Curriculum Sample Template – 8 Pages Max. (12 pages for integrated ELA sample)

Grade Level	Fifth Grade	**Content Area**	Math
Course Title (grades 9-12 Only)	N/A		
Expected Prior Knowledge *List the knowledge/skills mastered earlier in the year that are foundational to the mastery of the Required Standard(s).*	Synergy students will already know equivalent fractions. Students will be able to use the four operations with whole numbers to solve problems. They will be able to multiply and divide to solve word problems involving multiplicative comparison, e.g. by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison		
Alignment to Program of Instruction *Describe how the methods of instruction found in this sequence of lessons align to the Program of Instruction described in the application package.*	Synergy teachers will engage students in cooperative learning structures throughout the lesson. Lessons will be built using the Gradual Release of Responsibility. Synergy teachers will monitor student understanding and adjust instruction based upon student responses. Instructional strategies such as cooperative learning, differentiation, questioning, and meta-cognition will be used consistently during instruction.		
Standard Number* and Description *The standard number and description of the Required Standard(s) being instructed and assessed to mastery in the curriculum sample.*	**5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.** ***For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.***		
Materials/Resources Needed *List all items the teacher and students will need for the entire sequence of instruction (excluding common consumables)*	Anchor charts, math notebooks, document camera, whiteboards,		

* ***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, Cluster, Standard (e.g., 6.EE.B.7). For HS Math, use Conceptual Category-Domain, Cluster, Standard (e.g., A-REI.C.6).*

Lesson (add as needed)	**Instructional Strategies -** *List and describe teacher actions, lesson by lesson, which will provide students with opportunities to engage the grade-level rigor defined by the Required Standard(s). Indicate alignment of instructional strategies to specific component(s) or content/skill(s) of the Required Standard/component.*	**Student Activities -** *Describe the activities, lesson by lesson, in which students will engage to allow them to master the grade-level rigor defined by the Required Standard(s). Indicate alignment of student activities to specific component(s) or content/skill(s) of the Required Standard/component.*
1	**Objective: The students will write simple expressions and interpret numerical expressions.** **Introduction:** Sometimes when we are understanding math problems we will only need to write an equation to represent that problem. These questions do not require us to solve them. **I-Do (Modeling):** We will listen to the information presented to determine how we will write a matching equation. When doing this we will need to use the same problem solving strategies we have learned in the past. We will underline key information, determine the type of operation being used, and then write a matching equation. The teacher will pose the first problem to the group: Every week for 20 weeks, Kathy earned $15 for mowing lawns and $35 for delivering newspapers. At the end of 20 weeks, she stopped mowing lawns and delivering newspapers and spent $300. She didn't earn or spend any money besides what is described here. First we will underline key information to help us understand the problem. The teacher will underline the information needed to solve the problem. What should I add to my equation first? Well I know that Kathy earned $15 for mowing lawns and $35 for delivering newspapers. I will write that part of the equation: 15+35 I am adding those because both totals together determine how much was earned that week. What else do I need to add to the equation? Well she did this for 20 weeks. So that means she did that same work 20 times. Let me add that to the equation. 20 x (15+35) There was one more piece of information we added. It says that she spent $300 of that money. That means it was taken from the total. I will have to subtract that amount. 20 x (15 + 35) – 300= x **We Do (Guided Practice):** Now lets try to set up the next equation together. The teacher presents the next problem: Alina has just received 3 video games for her birthday to add to her existing 12 video games. A week later she went to the thrift store and doubled her video games. Another week later she bought 5 more games. We need to start by underlining the key information we know.	Students underline the information on their copy. Students will write the equation on their worksheet as the teacher models. Students will underline key information. Students will use the Rally Coach structure to assist partners in answering the different steps to the problem.

	Now you will use the Rally Coach structure to follow the steps we completed will the problem we just did as a class. (Teacher will have an anchor chart of the steps to follow) Remember we are not solving the problem we are only writing an equation to match the situation presented. **Check For Understanding:** The teacher will check student's equations during Rally Coach structure to determine if more examples are needed. If 80% of the students get it then they move to independent practice and the other 20% assemble in a small group for re-teaching or more we-do practice. **You-Do (Independent Practice):** The teacher will give students a worksheet with similar problems to complete on their own. Small groups may be pulled if there are students that need additional support. **Discussion Circle:** Why is it important to be able to write matching equations for word problems? The teacher will call on students to share answers during discussion circle.	Students will complete independent practice worksheet. Students will use Stand Up Hand Up Pair Up to share answers with a partner. Students will participate in discussion circle.
2	**Objective: The students will write and recognize that they are a given amount greater than the simple equation.** **Introduction:** Yesterday we focused on using our word problem strategies to write matching equation to multi-step problems. Today we will focus on finding a matching scenario for our equation. **I-Do (Modeling):** The teacher will present the following problem: **Which problem could be solved with the expression 3×(6+4)?** *A - Edward mowed 3 lawns in the morning and 6 lawns in the afternoon. He did this for 4 days. How many lawns did he mow?* *B - Danielle had 6 dolls. She bought 4 additional dolls. She then went to the thrift store and tripled her collection. How many dolls does she have now?* *C - Barry ate 3 cookies on Monday. He then ate 6 cookies on Tuesday. On Friday he ate 4 cookies. He follows this pattern for 4 weeks. How many cookies did he eat?* We will use the same process as yesterday. We will read each situation and write an equation. After we write equations we will find which one matches the equation at the top. The teacher will start with part A. I will underline the key information. Now I will write an equation. I know that 3 lawns were mowed in the morning and 6 in the afternoon so I will write: 3+6 He did this for 4 days or 4 times. The teacher will write (3+6) x 4. Does this match the equation? (No) Lets try part B. Teacher will have students identify key information. Teacher will call on students to help find first part of equation.	The student's will chorally answer the teachers question. Students will underline information. Students will Think, Pair, Share their response to a partner. Students suggest additional information. Students chorally respond. Students underline key information. Students write first part of equation. Students write second part of equation. Students chorally respond.

	What do we know from the problem that can help us with our equation? Teacher writes 6+4. Is there anything else included in problem B? Teacher writes (6+4) x 3 Does this match the given equation? (yes) Even though that one matches we still need to check the last equation. Sometimes problems will have one answer will other times we may select multiple correct answers. Teacher asks students to look at part C. Teacher has students help identify key information. Teacher calls on random reporter to share first part of equation. Teacher writes: 3+6+4 What else do we know? Teacher selects random reporter to share: Teacher writes complete equation (3+6+4) x4 Does this equation match? **We Do (Guided Practice):** The teacher has students use the Sage and Scribe structure to solve the following problem:**Which problem could be solved with the expression 5×(3+2) ?** A - Greg fertilized 3 lawns in the morning and 2 lawns in the afternoon. He did this for 5days. How many lawns did he fertilize? B - Betty has 5 students she tutors. She got 3 additional students. She then advertised and doubled her students. How many students does she have now? C - Allie builds furniture. She built 3 chairs and sold 2. She did this for 5 days. How many pieces of furniture did she have after the 5 days? **Check For Understanding:** The teacher will view students strategies in their notebooks to determine mistakes and if additional practice is needed. If 80% of the students get it then they move to independent practice and the other 20% assemble in a small group for re-teaching or more we-do practice. **You-Do (Independent Practice):** Students will complete an independent practice sheet on their own. **Discussion Circle**: How did yesterdays lesson prepare you to find matching equations? The teacher will help facilitate students discussion circle.	The students will use the Sage and Scribe structure to answer the question. Students will complete the independent practice on their own. Students will use the Mix and Freeze structure to answer the question. Students will participate in class discussion circle.

3	**Objective: The students will write equations to indicate an amount x times greater than the equation.** **Introduction:** We will continue finding equations for given expressions today. Over the past few days we have been given situation and we wrote and equation to match and yesterday we did the reverse. **I-Do (Modeling):** Today we will be given an expression using words and we will find the numerical match. The teacher will present this problem: **Which expression is half as large as the expression 46+42?** Please choose from one of the following options. A. 2÷(46+42) B. (46+42)÷2 C. 2×(46+42) Teacher will model a think aloud. The first part of the problem is easy. I know that we have 46+ 42. The other information I have is that it is half as much. That means that I will have two parts. Which one of the problems matches that statement? Although A and B look similar I am dividing the total of 46 and 42 by 2 so the answer is B. **We Do (Guided Practice):** Now you will try one with me. The teacher will write the expression on the board: **Which expression is 3 times as large as the expression 610−97?** Please choose from one of the following options. A. 3×610−973 B. 3×(610−97) C. 3+(610−97) The teacher will call on Random Reporters to explain why they chose the answer they did. The teacher will address any student misconceptions at this time. **Check For Understanding:** The teacher will assess student progress to determine if additional practice problems are necessary. The teacher will circulate around the room and add challenges and supports as needed. If 80% of the students get it then they move to independent practice and the other	Students share answers with a partner. Students will write the equation that they think matches on their whiteboard and use the showdown structure to share responses with their teammates.

	20% assemble in a small group for re-teaching or more we-do practice. **You-Do (Independent Practice):** The teacher will have students answer similar questions on Khan Academy.	Students will use Khan Academy to answer problem sets.
4	**Objective: The students will recognize numbers as an amount higher without having to calculate the sum or product**. **Introduction:** Sometimes we will encounter problems that we don't have to solve but rather use the information given to determine if statements are true. **I-Do (Modeling):** The teacher will present the first problem: **Which statement is true regarding the following calculation:** **3 × (9 + 921)** A. Three times as large as 921 B. Three times as large as 930 C. Three times as large as 9 D. One time as large as 3 + 9 + 921 Lets start with the first statement. Does the equation show show three times as large as 921? As I look at the problem I do see three times but it is of 921 +9 not just 921. The second statement says 3 times as large as 930. Again I see 3 times a number and 9 +921 does equal 930. So that is true. The third statement says 3 times as large as 9 but as we have already said it should be 9 + 921. The fourth statement says it is only one times as large as 3+9+921. In this example they only added all the numbers. The only correct statement is C. **We Do (Guided Practice):** The teacher posts the next set of statements: **Which statement is true regarding the following calculations:** **Let A: 3 × (10 + 8)** **Let B: 6 × (10 + 8)** A) A is two times as large as B B) A is equal to B C) B is less than A D) A is 3 times as large as B	

	E) B is two times as large as The teacher will have students use their whiteboards to write their answers. The teacher will present each statement and the students will write either true or false on their whiteboard and why. The showdown captains will call showdown and students will work their way around the team sharing responses. The teacher will listen to student discussions and answers. The teacher will have the students return to whole group discussion about which statement is true. **Check For Understanding:** The teacher will determine if additional problems are needed during the Show Down structure. Some students will be given small group intervention or problems that have fewer choices depending on students needs. If 80% of the students get it then they move to independent practice and the other 20% assemble in a small group for re-teaching or more we-do practice. **You-Do (Independent Practice):** The students will complete similar questions with true or false statements as the teacher pulls small groups and takes notes on student's progress. **Discussion Circle:** Were there any statements that caused a disagreement during the showdown structure? How did you resolve the issue to determine who was correct? The teacher has students return to whole group discussion.	Students will use the Showdown structure to determine if the statement is true or false and why. Students will defend their answer and solve disagreements within their team. Students complete independent practice. Students discuss in teams the question. Students participate in discussion circle.
S.A.	*Provide an opportunity for the student to complete the summative assessment items which is clearly separate from instruction and guided or independent practice, and in which the student is assessed independently. In the Student Activities column, provide a brief description of the summative assessment (S.A.) items that will allow students to demonstrate mastery of the rigor of the Required Standard(s)/components, and the context in which the items will be administered.*	The summative assessment includes 4 items that will test student knowledge and understanding of standard **5.OA.2.** Students who demonstrate proficiency will be able to write matching expressions and interpret number sentences without having to solve the problem. In order to be highly proficient students will also need to be able to clearly explain how they came up with the expression.

Summative Assessment Items and Scoring: *Below, provide at least three Summative Assessment Items that together accurately measure student mastery of the application of the content and/or skills as defined by the grade-level rigor in the Required Standard(s). For each assessment item, provide an answer key or scoring rubric, which clearly describes how assessment items are to be scored and how points will be awarded, such that mastery of the application of the content and/or skills as defined by the grade-level rigor in the Required Standard is clearly demonstrated by an acceptable score.*

Summative Assessment Item 1 (clearly identify answer key/scoring rubric, and acceptable score): (1 pt. for correct answer) 1 point total

Robin can bike 4 miles in one hour. Write an algebraic expression to show how many miles she can bike in *h* hours? (4*h*)

Summative Assessment Item 2 (clearly identify answer key/scoring rubric, and acceptable score): (1 pt for correctly written expression, 1 pt. for explanation) 2 points total

Write the expression for the problem below.

Adam is twice the height of *t* increased by 9. (2t+9)

Explain how you came up with this expression.

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Summative Assessment Item 3 (clearly identify answer key/scoring rubric, and acceptable score): (1 pt. for correct answer) 1 point total

Write an equation to match ten times the quotient of **104** and **8.** Any of these responses: 10(104/8) or 10*(104/8) or (104/8)*10

Summative Assessment Item 4 (clearly identify answer key/scoring rubric, and acceptable score): (1 pt. for correct answer) 1 point total

Which statements are true regarding the following calculations:
Let A: 8 × (5 + 5)
Let B: 4 × (5 + 5)

- ☐ A is four times as large as B
- ☐ A is two times as large as B
- ☐ A > B
- ☐ A < B
- ☐ A = B
- ☐ B is two times as large as A

Scoring Guide		
Highly Proficient	5/5	100%
Proficient	4/5	80%
Minimally Proficient	3/5	60%
Not Proficient	<3/5	<60%