Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

Stage 1: Identify Desired Results

Essential Question: *What thought-provoking questions will foster inquiry, meaning making and transfer?* • *An essential question is open-ended; it has no simple "right answer."* • *Is meant to be investigated, argued, looked at from different points of view* • *Encourages active "meaning making" by the learner about important ideas.* • *Raises other important questions.* • *Naturally arises*	• What do effective problem solvers do , and what do they do when they get stuck?
Scaffold Questions: *What questions can we ask students that break the essential question into smaller pieces of content?*	What kind of mathematical problems might you encounter in real life? What kind of mathematical problems do you think adults have to solve? What are the steps that go into solving a problem? What does it feel like when you get stuck in math? What strategies have you learned In True Success this year that you can use to help you when you get stuck?
Brief Summary of Unit:	

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

	Module 5 **Place Value Concepts for Decimal Fractions** 4 TOPICS 14 LESSONS Module 5 extends students' understanding of tenths and hundredths as fractional units to recognizing tenths and hundredths as place value units. They compare decimal numbers and add mixed numbers and fractions with the unlike, but related, units of tenths and hundredths.
Desired Understanding: *The long-term accomplishments that students should be able to do with knowledge and skill, on their own. Frames Standards as long-term performance accomplishments. Answer the questions Why? And What can you do with this?*	**Exploration of Tenths** Within the familiar context of money, students use decimal points to record amounts of money as decimal numbers for the first time. Students see that numbers can be represented in different ways. They use tape diagrams, number lines, and area models to represent the fractional unit of tenths. They write tenths in unit form and fraction form and then see that decimal form is another way to write the numbers. Students decompose 1 one into 10 tenths and compose 10 tenths into 1 one by using familiar representations, including place value disks, and recognize tenths as both a fractional unit and a place value unit. They record mixed numbers of ones and tenths in unit form, fraction form, and decimal form.

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

Tenths and Hundredths

Students decompose tenths into hundredths by using tape diagrams, number lines, and area models. They recognize hundredths as a fractional unit and write hundredths in fraction form and decimal form. Students see that the decomposition of 1 tenth as 10 hundredths and the composition of 10 hundredths as 1 tenth follows the same pattern as other place value units, and they recognize that hundredths is also a place value unit. Students use their knowledge of equivalent fractions and place value units to understand 10/100 = 1/10 and, for example, 0.21 is the same amount as 21 hundredths or 2 tenths 1 hundredth. Students record mixed numbers of ones, tenths, and hundredths in fraction form, decimal form, and unit form and express mixed numbers with units of tenths and hundredths in expanded form.

Comparison of Decimal Numbers

Students compare decimal numbers by applying their prior understanding of whole number and fraction comparison and by using strategies of their choice. They justify their comparisons and see how different strategies can be used. Students then use an area model, number line, and place value disks to represent decimal numbers. Students express decimal numbers in decimal form, fraction form, and unit form. They compare numbers by using different strategies such as making like units, comparing the value of each digit starting with the largest unit, and using mental math strategies. Students apply their knowledge to compare mixed numbers and to order decimal numbers.

	Addition of Tenths and Hundredths
	Students extend their understanding of fraction equivalence and fraction addition with like units to add fractions and mixed numbers with the unlike units of tenths and hundredths. They rename tenths as hundredths to create like units and then use familiar strategies to add. For example, they might combine like units or break apart an addend to make an easier problem. Students also solve word problems that require the addition of metric measurements or amounts of money expressed as decimal numbers. They express the decimal numbers in fraction form, add the numbers in fraction form, and then use decimal form within the solution statement.
Common Core State Standards (CCSS) - Mathematics *List all of the standards in this unit.*	4.NF.C.5Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100. 4.NF.C.6Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram. 4.NF.C.7Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of

	comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model. 4.MD.A.2Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
Mathematical Practices *Which of the mathematical practices will be focused on during this unit?*	MP.1 Make sense of problems and persevere in solving them. Students use the place value chart to draw diagrams of the relationship between a digit's value and what it would be one place to its right, for instance, by representing 3 thousands as 30 hundreds. Students also use the place value chart to compare large numbers. MP.2 Reason abstractly and quantitatively. Students make sense of quantities and their relationships as they use both special strategies and the standard addition algorithm to add and subtract multi-digit numbers. Students decontextualize when they represent problems symbolically and contextualize when they consider the value of the units used and understand the meaning of the quantities as they compute. MP.3 Construct viable arguments and critique the reasoning of others. Students construct arguments as they use the place value chart and model single- and multi-step problems. Students also use the standard algorithm as a general strategy to add and subtract multi-digit numbers when a special strategy is not suitable. MP.4 Model with mathematics. Students apply their understanding of place value to create area models and rectangular arrays when performing multi-digit multiplication and division. They use these models to illustrate and explain calculations. MP.5 Use appropriate tools strategically. Students decide on the appropriateness of using special strategies or the standard algorithm when adding and subtracting multi-digit numbers. MP.6 Attend to precision. Students use the place value chart to represent digits and their values as they compose and decompose base ten units

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

	MP.7 Look for and make use of structure. Students look for and make use of connections between measurement units and word problems to help them understand and solve related word problems. They choose the appropriate unit of measure when given the choice and see that the structure of the situations in the word problems dictates which units to measure with. MP.8 Look for and express regularity in repeated reasoning. Students express the regularity they notice in repeated reasoning when they apply place value strategies in solving multiplication and division problems. They move systematically through the place values, decomposing or composing units as necessary, applying the same reasoning to each successive unit.
Essential Standards* *List the Essential Standards that will be taught and assessed in this unit.*	CCSS.MATH.CONTENT.4.NF.C.6 Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.* CCSS.MATH.CONTENT.4.NF.C.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.
Crossover standards* *Connection to other content areas (Option)*	*CCSS.ELA-LITERACY.SL.4.1.A Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.* *CCSS.ELA-LITERACY.SL.4.1.B Follow agreed-upon rules for discussions and carry out assigned roles.* *CCSS.ELA-LITERACY.SL.4.1.C Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.* *CCSS.ELA-LITERACY.SL.4.1.D Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.*

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

Alignment to the Vision of High Quality Instruction in Mathematics *(How do the instructional targets in this unit align to the district's vision of high quality instruction?)*	**In order to create these mathematically rich classrooms, Teachers:** **1. Establish mathematical learning targets.** Effective teaching of mathematics establishes clear goals for the mathematics that students are learning, situates targets within learning progressions, and uses those targets to guide instructional decisions. **2. Implement tasks that promote reasoning and problem solving.** Effective teaching of mathematics engages students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies. **3. Use and connect mathematical representations.** Effective teaching of mathematics engages students in making connections among various representations to deepen understanding of concepts and procedures to solve problems.

4. Facilitate meaningful mathematical discourse. Effective teaching of mathematics facilitates discourse among students to build shared understanding of mathematical ideas by analyzing and comparing student approaches and arguments.

5. Pose purposeful questions. Effective teaching of mathematics uses purposeful questions to assess and advance students' reasoning and sense making about important ideas and relationships.

6. Build procedural fluency from conceptual understanding. Effective teaching of mathematics builds fluency with procedures on a foundation of conceptual understanding so that students, over time, become skillful in using procedures flexibly as they solve contextual and mathematical problems.

7. Support productive struggle in learning mathematics. Effective teaching of mathematics consistently provides students, individually and collectively, with opportunities and supports to engage in productive struggle as they grapple with mathematical ideas and relationships.

8. Elicit and use evidence of student thinking.

Effective teaching of mathematics uses evidence of student thinking to assess progress toward mathematical understanding and to adjust instruction continually in ways that support and extend learning.

As a Result of Ambitious Math Instruction, Students:

1 — Make Sense of Problems and Persevere in Solving Them

Students can solve problems without giving up.

	2 — Reason Abstractly and Quantitatively
	Students can think about numbers in many different ways.
	3 — Construct Viable Arguments and Critique the Reasoning of Others
	Students can explain and justify their thinking and understand the thinking of others.
	4 — Model With Mathematics
	Students can show, analyze and revise their work in many different ways.
	5 — Use Appropriate Tools Strategically
	Students can use math tools and explain why they chose them.
	6 — Attend to Precision
	Students can calculate accurately and efficiently, evaluate their work, and clearly communicate their thinking.
	7 — Look For and Make Use of Structure
	Students can use what they know to solve new problems.
	8 — Look For and Express Regularity in Repeated Reasoning
	Students can solve problems by looking for rules and patterns and evaluate their results.

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

Stage 2: Determine Acceptable Evidence (With the exception of formative assessments, all assessments listed in this section are required elements of the district's curriculum and the data associated will be collected in the district's performance management driver system.)	
Measure of Understanding (Performance Task) *(How will students demonstrate their attainment of the desired understanding?)*	End of Module Assessment
Assessing the Performance Task *(How will we evaluate quality*	

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

student work in the performance task? How will we determine that students can use their learning independently?)	
Summative Assessments *(How will we know if students can demonstrate mastery of the unit's content, skills, and common core state standards?) Can overlap the performance-based evidence, thereby increasing the reliability of the overall assessment (especially if the performance task was done by a group)*	End of module Assessment
Interim Assessments	Topic Quizes
Formative Assessments	● Exit Tickets ● Problem set questions ● White board answers
	What am I doing well at in math? What do I need to work on?

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

Student Self-Reflection and Self-Regulation **(Student-Centered)** *(How will we measure students' ability to think meta-cognitively?)*	
State Assessment Practice *(How will we measure students' ability to interact with content and skills in an MSTEP-like or SAT-like format?)*	*SMARTER BALANCED (the basis of M-STEP) Practice site* EdCite NWEA
Stage 3: Learning Plan **(Summary of Key Learning Events and Instruction)**	
	Teachers follow the following sequence

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

What activities, experiences and lessons will lead to achievement of the desired results and success at the assessments?
 	
The learning events –
● *should be derived from the goals of Stage 1 and the assessments of Stage 2 to ensure alignment and effectiveness of the activities.*
● *should match the level of rigor within the standard*
● *support student Acquisition, Meaning Making, and Transfer.*
	● Module 5
	    ○ Module 5 Pre-Assessment
	    ○ Eureka^2 Module 2 Lessons (1-14)
	    ○ Daily Exit Tickets (after each lesson)
	    ○ Topic Quizes (after each topic)
	    ○ Module 5 Post Assessment
	    ○ Observational Assessment Recording Sheet

Learning Targets	Module 5 learning targets

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

What will students be taught? What should they know? What should they be able to do?	

How will the unit be sequenced and differentiated to optimize achievement for all learners?
 	
Teaching -
    ● *should reflect the instructional approaches most appropriate to the goals (not what is easiest or most comfortable for the teacher).*
    ● *should employ resources most appropriate to the goals (not simply march through a textbook or commercial program).*
    ● *be responsive to differences in learners' readiness, interests, and preferred ways of learning.*
	● The modules are already sequenced and differentiated. You will not want to omit anything present in the modules.
	● We will use the Pre-Module Equip Assessments in order to see what students know from the previous year to influence our instruction for the module.
	● The fourth grade number sense Assessments will also guide our Math WIN instruction.

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

Key Vocabulary	**decimal form** A number written with a decimal point is written in decimal form. For example, the number 1 tenth, written in unit form, can be written in fraction form, 1/10, or decimal form, 0.1 or .1. (Lesson 2)
	decimal fraction A fraction with a denominator of 10 or 100 is a decimal fraction. (Lesson 2)
	decimal number, decimal A number written in decimal form is a decimal number. (Lesson 2)
	decimal point A decimal point is a symbol that looks like a period. It identifies which digit represents ones and which digit represents tenths. The digit to the left of the decimal point represents ones. The digit to the right of the decimal point represents tenths. (Lesson 1)
	Hundredths Hundredths is a place value unit. 1 one can be decomposed into 100 hundredths. (Lesson 6)
	Tenths Tenths is a place value unit. 1 one can be decomposed into 10 tenths. (Lesson 3)
	Familiar **denominator** **equivalent fraction** **expanded form** **fraction form** **fraction greater than 1** **mixed number** **numerator**

Roscommon Area Public Schools – Curriculum Framework
Course: Second Grade Math; Eureka Math Squared
Unit Number: 5
Unit Title: Place Value Concepts for Decimal Fractions
Timeframe:

	sum **total** **unit form**
Resources *Description or link to resources*	Eureka Math2 Level 4