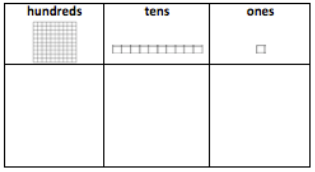
Curriculum Sample Template
Max. 8 Pages

Grade Level	Second Grade	**Content Area**	Math
Course Title (grades 9-12 Only)	n/a		
Length of Unit	4 days (Assessment on Day 5)	**Time of Year**	October
Expected Prior Knowledge *The knowledge/skills mastered earlier in the year foundational to the mastery of the required Standard in the current sample.*	By October, Vista College Prep second grade students should be able to add and subtract one and two digit numbers without regrouping and should be familiar with place value.		
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.*	Vista College Prep teachers will engage in choral responses (asking students to chant counting by 10s from 10-90), "turn and talk" to a partner, frequent and systematic checks for understanding (in the lessons teachers will turn in, and there will be a designated spot asking teachers how they will check for understanding). Each math lesson is structured with a commitment to the gradual release model (I Do/We Do/You Do). The teacher in the lesson is also individually conferencing with students who need additional support.		
Standard Number and Description *List the Number* and full description for the required Standard.*	**2.NBT.5**: Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.		
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.*	Vista College Prep students will use place value charts to demonstrate their understanding of addition and subtraction. Students will add and subtract two-digit by two-digit numbers to calculate sums and differences within 100 by representing their thinking through the use of illustrated base-10 blocks and place value charts. Students will then be expected to generate their own equations and illustrate their thought processes as they check their answers using the inverse relationship of addition and subtraction.		
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 sample.*	Students will be assessed on a 12-point scale. They will be asked to solve 4 separate equations each with three parts: a. solve the equation, b. demonstrate the inverse relationship between addition and subtraction by generating an equation based on the one they previously solved, and c. represent their thinking through the use of place value charts. The student will need to earn at least 10 out of 12 points to master this skill.		
Materials/Resources Needed	Math notebooks, base-10 blocks, place value chart for classroom, place value mats for each student, white board and dry erase markers, chart paper and markers, 6-sided die, index cards.		

* ***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	Instruction	Student Activities
1	**Objective: Students will be able to add within 100 using strategies based on place value.** **5 mins:** Teacher asks students to: *Solve: 10+10= 20+10=* Teacher brings students together and asks students to share their answers as well as how they solved the problems. Teacher will interject where appropriate and prompt students to discuss groups of 10s. **15 mins:** Teacher puts a place value chart on the board: Teacher tells students that today they are going to work on adding two-digit by two-digit numbers using base-10 blocks and a mat that looks like the chart on the board.  Teacher takes the chart off of the board and places it on a table. Teacher writes the following equation on the board: 45 + 22=_____ Teacher solves this equation using the place value chart and base-10 blocks ("I do"). Teacher says: *First I will represent the number 45. I see that there is a 5 in the ones place, so I will put 5 blocks into the ones column. Next I see that there is a 4 in the tens place so I will take 4 groups of 10 (4 rods) and put them in the tens column. Now I will add 22. I see that there is a 2 in the ones place, so I will take 2 blocks and add them to the ones column. Next, I see that there are 2 tens in the tens place so I will add 2 groups of 10 (2 rods) to the tens column. Finally I will count all of my groups.* Teacher counts the blocks with the group and gets 67. Teacher models another equation the same way, but will choose an equation that requires regrouping in order to model "trading in" 10 blocks for 1 ten rod such as 58+35=_____. In addition, teacher asks students for help throughout the process ("We do"). **15 mins:** Teacher distributes mats that are identical to the place value chart. Students will also be given base-10 blocks and a worksheet with five two-digit by two-digit addition equations, all with sums within 100. Teacher walks around to conference with and support students as they complete the task ("You do").	Students quietly transition to math class and independently solve the problems using a method of their choice. Students listen and share. They are encouraged to ask questions and make comments. Students listen to teacher and are encouraged to ask questions and make comments. Students work with teacher to solve the equation.

	5 -10 mins: Teacher asks students to come back together as a group and poses the following questions: *What was helpful about the addition strategy you used today?* Teacher facilitates conversation. If there is extra time, teacher teaches students to play *Race to 100* using their place value mats, base-10 blocks, and 6 sided dice. The object of this game is to be the first to have 100 blocks on your mat. Students play in pairs or groups of three. Each student has his or her own mat and base-10 blocks. The first player rolls the die and adds the number he or she rolled to his or her mat using base-10 blocks. Then the next player rolls the die. When a player has more than 10 blocks in the ones column, he or she trades 10 blocks for one 1 rod. Play goes on like this until the first player reaches 100.	Students work independently to solve the equations. Students ask for support when needed. Students listen and share. They are encouraged to ask questions and make comments. Students listen to the rules of the game and are encouraged to ask questions. Students play the game in pairs or trios and are expected to be respectful and fair.
2	**Objective: Students will be able to subtract within 100 using strategies based on place value.** **5 mins:** Teacher brings students together and reviews the addition strategy that was used during the previous lesson. **15 mins:** Teacher tells students that today they are going to work on subtracting 2 digit numbers using base-10 blocks and place value mats. Teacher again uses place value chart to demonstrate solving the following equation: 45 - 22=_____ ("I do). Teacher says: *First I will represent the number 45. I see that there is a 5 in the ones place, so I will put 5 blocks into the ones column. Next I see that there is a 4 in the tens place so I will take 4 groups of 10 (4 rods) and put them in the tens column. Now I will take away 22 blocks. I see that there is a 2 in the ones place, so I will take 2 blocks away from the ones column. Next I see that there is a 2 in the tens column so I will take 2 groups of ten (2 rods) from the tens column. Finally I will count all of my groups.* Teacher counts the blocks with the group and gets 67. Teacher will model another equation the same way, but will choose an equation that requires regrouping such as 60-25=_____. In addition, teacher will ask students for help throughout the process ("We do"). **15 mins:** Teacher distributes place value mats, base-10 blocks and a worksheet with five two-digit by two-digit subtraction equations. Teacher walks around to conference with and support students as they	Students quietly transition to math class and respond to teacher during reflection of previous day's lesson. Students listen to teacher and are encouraged to ask questions and make comments. Students work with teacher to solve the equation. Students work independently to solve the equations. Students ask for support when needed.

	complete the task ("You do"). **10 mins:** Teacher teaches students to play *Race from 100*. *Race from 100* is played the exact same way as *Race to 100*, but students start with 100 and subtract. The first student to reach 0 is the winner. Students can choose to play either *Race to 100* or *Race from 100.*	Students listen to the rules of the game and are encouraged to ask questions. Students choose a game to play in pairs or trios and are expected to be respectful and fair.
3	**Objective: Students will be able to compare and contrast the operations of addition and subtraction.** **10 mins:** As students transition to math class, the teacher hands them an index card with the word **addition** or the word **subtraction** on the front. On the back are two questions: 1) What is it? 2) Provide an example of it. Students are encouraged to work in two large groups (an addition group and a subtraction group) to answer the questions. Teacher brings the class back together to discuss each group's answers and charts responses on a piece of chart paper. **10 mins:** Teacher posts a piece of chart paper with the following definitions and reads them aloud: **Addition:** Joining two or more numbers to get one larger number. **Subtraction:** Taking one number away from another number to get a smaller number. Teacher then instructs students to turn and talk to a partner and discuss the following questions: *How are addition and subtraction similar? How are addition and subtraction different?* Teacher draws a Venn Diagram on the board: Teacher asks students to share their answers and fills in the Venn-Diagram as students respond ("We do"). **15 mins:** Teacher asks students to take out their math notebooks which have the following math prompt written inside ("You do"): 1. *Solve the following equations:* *4 + 7=* *11-7=* 2. *How are these equations similar? How are they different?* Teacher conferences with students as they independently complete this task.	Students look at index cards and read both the front and the back. Next they find their groups and discuss the two questions. At least one student per group writes the answers. When solicited, one student from each group provides answers to the questions. Students watch as teacher records answers on a piece of chart paper. Students listen to teacher and are encouraged to ask questions and make comments. Students turn and talk to a partner and discuss the similarities and differences between addition and subtraction. When solicited, one student from each pair provides answers to the questions. Students respond to peers using statement starters such as "I agree because.." and "I disagree because…" Students watch as teacher records answers. Students work independently. They are encouraged to ask questions and some students will be working in a small group with a teacher. Students are not expected to write in complete sentences but need to be able to verbally explain their answers

	10 mins: Teacher brings students together and chooses certain students to share their answers. Teacher will choose students who were able to verbalize the idea that *the equations are related because addition and subtraction are inverse operations* (in their own words).	Students share and/or listen to peers and teacher. Students are encouraged to ask questions and make comments.
4	**Objective: Students will be able to fluently add and subtract within 100 and use the inverse relationship between addition and subtraction.** **5 mins:** Teacher begins by reviewing work from the previous lesson. Teacher tells students that today they are going to be practicing adding and subtracting two-digit by two-digit numbers within 100, and that they are going to be able to check their own work by using the inverse relationship between addition and subtraction. **10 mins:** Teacher explains the inverse relationship between addition and subtraction and posts the following equation on the board: 43 + 36=___. Teacher talks through the process of adding the two addends by using a place value chart and base-10 blocks. Once completed, teacher will tell students that rather than asking the teacher or using a calculator to check the answer, you can use the inverse relationship between addition and subtraction to see if you are correct. Teacher thinks aloud: *If 43+36=79, then 79-36 must equal 43, and 79-43 must equal 36. That is the inverse relationship between addition and subtraction!* Teacher completes the two subtraction problems using a place value chart and base-10 blocks (“I do). **10 mins:** Teacher models another equation the same way but begins with a subtraction problem. In addition, teacher will ask students for help throughout the process (“We do”). **15 mins:** Teacher pairs students based on level and hands out worksheets with 2 addition and 2 subtraction problems. Students are to solve each problem and then check their answer using the inverse relationship between addition and subtraction (“You do). **5 mins:** Teacher and students review answers as a group.	Students quietly transition to math class and respond to teacher during reflection of previous day’s lesson. Students listen to teacher and are encouraged to ask questions and make comments. Students and teacher work to solve the equation together. Students are given base-10 blocks and place value mats to complete worksheet in pairs. Students share and/or listen to peers and teacher. Students are encouraged to ask questions and make comments.
5	**Objective: Students will be able to fluently add and subtract within 100 using strategies based on place value and demonstrate their**	

	understanding of the inverse relationship between addition and subtraction.	
	15 mins: Teacher tells students that today they will be asked to complete an assessment to demonstrate their understanding of the work they accomplished this week.	Students respond to teacher during reflection to previous lessons.
	Teacher posts the following equation on the board 40-27= _____ along with place value charts similar to the ones students will be using on their assessments. Teacher demonstrates how to solve this equation using place value charts and drawing base-10 blocks in order to show their work. Teacher shows students that in order to demonstrate "taking away" they should cross out 27 blocks (2 rods, 7 blocks). Teacher then demonstrates the inverse relationship by writing 13+27=40 above a second place value chart and representing this by drawing blocks to show work.	Students listen to teacher and are encouraged to ask questions and make comments.
	30 mins: Teacher passes out assessment.	Students independently complete assessment.
	Students who finished early will be given immediate feedback and the chance to fix their work. Others will be given a "challenge sheet" to complete while the others are finishing up.	Students independently complete work.

[This would be on clean page if administered to students]

Paste Summative Assessment Here:

Solve the following equations by using the place value chart below and illustrating your work, then check your work by using the inverse relationship between addition and subtraction:

1.
$$\begin{array}{r} 21 \\ +\ 17 \\ \hline \end{array}$$

hundreds	tens	ones

Now check your work:

Equation:_____

hundreds	tens	ones
		s

2.
$$\begin{array}{r} 56 \\ +\ 39 \\ \hline \end{array}$$

hundreds	tens	ones

Now check your work:

Equation:_____

hundreds	tens	ones

3.
$$\begin{array}{r} 57 \\ -\ 42 \\ \hline \end{array}$$

hundreds	tens	ones

Now check your work:

Equation:_____

hundreds	tens	ones

4. 60
- 23

hundreds	tens	ones

Now check your work:

Equation:_____

hundreds	tens	ones

Paste Answer Key/Scoring Rubric Here:

Answer Key:

1)
   a. 21+ 17= 38
   b. Either: 38-17=21 or 38-21=17
   c. Correct representation

_____/3

2)
   a. 56+39=95
   b. Either: 95-39=56 or 95-56=39
   c. Correct representation

_____/3

3)
   a. 57-42=15
   b. 42+15=57
   c. Correct representation

_____/3

4)
   a. 60-23=37
   b. 37+23=60
   c. Correct representation

_____/3

Total: _____/12

Grading Scale:

10-12 points: Mastered

1-9 points: Not Mastered