Curriculum Sample Template
Max. 8 Pages

Grade Level	Second Grade	**Content Area**	Mathematics
Course Title (grades 9-12 Only)	N/A		
Length of Unit	4 days + 1 day for the summative assessment	**Time of Year**	Second Quarter
Expected Prior Knowledge *The knowledge/skills mastered earlier in the year foundational to the mastery of the required Standard in the current sample.*	Students will be able to do the following: Count within 100; skip-count by 5s, 10s; Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; Read and write numbers to 100 using base-ten numerals, number names, and expanded form; Compare two one- and two-digit numbers based on meanings of the hundreds, tens, and ones digits; Add and subtract within 20 using mental strategies. Know and have experience using properties of operations (commutative, associative and property of 0) to add and subtract using one-digit numbers.		
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 unit aligns to the Core Knowledge Sequence for Math, to the sequence for Singapore Math, and to the 2010 AZ Math Standards. The domain of Numbers and Number Sense (CK) and Number and Operations in Base Ten (CCSS) will be taught at the Second Grade level. The skill of adding and subtracting is revisited at increasingly higher levels of rigor as set forth in the ADE 2010 Mathematics Standards (CCSS). The content knowledge of number and number sense is spiraled throughout the Core Knowledge Sequence from Kindergarten to 8^{6h} Grade, and then further applied through Pre-Algebra and Algebra in 7th and 8th Grade. As described in the Program of Instruction, cooperative learning will take place throughout this unit. Each lesson includes a combination of teacher-led instruction, small group interaction, independent practice, and ongoing assessment. Prior to beginning instruction, the teacher will administer an aligned pre-test to assess student understanding, and use data from this to target individual students' needs throughout the unit. Students will individually graph their results on both the pre- and post-tests, and graph their results in an individual portfolio, which serves as a visual representation of their progress towards their "Big Goal" in Math.		
Standard Number and Description *List the Number* and full description for the required Standard.*	2. NBT. 5 Use place value understanding and properties of operations to add and subtract. 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.*	At the end of this unit, students will be given a summative assessment which will consist of four parts. In each section, students must apply what they've learned about adding and subtracting numbers within 100 to solve problems. There are a total of twenty items on the assessment. Please see attached.		

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.*	Each item will be worth one point, for a total of 20 points. Items will be scored according to an answer key (see provided). Grading for the assessment will be based on the following scale: 0-12 points= Falls Far Below; 13-15 points= Approaches; 16–17 points= Meets; 18–20 points= Exceeds According to our program of instruction, 80% will indicate mastery. Thus, a score of 16 points or more will indicate mastery of this standard.
Materials/Resources Needed	Singapore Math Primary Mathematics Teacher's Edition 2B, Unit 7, student counters, hundreds boards, number discs, base-10 blocks, number cubes, document camera, crayons

Lesson (add as needed)	**Instruction** TW= Teacher will; SW = Student will; TPS= Think, Pair, Share; INM = Introduction to new material; CFU = Check for understanding; GP= Guided practice; IP = Independent practice	**Student Activities**
1	**Activation of Prior Knowledge:** TW direct students to review and graph their scores of the Math pre-test. TW guide students through creating a KWL chart based on the math test, identifying things they already know about adding and subtracting, as well as skills they want to learn. **Objective:** Students will find the missing part in an addition or subtraction equation, and find the missing whole in a subtraction equation **INM:** Key Points: 1. A "whole" is the total, or entire thing. 2. A "whole" is made up of parts. 3. We can see the relationship between a "whole" and its "parts" by using number bonds. **Modeling:** TW illustrate a part-whole situation which has a missing part. TW use the document camera to show students how to use counters to display two parts and the whole (7, 4, and 11). TW Draw the number bond on the board, and point out the two parts and the whole. TW then cover up one of the parts. TW write the equation for this situation on the board: 11-7=?. TW use the "Think Aloud" strategy to find the difference, using the counters as a resource. Then, TW will write: "7 + ? = 11; 11-7 = ?; ? + 4 = 11; and 11 – 4 = ?" on the board. TW continue to use counters to show how to solve find the missing parts/whole, and emphasize how to use addition and subtraction to find each missing number.	SW review their homework from last night, and ask questions when necessary. SW repeat today's objective, and discuss how it will help them reach their Big Goal in Math. SW actively listen to today's key points. SW actively listen as the teacher illustrates the part-whole situation. SW engage and offer ideas and ask questions as the teacher explains the "Whole" and "Parts" of the 7 + 4 = 11 equation. SW answer questions to demonstrate understanding. SW work with a partner. SW use counters to find the missing number in

	Guided Practice: TW distribute counters to each pair of students. TW show the following equations on the board: "4 + 8 = ?; 12 – 8 = ?; ? + 4 = 12; and 12 – 4 =?" TW guide pairs of students to use the counters to solve each missing part or whole. Then, TW direct students to form groups and make up story problems that would require equations (ie: A farmer had 12 ducklings. 5 of them were swimming on the pond, and the rest were on the land. How many were on the land?" TW direct students to discuss one another's questions, and guide them to calculate the answer of each. **Independent Practice:** TW direct students to complete pages 10 and 11 in their workbooks. These pages will require students to complete number sentences, and determine whether they need to add or subtract to find the missing numbers. TW provide scaffolding and support as needed. **Assessment:** TW use the Independent Assessment to track student mastery of the objective in a data tracker. The teacher will remediate for any student who does not show mastery. **Closure:** TW assign relevant homework, which will be this lesson's corresponding page in students' Singapore Math workbook.	each of the provided equations. SW form groups of three and make up story problems that would require such equations. SW share their situations with the class, and discuss with their team in order to calculate each answer. SW complete the independent practice page, using what they've learned about find the whole and parts of a number equation. Any student who did not successfully show an understanding of parts of a whole will meet with the teacher in a small group setting, to practice the concept until mastery. SW share their ideas aloud to the class.
2	**Activation of Prior Knowledge:** TW lead class through review of last night's homework. **Objective:** Students will add numbers mentally to make 100, and subtract numbers mentally from 100. **INM:** Key Points: 1. Just like we learned to "Make 10" with single digit numbers, we can mentally "Make 100" to help us add and subtract larger numbers. 2. 100 can be made different ways: 100 ones, or 10 tens, or a combination of tens and ones. **Modeling:** TW illustrate the process of "making 100" by counting on. TW write a missing number equation with a sum of 100 (52 + ? = 100) and its corresponding number bond. TW color in the corresponding number of squares on a hundreds board. TW color in the rest of the squares in a column with a different color, and then the rest of the columns with a third color, to show the missing number can be found by	SW review their homework from last night, and ask questions when necessary. SW repeat today's objective, and discuss how it will help them reach their Big Goal in Math. SW actively listen to today's key points. SW actively engage as the teacher demonstrates "making 100." TW watch as the teacher counts on to 100. SW watch as the teacher models how to color in the hundreds chart to find the missing part.

	adding 8 to get to the next ten, and then 40 to get to 100. TW ask clarifying questions to check for understanding. **Guided Practice:** TW provide each pair of students with a blank hundreds chart. TW write another problem on the board, and students will work together to solve it using the coloring method. TW repeat two more times, and check in with each pair to ensure understanding. **Independent Practice:** TW direct students to complete the textbook page 12, on which they'll independently use the hundreds chart to "make 100." TW provide scaffolding and support as needed. **Assessment:** TW use the Independent Assessment to track student mastery of the objective in a data tracker. The teacher will remediate for any student who does not show mastery. **Closure:** TW direct students to TPS what they learned about today. TW assign relevant homework, which will be this lesson's corresponding page in students' Singapore Math workbook.	SW work in pairs. SW use the hundreds chart to model the equations written on the board. SW check their answers by using the counting on method. SW share their answers with their class, and explain how they colored their hundreds chart for each. SW complete the textbook page, coloring hundreds charts to solve equations independently. Any student who did not successfully use the hundreds chart to solve equations will meet with the teacher in a small group setting. SW TPS with their neighbor about using the hundreds chart to solve equations.
3	**Activation of Prior Knowledge:** TW lead the class in a review of last night's homework. **Objective:** Students will add ones or tens to a 2-digit number, and count on mentally up to 100. **INM:** Key Points: 1. To mentally add numbers, we usually start with the highest place value. 2. To count on, we usually start with the highest place value, and count up from there. 3. There is more than one approach to mentally adding numbers. **Modeling:** TW prepare a set of number discs (labeled with "tens" and "ones). TW display 5 tens and 4 ones on the document camera. TW add 8 more ones next to them. TW write "54 + 8" and discuss strategies to mentally find the sum. TW discuss two strategies: adding the tens, and adding the ones. TW show both ways, and also draw a number bond picture. Then, TW model the counting on strategy, by using "29 + 2" and demonstrating how to start with the larger number and count up for the smaller number.	SW review last night's homework with the teacher, and ask questions when necessary. SW repeat today's objective, and discuss how it will help them reach their Big Goal in Math. SW actively listen to today's key points. SW actively engage as the teacher demonstrates adding with the number discs. SW watch as the teacher shows how to use the tens and ones discs to solve the expression 54 + 8. Then, SW listen as the teacher uses a different strategy, counting on, to solve 29 + 2. SW answer questions to demonstrate understanding. SW work with a partner. Each pair of students will work together with

	Guided Practice: TW project practice problems on the board (38 + 7; 64 + 3; 23 + 8; and 72 + 4). TW direct students to work in pairs to solve the problems. Then, TW ask students to share with the class which method they used to solve each equation. **Independent Practice:** TW direct students to complete page 15 in their textbook, which requires them to add numbers within 100. TW provide scaffolding and support as needed. **Assessment:** TW use the Independent Assessment to track student mastery of the objective in a data tracker. The teacher will remediate for any student who does not show mastery. **Closure:** TW direct students to work with a partner to create a real-world situation that requires adding within 100. TW direct students to share their ideas with the class. TW assign relevant homework, which will be this lesson's corresponding page in students' Singapore Math workbook.	number discs to solve the expressions written on the board. When finished, each pair of students will share their answers with the class, and discuss which method they used and why. SW complete the textbook page, adding numbers up to 100 independently. Any student who does not show mastery of the objective will meet with the teacher in a small group setting, to practice the skill to mastery. SW work with a partner to create a real-world situation in which one would have to add numbers within 100 to solve a problem. SW share their situations with one another, and solve each problem mentally.
4	**Activation of Prior Knowledge:** TW lead class in reviewing last night's homework. **Objective:** Students will subtract ones or tens from a 2-digit number, and count backwards to solve subtraction problems. **INM:** Key Points: 1. One ten is the same as ten ones. 2. We can switch one ten with ten ones in order to solve some subtraction problems. 3. We can count backwards to solve some subtraction problems. 4. When we count backwards, we begin on the larger number and count down. **Modeling:** TW illustrate mental subtraction of ones from a 2-digit number when renaming occurs. TW use number discs to display 5 tens and 4 ones. TW tell students she wants to subtract 8. TW write the expression 54-8 and discuss strategies to mentally find the value of 54-8. TW find the tens/ones, and TW will count backwards. TW explain that both methods arrive at the same answer. **Guided Practice:** TW display the expression 14-8 on the board. TW direct students to work in pairs to solve the expression, first by switching out the tens block with ten ones, then by counting backwards. TW give students three more problems to solve. Then, TW ask students to share	SW review their homework from last night, asking questions when necessary. SW repeat today's objective, and discuss how it will help them reach their Big Goal in Math. SW actively listen to today's key points. SW actively engage as the teacher illustrates how to mentally subtract. SW watch as the teacher models 54- 8 on the board, and switches out one ten with ten ones, then takes away 8. SW listen as the teacher counts backwards, starting on 54 and counting down 8, to arrive at the same answer. SW answer questions to demonstrate their understanding of the different methods of subtracting. SW work in pairs to solve 14-8. First, SW use the tens and ones method, by trading one tens block with ten ones blocks, and taking away 8. Then, SW count backwards together to check their answers. SW share their answers with the class, and discuss which methods they preferred and

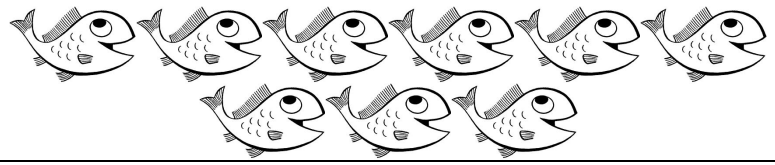
	with the class which method they used to find their answers, and why. **Independent Practice:** TW direct students to complete page 18 in their textbooks, requiring them to subtract number less than 100. TW remind students they may use whichever method they feel more comfortable with. TW provide scaffolding and support as needed. **Assessment:** TW use the Independent Assessment to track student mastery of the objective in a data tracker. The teacher will remediate for any student who does not show mastery. **Closure:** TW direct class to create real-world situations in which one would have to mentally subtract numbers less than 100. TW direct each group to share out, and other students to mentally solve each problem. TW assign relevant homework, which will be this lesson's corresponding page in students' Singapore Math workbook. Finally, TW refer students back to the KWL chart, and facilitate conversation about what students have learned in this unit. TW add student responses to the "L" column.	why. SW complete page 18 in their textbooks, subtracting numbers less than 100. SW use whichever method they are more comfortable with, and double check their answers. Any student who does not show mastery of the skill will meet with the teacher in a small group setting. Students will practice the skill until mastery. SW work with a partner to create real-world situations in which one would have to mentally subtract numbers less than 100. SW share their problems, and solve one another's equations by using mental math. SW share out things they've learned in this unit, as teacher records their responses on the KWL chart.

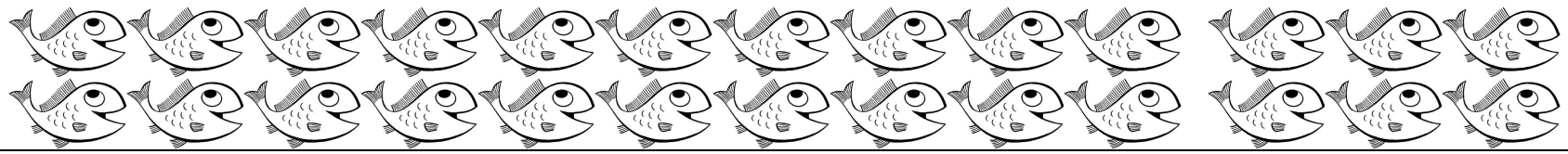
Math Summative Assessment

Name: _____

2. NBT. 5 Use place value understanding and properties of operations to add and subtract.
Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Part I. Directions: Find the missing numbers.

Part	Part
	___

Whole


a) 9 + __?__ = 26 b) 17 + 9 = ___?__ c) 26 – 17 = __?__ d) 26 – 9 = __?___

Part II. Directions: Find the missing number in each of the following:

e) ____ + 25 = 40 f) 58 + ____ = 72 g) ____ - 79 = 11 h) 100 - ____ = 57

Part III: Directions: Find the value of each of the following:

i) 43 + 6 j) 48 + 7 k) 56 + 5 l) 24 + 30 m) 43 + 50

n) 38 – 2 o) 24 – 6 p) 70 – 9 q) 78 – 20 r) 51 – 30

Part IV: Directions: Read each word problem and solve.

s) A farmer had 45 ducks. After selling some of them, he had 31 ducks left. How many ducks did he sell?

t) There are 92 students in the school cafeteria. 57 of them are boys. How many girls are there in the cafeteria?

Answer Key
a. 17
b. 26
c. 9
d. 17
e. 15
f. 14
g. 90
h. 43
i. 49
j. 55
k. 61
l. 54
m. 93
n. 36
o. 18
p. 61
q. 58
r. 21
s. 14
t. 35

Score: _____/20 Grading Scale: 0-12 points= Falls Far Below; 13-15 points= Approaches; 16–17 points= Meets; 18–20 points= Exceeds