Grade 1

Unit	Unit Title	Lesson	Day
2.2	**Work with Addition and Subtraction Equations**	**1 of 5**	**1 - 3**

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, ~~and comparing~~, with unknowns in all positions, e.g., by using objects, drawings, and equations ~~with a symbol for the unknown number to represent the problem.~~ [2] [2]See Table 1	•Solve *adding to* and *putting together* word problems, within 20, using objects, drawings, models and equations. • Model and record all the ways to put together numbers within 10. • Begin to understand the meaning of the equal sign when modeling with equations.	**SMP1** Make sense of problems and persevere in solving them. **SMP2** Reason abstractly and quantitatively.	•How do you solve addition problems by using objects, drawings or making a model? •How can you systematically show all the ways to make a number within 10?
5. Prerequisite Knowledge	**6. Essential Vocabulary**	**7. Possible Misconceptions**	**8. Necessary Materials**
Use addition within 10 to solve word problems involving situations of adding together and putting together using objects and drawings.	Systematically Model (bar model)	•Not finding all the ways to make a number because they have not systematic way to keep track. •Incorrectly using the bar model.	**OnCore** Lesson 4 & 5 Student pages 7 – 10 **Investigations** Unit 6 INV 1 & 2 SAB page #1,6,12,16 – 19, 22,24,30 Addition practice pages: Unit 2 #12,25,30, Unit 3 #38, Unit 4 #16, Unit 6 #11, 27 Unit 7 #2, 13

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will guides students to solve *adding to* and *putting together* addition problems, within 20, with Oncore Lesson 4 or any additional practice pages they choose. They will continue to guide students to systematically model and record all the ways to put together numbers within 10 utilizing OnCore Lesson 5 and Investigations Unit 6 INV 1 & 2.	Students will solve *adding to* and *putting together* word problems using objects, drawings, models and equations. They will systematically model and record all ways to put together numbers within 10. Students will begin to understand the meaning of the equal sign as they model with equations. OnCore pages 7 – 10 , Investigations Unit 6 and any other additional pages chosen by the teacher will be used to practice.

Grade 1

Unit	Unit Title	Lesson	Day
2.2	**Work with Addition and Subtraction Equations**	**2 of 5**	**4 - 7**

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, ~~and comparing~~, with unknowns in all positions, e.g., by using objects, drawings, and equations ~~with a symbol for the unknown number to represent the problem.~~ [2] [2]See Table 1	•Use pictures to show "taking from" to find differences. •Use objects to solve "taking from" and "taking apart" subtraction problems. •Solve "taking from" and "taking apart" subtraction problems using the strategy make a model. •Begin to understand the meaning of the equal sign when modeling with equations.	**SMP1** Make sense of problems and persevere in solving them. **SMP4** Model with mathematics.	• What strategies can you use to solve subtraction problems? •How can you show "taking from" of "taking apart" with pictures or objects? •How do you solve subtraction problems by making a model? •How can you solve the problem a different way?

5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
Subtraction within 10.	Taking from, take apart Minus, difference, subtraction Model, bar model Equation, subtraction sentence	Misinterpreting the problem. Recognizing what the whole is.	**OnCore** Lessons 6 – 9 Student pages 11 – 18 **Investigations Unit 3** Investigations 2 pg 78 SAB page #21,22,24,25, 35,45 Additional subtraction practice: Unit 4 #5,6,20 Unit 5 #8,9,22 Unit 6#33,38 Unit 7 #4,6,14

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will guide students to solve *taking from* and *taking apart* subtractions problems. Teachers will use OnCore Lessons 6 – 9 and Investigations Unit 3 INV 2 to help students understand how to solve them using objects, pictures, bar models and equations. Teachers will focus on helping students understand the whole and the parts of the whole in each situation. Additional practice pages have also been provided.	Students will learn how to solve taking from and taking apart subtraction problems using objects, pictures, bar models and equations. They will focus on understanding what represents the whole and parts of the whole in each situation. As students represent situations using equations they will begin to understand the meaning of the equal sign.

Grade 1

Unit	Unit Title	Lesson	Day
2.2	**Work with Addition and Subtraction Equations**	**3 of 5**	**8 - 10**

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
1.OA.4 Understand subtraction as an unknown-addend problem. For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.	•Recall addition facts to subtract within 20. •Relationship between addition and subtraction.	**SMP1** Make sense of problems and persevere in solving them. **SMP2** Reason abstractly and quantitatively.	How can you use addition to help you find the answer to a subtraction fact?

5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
Know all the ways to model and put together numbers within 10. Add within 20.		•Misunderstanding the relationship between addition and subtraction. •Understanding what is the whole.	**OnCore** Lesson 21 & 22 Student pages 41 – 44 **Investigations** Heads & Tails Unit 3#14, Unit 4#8, Unit 5#18, Unit 7 #22, 23 Unit 8 #4 Unit 9 #4 Unit 9 #1 Unit 3 INV 3 SAB pgs #28& 30 Additional +/- problems: Unit 6#34, 39 – 41 Unit 7 #13,14

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will guide students to understand subtraction as an unknown-addend problem and the relationship between addition and subtraction using OnCore Lessons 21 & 22. They will help student understand that they can solve a subtraction problem by adding up. Using the Heads & Tails practice pages (or any of the additional practice pages) have students think about what they need to add to get to the total instead of subtracting. Teachers will continue to help students understand the parts of a part/part/model.	Students will guide understand the relationship between subtraction and addition (understand subtraction as an unknown-addend problem). They will practice solving what they may consider a subtraction problem by adding up to find the total instead (Heads & Tails problem pages). Students will continue working to understand what part is the whole in a part/part/whole model. They will use various practice pages from Investigations.

Grade 1			
Unit **2.2**	**Unit Title** **Work with Addition and Subtraction Equations**	**Lesson** **4 of 5**	**Day** **11 & 12**

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
1.OA.5 Relate counting to addition and subtraction. (e.g., by counting back 2 to subtract 2).	Use count back as a strategy to subtract.	**SMP1** Make sense of problems and persevere in solving them. **SMP2** Reason abstractly and quantitatively.	•How can you use the strategy count back to subtract? •Why does the strategy count back work?
5. Prerequisite Knowledge	**6. Essential Vocabulary**	**7. Possible Misconceptions**	**8. Necessary Materials**
Skip count backwards by 1, 2, 3, etc.	Count back	Counting the first object as one as they are counting back.	**OnCore** Lesson 24 Student pages 47 & 48 **Investigations** SAB Unit 5 pg 14

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will help students relate counting to addition and subtraction. Using the strategy counting back is a great way for students to understand subtraction. Using OnCore lesson 24 teachers will model using counters and Investigations SAB is an example of how to model this strategy using a number line. As teachers make students aware of different strategies they will help them choose the one that is most efficient for them.	Students will learn to relate counting to addition and subtraction by using the count back strategy to solve subtraction. They will practice counting back using counters with the OnCore student pages 47 & 48. The investigations SAB pg 14 will introduce the students to the counting back strategy using a number line. As students explore different strategies we hope they will ultimately choose the one that is most efficient for them.

Grade 1

Unit	Unit Title	Lesson	Day
2.2	**Work with Addition and Subtraction Equations**	**5 of 5**	**13 - 15**

Lesson Focus

1. Standards Addressed	2. Content to be Learned	3. Mathematical Practices	4. Essential Question
1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true or false? 6=6, 7=8-1, 4+1=5+2*	•Understand the meaning of the equal sign to mean "is the same as". •Determine if an equation is true or false.	**SMP1** Make sense of problems and persevere in solving them. **SMP2** Reason abstractly and quantitatively.	•How can you determine if a number sentence (equation) is true or false?

5. Prerequisite Knowledge	6. Essential Vocabulary	7. Possible Misconceptions	8. Necessary Materials
•Add and subtract within 20. •Understand the meaning of the equal sign, and determine if equations involving addition are true or false.	Equation/number sentence True, false	•Misinterpreting the meaning of the equal sign. Believe the equal sign means the answer is the number directly to the right of equal sign. Students may say that 4+1=5+2 is true because they know 5 is the answer to 4+1.	**OnCore** Lesson 42 Student pages 47 & 48 **Investigations Snap-ins** Unit 6 1.8A & 2.6A Student pages C43 –C54 Unit 8 C72, C74

Instruction

9. Instruction Practices (What are the teachers doing)	10. Learning Practices (What are the students doing)
Teachers will guide students to understand the meaning of the equal sign by having them determine if equations involving addition or subtraction are true or false. Teachers will use both Oncore Lesson 42 and the Investigations Snap-ins for Unit 6 to construct their lessons. This concept will lead to students solving equations with unknowns. The equal sign should be read as "is the same as".	Students will understand the meaning of the equal sign as they practice determining if addition or subtraction equations are true or false. Students often have difficulty with this concept because up until now they thought the equal sign meant "total". In this unit, students will read the equal sign as "is the same as". Understanding of this concept will help when solving equations with unknown.