3.OA.A/B, 3.NBT.A 3.OA.A/B, 3.NBT.A
Unit 3	How Far from 100? Let's Go Collecting A "Mazing" 100 Addition Table Trail Addition Tic-Tac-Toe Close to 100 (or 1000) Roll 6 for 100	Investigations Investigations Other Resource Other Resource Other Resource Other Resource Other Resource	3.NBT - 1, 2 3.NBT. 2 3.NBT.A 3.OA.C 3.NBT.A 3.NBT.C, 3.NBT.A 3.OA.B, 3.NBT.A
Unit 4	Factor Pairs Fraction Cookies Wipeout	Investigations Investigations Other Resource	3.OA - 5, 7, 3.MD - 6, 7b 3.NF - 1, 3abc
Unit 5	Factor Pairs Fraction Cookies	Investigations Investigations	3.OA - 5, 7, 3.MD - 6, 7b 3.NF - 1, 3abc
Unit 6*			
Unit 7	Factor Pairs Missing Factors How Far from 100?	Investigations Investigations Investigations	3.OA - 5, 7, 3.MD - 6, 7b 3.OA - 1, 7, 3.MD - 6, 7b 3.NBT - 1, 2
Unit 8	Let's Go Collecting Close to 1000	Investigations Other Resource	3.NBT.2 3.NBT - 1, 2

<b>Unit 9</b>	<b>Factor Pairs Missing Factors Count and Compare</b>	<b>Investigations Investigations Investigations</b>	<b>3.OA - 5, 7, 3.MD - 6, 7b 3.OA - 1, 7, 3.MD - 6, 7b 3.OA - 1, 5, 7, 3.MD - 6, 7b</b>
<b>Unit 10</b>	<b>Factor Pairs Fraction Cookies</b>	<b>Investigations Investigations</b>	<b>3.OA - 5, 7, 3.MD - 6, 7b 3.NF - 1, 3abc</b>
<b>Unit 11</b>	<b>Factor Pairs Fraction Cookies</b>	<b>Investigations Investigations</b>	<b>3.OA - 5, 7, 3.MD - 6, 7b 3.NF - 1, 3abc</b>
<b>Unit 12</b>	<b>Factor Pairs Missing Factors</b>	<b>Investigations Investigations</b>	<b>3.OA - 5, 7, 3.MD - 6, 7b 3.OA - 1, 7, 3.MD - 6, 7b</b>
<b>Unit 13</b>	<b>Fraction Cookies What's My Shape</b>	<b>Investigations Investigations</b>	<b>3.NF - 1, 3abc 3.G - 1, 2</b>
<b>Unit 14*</b>			

\* No additional aligned games for this unit at this time. Please select from the Games Resources binder to support prior knowledge.