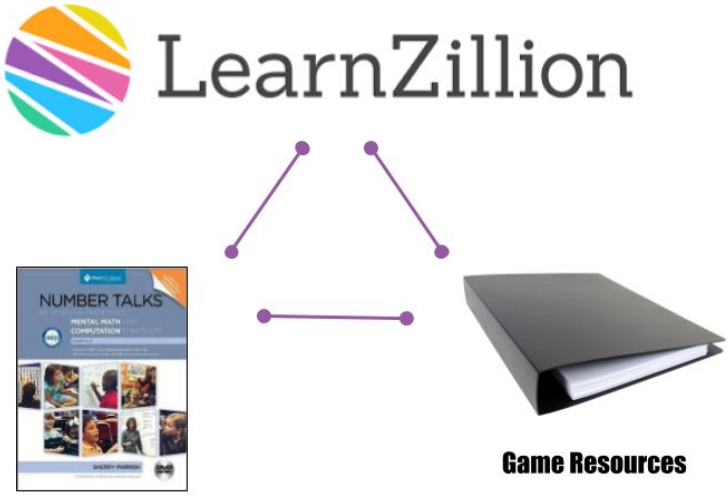
Grade 5: LearnZillion Pacing Guidance & Additional Supports
2017-2018 School Year

In Grade 5, instructional time should focus on three critical areas:

- Developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions)
- Extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations
- Developing understanding of volume.

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 5 PACING GUIDE

KEY:

Color by Domain	NF	OA	CC	GEO	NBT	MD

✪ = 1st day of school	U# = Unit launch day	NS = No student day	Major Work	Supporting Work	Additional Work

Total LearnZillion Lessons: 145 + 14 Assessments*

Reporting Period 1:

LearnZillion Units 1-7

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 U2	29

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

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

UNIT 1: Understanding volume

Lessons: 10 (9+assessment)

5.MD.C.3, **5.MD.C.3a,** **5.MD.C.3b,** **5.MD.C.4**

MP3 - Construct viable arguments and critique the reasoning of others
MP5 - Use appropriate tools strategically
MP6 - Attend to Precision
MP7 - Look for and make use of structure

UNIT 2: Developing multiplication and division strategies

Lessons: 16 (15+assessment)

5.NBT.B.5, **5.NBT.B.6**

MP1 - Make sense of problems and persevere in solving them
MP6 - Attend to Precision
MP8 - Look for and express regularity in repeated reasoning

UNIT 3: Using equivalency to add and subtract fractions with unlike denominators

Lessons: 11 (10+assessment)

5.NF.A.1, **5.NF.A.2**

MP2 - Reason abstractly and quantitatively
MP3 - Construct viable arguments and critique the reasoning of others
MP4 - Model with mathematics
MP5 - Use appropriate tools strategically

UNIT 4: Expanding understanding of place value to decimals

Lessons: 11 (10+assessment)

5.NBT.A.1, **5.NBT.A.2,** **5.NBT.A.3**

27	**28**	**29**	**30** U5	

December				
Mon	**Tue**	**Wed**	**Thu**	**Fri**
				1
4	**5**	**6**	**7**	**8**
11	**12**	**13**	**14** U6	**15**
18 NS	**19** NS	**20** NS	**21** NS	**22** NS
25 NS	**26** NS	**27** NS	**28** NS	**29** NS

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

Winter Grade 5 Report Cards Notes:

<u>Operations and Algebraic Thinking</u>

- Write and interpret numerical expressions (NOT YET TAUGHT)
- Analyze patterns and relationships (NOT YET TAUGHT)

<u>Numbers and Operations in Base Ten</u>

- Perform operations with multi-digit whole numbers and with decimals to hundredths
    - 5.NBT.7 (NOT YET TAUGHT)

<u>Numbers and Operations - Fractions</u>

- Apply and extend previous understandings of multiplication and division to multiply and divide fractions
    - 5.NF.7abc (NOT YET TAUGHT)

<u>Geometry</u>

- Graph points on the coordinate plane to solve real-world and mathematical problems (NOT YET TAUGHT)
- Classify two-dimensional figures into categories based on their properties (NOT YET TAUGHT)

MP1 - Make sense of problems and persevere in solving them
MP2 - Reason abstractly and quantitatively
MP4 - Model with mathematics
MP6 - Attend to Precision
MP7 - Look for and make use of structure

UNIT 5: Understanding the concept of multiplying fractions by fractions
Lessons: 10 (9+assessment)
5.NF.B.3, 5.NF.B.4a, 5.NF.B.4b,
MP1 - Make sense of problems and persevere in solving them
MP4 - Model with mathematics
MP6 - Attend to Precision
MP7 - Look for and make use of structure
MP8 - Look for and express regularity in repeated reasoning

UNIT 6: Comparing and rounding decimals
Lessons: 11 (10+assessment)
5.NBT.A.3b, 5.NBT.A.3b, 5.NBT.A.4
MP6 - Attend to Precision
MP7 - Look for and make use of structure

UNIT 7: Interpreting multiplying fractions as scaling
Lessons: 11 (10+assessment)
5.NF.5.a, 5.NF.5.b, 5.NF.6
MP2 - Reason abstractly and quantitatively
MP4 - Model with mathematics
MP6 - Attend to Precision

<u>Measurement and Data</u>

- Convert like measurement units within a given measurement system (NOT YET TAUGHT)
- Represent and interpret data (NOT YET TAUGHT)
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition
    - 5.MD.5.abc (NOT YET TAUGHT)

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

March				
Mon	Tue	Wed	Thu	Fri
			1	**2**
5 U10	**6**	**7**	**8**	**9**
12	**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**	**20** U12
23	**24**	**25**	**26**	**27**
30				

Reporting Period 2:
LearnZillion Units 8-14

UNIT 8: Developing the concept of dividing unit fractions

Lessons: 8 (7+assessment)

5.NF.7a, **5.NF.7b**

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
MP5 - Use appropriate tools strategically
MP6 - Attend to Precision
MP7 - Look for and make use of structure

UNIT 9: Solving problems involving volume

Lessons: 11 (10+assessment)

5.MD.C.5a, **5.MD.C.5b,** **5.MD.C.5c**
5.OA.A.1

MP1 - Make sense of problems and persevere in solving them
MP5 - Use appropriate tools strategically
MP7 - Look for and make use of structure
MP8 - Look for and express regularity in repeated reasoning

UNIT 10: Performing operations with decimals

Lessons: 16 (15+assessment)

5.NBT.B.7, **5.MD.A.1**

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
MP6 - Attend to Precision
MP7 - Look for and make use of structure

UNIT 11: Classifying two-dimensional geometric figures

Lessons: 11 (10+assessment)

5.G.B.3, **5.G.B.4**

MP3 - Construct viable arguments and critique the reasoning of others
MP7 - Look for and make use of structure

May				
Mon	**Tue**	**Wed**	**Thu**	**Fri**
	1	**2**	**3**	**4** NS
7	**8** U13	**9**	**10**	**11**
14	**15**	**16**	**17**	**18**
21	**22**	**23** U14	**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 with fractional quantities

Lessons: 11 (10+assessment)

5.NF.B.7b, **5.NF.B.7c,** **5.NF.B.6,** **5.NF.B.5** **5.MD.B.2**

MP2 - Reason abstractly and quantitatively
MP3 - Construct viable arguments and critique the reasoning of others
MP7 - Look for and make use of structure

UNIT 13: Representing algebraic thinking

Lessons: 11 (10+assessment)

5.OA.A.1, **5.OA.A.2**

MP2 - Reason abstractly and quantitatively
MP6 - Attend to Precision
MP7 - Look for and make use of structure

UNIT 14: Exploring the coordinate plane

Lessons: 11 (10+assessment)

5.OA.B.3, **5.G.A.1,** **5.G.A.2**

MP2 - Reason abstractly and quantitatively
MP4 - Model with mathematics
MP6 - Attend to Precision
MP7 - Look for and make use of structure

*** Supplemental Resources**

UNIT 15: Finalizing multiplication and division with whole numbers (10 lessons)

5.NBT.B.5, **5.NBT.B.6**

MP3 - Construct viable arguments and critique the reasoning of others
MP8 - Look for and express regularity in repeated reasoning

Developing Math Fluency with Grade 5 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)
Addition ● Friendly Numbers Subtraction ● Adding Up ● Removal ● Counting Back Multiplication ● Friendly Numbers
<u>Fall</u>
Addition ● Breaking Into Place Value ● Adding Up in Chunks Subtraction ● Place Value and Negative Numbers Multiplication ● Partial Products ● Doubling and Halving
<u>Winter</u>
Addition ● Compensation Subtraction ● Adjusting One Number to Create an Easier Problem Multiplication ● Breaking Factors into Smaller Factors Division ● Partial Quotients
<u>Spring</u>
Subtraction ● Constant Difference Division ● Multiplying Up ● Proportional Reasoning

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 5 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*	Multiplication Compare Finding Factors Missing Addend or Factor (Salute)	Investigations Other Resource Other Resource	5.NBT - 2, 5 5.OA.B, 5.NBT.B 5.OA.B
Unit 2	Hit the Target Target 300 (A Multiplication Game) Pathways and Variation: Ten Times Division Compare Leftovers with 15 (and 100)	Other Resource Other Resource Other Resource Investigations Other Resource	5.OA.B, 5.NBT.B 5.OA.A, 5.NBT.A/B 5.OA.B, 5.NBT.A 5.NBT.B.6 5.OA.A, 5.NBT.B
Unit 3	Wipeout (Fractional Relationships) Roll Around the Clock Spinning Sums and Differences	Other Resource Investigations Other Resource	5.NF.A/B 4.NF.A.1** 5.NBT.A. 5.NF.A/B
Unit 4	Decimals in Between Smaller to Larger Digit Place (A Secret Number Game)	Investigations Investigations Other Resource	5.NBT.3ab 5.NBT.3ab 5.NBT.A
Unit 5*			
Unit 6	Decimals in Between Smaller to Larger	Investigations Investigations	5.NBT.3ab 5.NBT.3ab
Unit 7*			
Unit 8*			
Unit 9*			
Unit 10	Fill Two Close to 1 Decimal Double Compare Roll for $1.00 and Roll for 1	Investigations Investigations Investigations Other Resource	5.NBT.3a 5.NBT.7 5.NBT.3a 5.NBT.A/B, 5.NF.A
Unit 11*			
Unit 12*			
Unit 13	Equation Building	Other Resource	5.OA.A, 5.NBT.A/B, 5.NF.A/B

	Order up 21! Roll for 6 to 100 Take Five, Make Ten!	Other Resource Other Resource Other Resource	5.OA.A, 5.NBT.A/B, 5.NF.A/B 5.OA.A, 5.NBT.B 5.OA.A, 5.NBT.A/B
Unit 14*			

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

** Be aware that these games as written meet prior knowledge standard and not current grade content standards.