Curriculum Sample Template
Max. 8 Pages

Grade Level	Fourth Grade	**Content Area**	Math
Course Title (grades 9-12 Only)	n/a		
Length of Unit	4 days (Assessment on Day 5)	**Time of Year**	November
Expected Prior Knowledge *The knowledge/skills mastered earlier in the year foundational to the mastery of the required Standard in the current sample.*	By November, Vista College Prep fourth grade students will already have developed a conceptual understanding of both multiplication and division. Students will have spent much time developing their knowledge of multiplication and division concepts using various models (such as arrays and pictures) in addition to spending time practicing multiplication and division fluency. Students will understand that multiplication is the same thing as repeated addition and that multiplication and division are simply the reciprocal of each other. Although students will still be developing their multiplication and division fluency and may not yet know their facts right off hand, they will have a strong foundation in multiplication and division principles, which will contribute to furthering their development of multiplication and division strategies at a more complex level. Students have been practicing finding whole-number quotients and remainders with up to two digit dividends.		
Alignment to Program of Instruction *Briefly outline methods of instruction found in this sequence of lessons that align to the Program of Instruction described in A.3.*	This lesson format follows the I Do/We Do/You Do gradual release model that Vista College Prep teachers will be expected to uphold in lesson planning and delivery. This unit takes advantage of the "think-pair-share" a strategy used by teachers to check for understanding. Throughout the lesson, as discussed in Vista College Prep's Program of Instruction, teachers are taking advantage of the smaller class sizes and streamlining the lesson's message through their use of individualized instruction and small-group work, which occurs during the "you do" portion of the lesson.		
Standard Number and Description *List the Number* and full description for the required Standard.*	**4.NBT.6:** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.		
Summative Assessment *Describe a cumulative and comprehensive activity, clearly separate from instruction and guided or independent practice, which allows each student to individually demonstrate mastery of the required Standard. A copy of the summative assessment must be attached to the curriculum sample.*	Students will solve for whole-number quotients and remainders with three-digit and four-digit dividends and one-digit divisors. Students will be assessed on pictorial representation, place value and relationship between multiplication and division. None of the problems assessed are problems that were done during class time.		
Scoring Scale and Mastery Level *Explain how the assessment is scored, to include points per question, how points are awarded, total points possible, criteria necessary to demonstrate mastery, and grading scale. A copy of the answer key and scoring rubric (whichever applicable) must be attached to the curriculum*	**Students must get 10 out of 12 points to earn mastery.** ___/12 1. 1 point 2. 1 point 3. 1 point 4. 2 points, 1 for correct answer and 1 for work		

sample.	5. 2 points, correct answer and work 6. 1 point 7. A. 2 points, 1 for correct answer and 1 for work B. 2 points, 1 for correct answer and 1for work
Materials/Resources Needed	Individual white boards, Expo Markers, Fake money (hundreds, tens, ones), Pencils

* ***Standard Number****: For English Language Arts (Reading and Writing), use Grade, Strand, Standard (e.g., 3.RI.2). For K-8 Math, use Grade, Domain, Standard (e.g., 6.EE.7). For HS Math, use Conceptual Category-Domain, Standard (e.g., A-REI.6). For Science, use Grade, Strand, Concept, PO (e.g., 4.1.3.1).*

Lesson (add as needed)	**Instruction**[1]	**Student Activities**
1	**Objective: SWBAT divide 3 and 4 digit numbers by 1 digit numbers using concrete representations of place value.**	**Do Now**: Assess a skill from the day prior
	Intro to new material: Teacher holds up a $10 bill and explains that he/she promised Student A half of it and Student B half of it because they helped clean all of the desks after school. *So, can I just rip this in half and give each half of it to share the money?* (Students should be gasping!) *No! You should exchange it for two $5 bills or ten $1 bills and then split them into 2 equal groups. Today we are going to investigate how to divide numbers into equal groups using place value.*	Students listen actively.
	I do/ We do: Teacher poses the following problem to the students: How can 4 people share $116 equally? (Teacher holds up one hundred-dollar bill and sixteen one-dollar bills.) Students think-pair-share with their shoulder partners on white boards as they try to solve the posed problem. After about 3 minutes, teacher calls on groups to share their findings. Students should explain how to exchange the hundred-dollar bill for 10 ten-dollar bills and explain how exchanging the bills using place value makes it easier to divide the money equally between the 4 students.	Students observe teacher model the first problem. Students turn to a shoulder partner and discuss how they will divide 116 by 4 into equal groups. Students share their responses with the whole group by raising their hands. Students get out white boards and play money. Students create the problems the teacher creates and make adjustments as given by teacher.
	We do: Teacher poses another division problem to the class. Teacher and students complete the problem using sample money. Teacher and students continue to practice together and, after students and teachers have practiced several sample problems together, teacher gradually	Students create final problem on their own and show teacher then they are done. If they have completed the problem correctly, they return to their seat to work independently. If they have gotten the problem

[1] These lessons were adapted from an Achievement First (high performing network of schools on the east coast) unit plan.

	releases more and more responsibility to the students based on his/her observation notes. Teacher puts the following problem on the board and asks the students to model the problem with their money and solve it on their white boards: 5 people want to share $75 equally. How much will each person get? Teacher roams around to check for understanding and takes notes as he/she observes students' abilities. Students who master this check for understanding are given an independent practice activity, and teacher continues to work with a small group of students who still need assistance understanding the given objective. **You Do:** Teacher gives students a worksheet with a three-digit division word problem. Students need to show how they would solve the problem by using their money and drawing pictures to represent their thinking. Teacher assists students who are still struggling. Teacher continues to circulate the classroom and checking for understanding. Teacher continues to question his/her students' understanding of the given objective and encourages them to explain their thinking to ensure mastery. **Closure:** At the end of the independent practice, teacher brings all students back together as a class. Teacher asks students to explain to a partner their ideas on how to solve the aforementioned word problem: "How do I solve the problem 484 divided by 4?" Teacher solicits students to share their responses.	incorrect, they will stay with the teacher for more guided instruction. Students complete worksheet by recording their thinking and creating their place value groups using the money on their papers. Students think-pair-share with a shoulder partner. Each student explains the process for dividing 484 by 4. Then, students share their thoughts with the whole class, as guided by the teacher.
2	**Objective: SWBAT divide three and 4 digit whole numbers by one digit divisors by using place value.** **Intro:** Teacher reminds students that this week they are practicing the division of three-digit numbers by one-digit numbers. This is the first step before working with larger digits when dividing. **I do/ We do:** Teacher poses the following problem to the students: The fifth grade raised $115 to share equally among 5 charities. How much money will they donate to each charity? Teacher reminds students to recall their knowledge of dividing two-digit numbers by one-digit numbers. (Teacher gives them the hint: think of place value!) Teacher models the process, referencing place value at every step. Teacher does another example. *This time we might have a remainder!* (581 divided	**Do Now**: Assess a skill from the day prior Students listen actively. Students listen actively. Students are prepared to share-out thoughts with the class if teacher calls on them. Students get out white boards. Students create the problems the teacher creates and make adjustments as given by teacher.

	by 9) **We do:** Teacher gives a problem and teacher and students complete the problem together, using white boards focusing on place value. Teacher and students continue to practice division problems using place value. Teacher puts the following final problem on the board and asks students to model the problem and label the place values on their white boards: 162 divided by 3. After students take time to solve the problem, teacher asks a question, such as "How did you know that the first digit went in the _____ place?" Teacher checks for understanding (by asking several follow-up questions) and monitors student performance. **You Do:** Teacher gives students a worksheet containing three division word problems (all ending with whole number quotients). Students are instructed to label each quotient with the correct place value. Teacher assists students who are still struggling. Teacher continues to rove around the classroom, checking for understanding. **Closure:** At the end of the independent practice, teacher brings all students back together as a class. Teacher asks students to explain their solution to the following question to a partner: *"How do I solve the problem 684 divided by 6?"* Teacher gets the attention of the class after several minutes and asks students to share their responses, citing place value in their responses.	Students complete final problem on their own. Teacher notes which students did not answer the problem correctly. Those students are pulled aside for one-on-one help (using blocks or other intervention strategies). Students think-pair-share with a shoulder partner. Each student explains the process for dividing 684 by 6. Then students share with the whole class as directed by the teacher.
3	**Objective: SWBAT divide three and four digit numbers by one digit numbers using the standard algorithm.** **Intro to new material:** Teacher tells students they have done a great job so far this week demonstrating how to correctly solve problems with three and four digit numbers divided by a one-digit number using manipulatives and place value. Teacher explains that today they will practice solving similar problems using the standard algorithm for division. **I do/ We do:** Teacher poses the following problem to the students: Vista College Preparatory has 560 students. All 5 grades have the same number of students. How many students are in each grade? The goal of	**Do Now**: Assess a skill from the day prior Students actively listen. Students listen actively and take notes as needed.

	this problem is to have the students practice using the abstract strategy of reverse multiplication. (5 times what equals 560? I know that 5 times 100 equals 500 and 5 times 12 equals 60. 100 + 12 = 112.) Teacher goes through another example using a four-digit dividend. This answer has a remainder. The teacher will also make the connection for students between the standard algorithm and the conceptual/pictorial work that they have already done. **We do:** Teacher gives a problem and teacher and students complete the problem, using white boards and the standard algorithm, making sure the students check their answer using the abstract strategy of reverse multiplication. Teacher and students continue to practice division problems using the standard algorithm. Teacher documents student responses to keep track of their overall understanding. Teacher and students work through two more problems: 543 divided by 3 and 2,462 divided by 8. **You Do:** Teacher gives students a worksheet with a division word problem. Students need to show how they would solve the problem by using the standard algorithm and check their work using reverse multiplication. Teacher assists students who are still struggling. Teacher continues to document student success and challenges on monitoring notes. **Closure:** At the end of the independent practice, teacher brings all students back together as a class. Teacher asks students to explain to a partner "832 divided by 4?" Teacher brings the class back together after several minutes and asks students to share their responses.	Students take out their white boards. Students copy the problems the teacher creates and make adjustments as given by teacher. Students practice with both three- and four-digit dividends. Students complete the given word problem: Maddie has 168 gumballs. She put the gumballs into 8 machines. How many gumballs are in each machine? Students demonstrate their understanding by solving the problem and checking their work using reverse multiplication. 21 8) 168 - 16 08 - 8 0 Checking: 8 x 20 = 160 8 x 1 = 8 160 + 8=168 answer is correct Students think-pair-share with a shoulder partner. Each student explains the process for dividing 832 by 4. Then students share with the whole class as directed by the teacher.
4	**Assessment: Students will find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value and the relationship between**	

	multiplication and division. They will also demonstrate an understanding of the standard algorithm for division. Some problems will require illustration and explanation of the calculation. Teacher administers the assessment.	Students take assessment. Upon finishing students can read from their DEAR book.

Paste Summative Assessment Here:

1. Where will the first digit of the quotient be placed in the following problem?

   $7\overline{)378}$

   A. Ones place
   B. Tens place
   C. Hundreds place

2. Joseph wants to divide 496 cards into four groups. Complete the calculation to find how many cards will be in each group.

   $4\overline{)496}$

   Answer: _____

3. Marcos has 651 video games. He wants to divide them between his 9 friends. How many video games does each group get?

   $9\overline{)651}$

   Answer: _____

4. Directions: Draw a diagram or use your manipulatives to help you divide.

   108 ÷ 4 = _____

5. DRAW TO EXPLAIN Manuela agreed to pay her 4 grandsons $180 for helping her with yard work for the day. If her grandsons divide the money equally, how much will each of them earn? Draw bills to help you divide.

6. Where will the first digit of the quotient be placed in the following problem?

$$5\overline{)1{,}250}$$

A. Ones place
B. Tens place
C. Hundreds place
D. Thousands place

7. Check your work using reverse multiplication:

A. $5\overline{)655}$

B. $2\overline{)1042}$

Paste Answer Key/Scoring Rubric Here:

1. B
2. 124
3. 72 Remainder 3
4. 27

[For picture student should show 100 with a box around it, and eight smaller boxes with ones in them. Student will cross out the 100 and draw 10 boxes of ten. Student will show that they crossed out each ten as you divide them into 4 equal groups. Show that student crossed out the two tens and drew twenty ones. Student counts one share of the $108 and gets 27].

5. Draw 18 bills of $10 and then break into groups of 4, answer = $45
6. C
7.
    a. Answer is 131

       Checking: 5 x 100 = 500

       5 x 30 =150

       5 x 1 = 5

       500 + 150 + 5=655 answer is correct

    b. Answer is 521

       Checking: 2 x 500 = 1000

       2 x 20 =40

       2 x 1 = 2

       1000 + 40 + 2=1042 answer is correct

Students must get 10 out of 12 to earn mastery. ___/12

1. 1 point
2. 1 point
3. 1 point
4. 2 points, 1 for correct answer and 1 for work
5. 2 points, 1 for correct answer and 1 for work
6. 1 point
7. A. 2 points, correct answer and work B. 2 points, correct answer and work