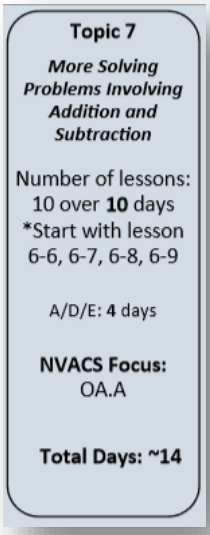
▸ Grade 2 Topic 7: More Solving Problems Involving Addition and Subtraction



Big Conceptual Idea: K-5 Progression on Operations and Algebraic Thinking (pp. 6-7; 18-21)
Prior to instruction, view the Topic 7 Professional Development Video located in Pearson Realize online. Read the Teacher's Edition (TE): Cluster Overview/Math Background pages (pp. 389A-389E), the Topic Planner (pp.389I-389J), the Topic Performance Assessments (pp. 433-434A), and all 6 lessons.

Mathematical Background: Read Cluster Overview (TE, pp. 389A-389E)	Topic Essential Question: How can you solve word problems that use adding and subtracting? *Reference Answering the Topic Essential Questions (TE, pp. 431-432) for key elements of answers to the Essential Questions.*

The lesson map for this topic is as follows:

6-6	6-7	6-8	6-9	7-1	7-2	7-3	7-4	7-5	7-6	Assessment

4 A/D/E days used strategically throughout the topic.

2nd Grade Curriculum Pacing Framework: Balanced Calendar

Instructional note:
The big idea of Topic 7 focuses on the meaning of operations through word problems that illustrate multiple interpretations of addition and subtraction. Focus instruction on Nevada Academic Content Standard (NVACS, 2010) 2.OA.A.

2.OA.A Represent and solve problems involving addition and subtraction.

1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

The standard references one- and two-step word problems involving various situations. These situations or problem types (inserted below for reference) help students develop meanings for addition and subtraction. It is important to be mindful that second grade students are expected to demonstrate security with all problem types, including unknowns in each place, by the end of the year. This expectation is supported by work done in kindergarten and first grade. Kindergarten students work with the problem types outlined with a thick, *solid* border as the actions of composition/decomposition are more easily modeled. First grade students interact with all problem types, but the problem types outlined with a thick, *dashed* border are the most challenging and are not expected to be secure until the end of second grade (CCSWT, 2011, p.20-21).

In general, students find *Add To* and *Take From* problem types easier because they include explicit action. *Put Together* and *Take Apart* problem types are generally more challenging, as they do not include explicit action and involve combinations of different kinds of objects into one collection as noted in the table below (Van de Walle, et al., 2014, p. 129). Finally, *Compare* problems tend to be the most challenging problem types, because one of the quantities must be conceptualized, as it is not present physically in the problem (CCSWT, 2011).

As stated in the "Progressions for the Common Core State Standards in Mathematics", two-step problems should not involve the most difficult subtypes (2011, p.20-21). Carpenter, Fennema, Loef-Franke, Levi and Empson developed a framework for students' strategies for solving these problems. The framework indicates that students often start direct modeling, then move to counting strategies and derived fact strategies (2015). When students use direct modeling strategies, they make an "Explicit physical representation of each quantity in a problem and the action or relationship involving those quantities before counting the resulting set." (Carpenter, et al., 2015, p.29). These models can include concrete objects, tally marks or pictures.

Counting strategies refer to when "…a child recognizes that it is not necessary to physically construct and count the two sets described in a problem." (Carpenter, et al., 2015, p.24). These students may keep track of counts using their fingers, counters or tallies, but most give no evidence of a physical action when counting. Finally, derived fact strategies "can be represented with equations or other notation using written numerals" (Carpenter, et al., 2015, p.32), and where "the notation becomes a tool for reflection." (Carpenter, et al., 2015, p.33). Although students will progress to more efficient strategies over time (e.g., from direct

modeling to counting strategies to derived facts), it is common for students to move among these strategy types based upon the numbers, context and the difficulty of the problem type.

As students interact with the problem types, help them draw connections to the meanings of the operations (addition and subtraction) as well as the relationship between operations. Bar diagrams help students make sense of word problems and see the relationship between quantities supporting part-part-whole reasoning. In addition, making bar diagrams helps students write an equation to solve the problem. The use of a question mark (?) to represent the unknown quantity helps students develop algebraic thinking.
In order to offer support or challenge, consider factors that affect problem difficulty. As previously discussed, the structure of a word problem affects the level of difficulty, as do the numbers and wording of the problem. If a student is struggling with *put together, take apart* or *compare* problems, consider modifying the problem to include an explicit action (*add to* or *take from*), returning to the original problem type after support is offered. In addition, adjusting the numbers in a problem allows teachers to respond to learners. For students who are struggling, help them focus on the context of the problem type by decreasing the numbers and then return to the original level of difficulty. For students who are ready for extension, a challenge might be offered by changing the numbers to elicit strategies based on decomposing or recomposing.

TABLE 1. Common addition and subtraction situations.[6]

	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? 2 + 3 = ?	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? 2 + ? = 5	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? ? + 3 = 5
Take from	Five apples were on the table. I ate two apples. How many apples are on the table now? 5 – 2 = ?	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? 5 – ? = 3	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? ? – 2 = 3

	Total Unknown	Addend Unknown	Both Addends Unknown[1]
Put Together/ Take Apart[2]	Three red apples and two green apples are on the table. How many apples are on the table? 3 + 2 = ?	Five apples are on the table. Three are red and the rest are green. How many apples are green? 3 + ? = 5, 5 – 3 = ?	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? 5 = 0 + 5, 5 = 5 + 0 5 = 1 + 4, 5 = 4 + 1 5 = 2 + 3, 5 = 3 + 2

	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare[3]	("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? ("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? 2 + ? = 5, 5 – 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? 2 + 3 = ?, 3 + 2 = ?	(Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? 5 – 3 = ?, ? + 3 = 5

[1]These take apart situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean makes or results in but always does mean is the same number as.
[2]Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation, especially for small numbers less than or equal to 10.
[3]For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using more for the bigger unknown and using less for the smaller unknown). The other versions are more difficult.

Council of Chief State School Officers. (2010). The Nevada Academic Content Standards. Retrieved from http://www.doe.nv.gov/uploadedFiles/nde.doe.nv.gov/content/Standards_Instructional_Support/Nevada_Academic_Standards/Math_Documents/mathstandards.pdf.

Math Practice 2: Reason abstractly and quantitatively

Focus on opportunities for students to develop MP.2 behaviors. This is the focus of the Math Practices and Problem Solving lesson 7-6. Reference Teacher's Edition (pp. F24-F24A) and the *Nevada Academic Content Standards for Mathematical Practice*.

Topic 6 has been decomposed with lessons either omitted or distributed to Topics 5 and 7. Lessons 6-6, 6-7, 6-8, and 6-9 are paced before lesson 7-1 and are included in this document.

Note: The purpose of the curriculum guides is for additional considerations. Therefore, not all components may have additional notes included in this guide.

Topic 6 and 7 Essential Academic Vocabulary Use these words consistently during instruction.	
New Academic Vocabulary: (First time explicitly taught)	Review Academic Vocabulary: (Vocabulary explicitly taught in prior grades or topics)
	equation *difference* *bar diagram* *tens* *ones* *open number line* *break apart* *mental math* *compensation* *subtract*

Additional terminology that students may need support with: *algorithm, backward, column, forward, minuend (whole), model, row, separate, subtrahend (part subtracting)*

*Collaborative Team Conversations (CTC)

Consider using *one* of the following as part of the formative assessment process at the lesson level to **collect student work** to analyze for evidence of mathematical understanding:

Guiding question: "Are students developing conceptual understanding and connecting real world context with numbers, strategies, and/or equations?"

Lesson	Evidence	Look for
7-3	*Solve & Share* (student work samples)	Focus CTC around the big idea: • student strategies and models • sense-making strategies
7-5	*Quick Check* (digital platform) Items 1, 3, and 4	Focus CTC around data analysis and collection of student workspace (scratch paper). Printable version available under "Teacher Resources".

Learning Cycle Assessments (summative)	*Topic Assessments* SE pp.431-434	Use *Scoring Guide* TE pp. 431-434

Standards listed in **bold** indicate a focus of the lesson.

NVACS (Content and Practices)	Mathematical Development of the Big Idea	Instructional Clarifications & Considerations
Lesson 6-6: Use Addition to Check Subtraction		
2.NBT.B.5 2.NBT.B.9 MP.1 MP.2 MP.3 MP.4	Access Prior Learning: In first grade, (1.OA.B.4) students understood subtraction as an unknown-addend problem. Students also (1.OA.C.6) added and subtracted within 20 using strategies including the relationship between addition and subtraction. In lesson 1-6, second grade students used think-addition to subtract. In prior topics, students represented the relationship between numbers and operations through bar diagrams. Developing the Big Idea: In this lesson, students are *developing* understanding of the inverse relationship between addition and subtraction by using addition to check subtraction.	In first grade, students worked with part-part-whole relationships. Continue to use the language of part-part-whole. However, you can help students make a connection to this relationship and prior learning by also referencing fact families. Encourage students to try the strategy indicated in the instructional materials, but do not require them to use it. Although the text offers tens-and-ones charts as an intended support for students, it may send a conflicting message that there is only one acceptable strategy for that problem. Instead, offer students a blank piece of paper for solving problems. A blank workspace reflects the value we place on students' selection of appropriate strategies. Topic Opener: In planning, consider the four lessons from Topic 6 as part of Topic 7. Use the *Topic 7 Opener*. Consider limiting the *Topic Opener* to discussion of the *Topic 7 Essential Question* (TE, p. 389), *Review What You Know* (TE, p.390), and *Vocabulary Review Activity* (TE, p. 390) with the word *equation* or *bar diagram*. Post the essential question and student strategies on your math focus wall. Solve & Share: Providing students with a blank workspace to solve the problem honors a variety of student strategies. Encourage students to draw a bar diagram as a tool for sense making that reinforces the part-part-whole relationship, as the bar diagram will be a major representation utilized throughout this Topic. In addition, have students write an explanation to answer the question, "How can you use addition to check your answer?" *-continues on next page-*

		Visual Learning: Omit the *Visual Learning* animation. Instead, spend more time on the *Solve & Share*. Focus on sharing student work that demonstrates why addition can be used to check subtraction. When working with regrouping a ten for 10 ones, ensure that students have support through concrete manipulatives and representational drawings. Independent Practice/Math Practices and Problem Solving: As previously indicated, students do NOT need to do all of the problems in their student edition. However, ALL students NEED to have opportunities to solve problems at varying DOK levels. The *Independent Practice* page offers problems that support procedural skill and fluency. The *Math Practices and Problem Solving* page offers problems that support application. The quick check items (marked with a pink check) offer both opportunities. Have students complete these items first and continue on to other items as appropriate. Assess and Differentiate: To support students in understanding the bar diagram, refer to the *Intervention Activity*, "Check It with Cubes" (TE, p.357A).
Lesson 6-7: Practice Subtracting		
2.NBT.B.5 2.NBT.B.9 MP.1 MP.2 MP.6 MP.7	Access Prior Learning: In first grade, (1.NBT.B.2) students understood that the two digits of a 2-digit number represent amounts of tens and ones. In Topic 5, second grade students learned subtraction strategies. Securing the Big Idea: In this lesson, students are *securing* understanding of subtraction strategies and that at times it is necessary to regroup 1 ten as 10 ones.	If students have consistent opportunities to play the Regrouping Game (Reference the last page of this document), they should secure the understanding of regrouping 1 ten as 10 ones. Solve & Share: Ask students to solve the problem a second time using place-value blocks. Child-watch for students who appropriately trade in, or regroup, 1 ten for 10 ones in order to subtract. Highlight this student's strategy in the share to develop the essential understanding of the lesson, without relying on the standard subtraction algorithm. Visual Learning: The *Visual Learning* animation includes the break apart strategy and the U.S. traditional standard subtraction algorithm. Students should use place value blocks to support their understanding of the strategies presented. Students may view and discuss standard algorithms to expose the idea that it is one more strategy, but do not focus on it. Additional learning opportunities around written methods and standard algorithms have been included in Topic 11. Independent Practice/Math Practices and Problem Solving: Consider using item 12 (34 - 8 = 35 - ?) to engage students in a discussion around the meaning of the equal sign (=). Avoid defining the meaning of this symbol. Instead, use questioning and examples to formatively assess students' understanding. If students believe that the equal sign means, "the answer is" continue to move them toward an understanding of equivalence as "the same as". Presenting equations with the answer first (7 = 2 + 5) causes students to examine why it is the same as when the answer is last (2 + 5 = 7). In addition, asking students to find equivalent expressions, rather than just the answer, helps students to focus on the meaning of this symbol. For example, given 19 + 23, students may come up with 19 + 23 = 20 + 22. (Van de Walle, et al., 2014, p. 230).
Lesson 6-8: Solve One-Step And Two-Step Problems		
2.OA.A.1 MP.1 MP.2 MP.4 MP.7	Access Prior Learning: In lesson 3-8 and 4-7 students solved one-step and two-step word problems. In lesson 5-8, second grade students solved word problems using the relationship between addition and subtraction. Developing the Big Idea: In this lesson, students are *developing* understanding that models and equations can be used to solve one-step and two-step word problems. They are also developing understanding that solving two-step word problems requires them to solve the first step before solving the second step.	Solve & Share: Provide a blank workspace for students to solve the problem. This may simply be placing a sticky note on the page. Child-watch for students who demonstrate understanding. Offer an extension by asking them to represent the two-steps of the problem using bar diagrams. Continue to encourage all students to use two strategies to check for accuracy, and evaluate those strategies for efficiency. Visual Learning: Focus the discussion on the *Essential Question*: *Why is it helpful to complete a bar diagram and write an equation to solve word problems?* (TE, p.366).

Lesson 6-9: Math Practices And Problem Solving: Reasoning		
2.OA.A.1 2.NBT.B.9 MP.1 MP.2 MP.4 MP.5 MP.6	Access Prior Learning: In first grade, students engaged in Math Practice 2. Developing the Big Idea: In this lesson, students are *developing* understanding of Math Practice 2: Reasoning Abstractly and Quantitatively by thinking about words and numbers to solve problems.	Consider using and discussing the *Math Practice 2 Animation* available on Pearson Realize online. Engage students in discussions around MP.2 behaviors (TE, pp.F24 - F24A). The focus of this lesson should be on these habits of mind, rather than on computation. Students use reasoning to contextualize addition and subtraction problems, then decontextualize by writing and solving an equation. Solve & Share: Provide a blank workspace for students to solve the problem. This may simply be placing a sticky note on the page. Visual Learning: Before the *Visual Learning* animation, give students time to make sense of and solve the problem presented in the animation. In *Guided Practice* item 2, if students are confused about the comparison bar diagram, reference Error Intervention Note: Item 2 (TE, p.372). Representing the quantities of 46 and 18 with cubes will help them understand the proportion of the boxes in the diagram, and why 46 is placed in the larger "part" box. Topic 6 Performance Assessment: It is not necessary to give the *Topic 6 Performance Assessment* at this time. Teachers may choose to select items to add to the *Topic 7 Performance Assessment*, skip the assessment, or use a few items to formatively assess and inform instruction.
Lesson 7-1: Represent Addition and Subtraction Problems		
2.OA.A.1 MP.2 MP.4 MP.5 MP.8	Access Prior Learning: In first grade, (1.OA.A.1) students solved addition and subtraction word problems within 20, with unknowns in all positions. In previous lessons, second grade students represented and solved problems using models, pictures and equations. Developing the Big Idea: In this lesson, students are *developing* understanding that equations can be written to model word problems using a question mark (?) to represent the unknown. Students will model problems with the unknown in any position.	Solve & Share: During problem solving, child-watch for students who are able to explain their thinking in a way that reflects understanding of the context of the *Put Together Addend Unknown* problem. Encourage students to explain how their drawing connects to the abstract equation given. Sequence the share to include strategies seen in the Visual Learning such as bar diagrams, adding on, and the relationship between addition and subtraction. Visual Learning: Give students an opportunity to solve the *Add To Change Unknown* word problem presented before continuing with the animation. During discussion, strategically ask questions that help students connect student strategies from the Solve & Share to the strategies presented in *Visual Learning*. Also, encourage students to think of other models for solving the problem, including open number lines with a jump of 30 and a jump of 1. In the *Guided Practice*, use of the *Problem Solving Recording Sheet* (Teaching Tool 1) may help students make sense of the problem. Use of this tool models questions students should ask themselves when making sense of a problem and devising a plan. Item 1 is a *Take From Start Unknown* problem. Having the unknown in the start position increases the level of difficulty of the problem. Item 2 is an easier problem type, *Add To Result Unknown.* Assess and Differentiate: In the *Intervention Activity*, "Step-by-Step!" (TE, p.395A) further support students by having them represent quantities on the bar diagram with manipulatives or drawings, as a way to give meaning to the numerals in the problem.
Lesson 7-2: Mixed Practice: Solve Addition and Subtraction Problems		
2.OA.A.1 MP.1 MP.2 MP.3 MP.4	Access Prior Learning: In lesson 7-1, second grade students wrote equations with a question mark (?) for the unknown, to model and solve word problems. Developing the Big Idea: In this lesson, students are *developing* understanding of *Compare Bigger Unknown* problems. Securing the Big Idea: In this lesson, students are *securing* understanding that drawings, bar diagrams and equations can be used to make	This lesson focuses on *Compare Bigger Unknown* word problems involving addition and subtraction. As indicated in the instructional note at the beginning of this document, *compare* problems are more challenging because one of the quantities must be conceptualized, as it is not present physically in the problem (CCSWT, 2011). Rather than involving an action such as *Add To* or *Take From*, these problems involve the relationship between quantities. These quantities are labeled as follows: *referent set*, *compared set*, and *difference (Carpenter, et al., 2015, p.10)*. Mark has 8 mice. ← *Referent set* Joy has 12 mice. ← *Compared set* Joy has 4 more mice than Mark. ← *Difference* *-continues on next page-*

	sense of word problems and strategies can be used to solve them.	Throughout instruction, ensure that students are encouraged to model their thinking with concrete manipulatives and drawings. As noted in the *Error Intervention Note*: Item 1 (TE p.398), labeling the bar diagram helps students make sense of the quantities and relationships in a problem. Reference *Visual Learning* for an example. Also, when drawing comparison bar diagrams, the sizes of the bottom boxes should correspond with the proportion of the quantities in the problem. Solve & Share: If students have difficulty making sense of the problem, engage them in a conversation around the word, *fewer* using real-world examples. As indicated by Van de Walle et al., students often have more experiences with the term *more than*, so they may need additional experiences with the terms *less than* or *fewer than* (2014, p.131). Visual Learning: The *Do You Understand? Show Me!* (TE, p.398) further supports students as they develop understanding of the *more* and *less than* relationships. Consider having students work in partners to model the statements.
Lesson 7-3: Continue Practice With Addition And Subtraction Problems		
2.OA.A.1 MP.1 MP.2 MP.4 MP.8	Access Prior Learning: In lesson 7-2, second grade students used drawings and equations to make sense of *Compare Bigger Unknown* word problems. Developing the Big Idea: In this lesson, students are *developing* understanding of *Compare Difference Unknown* and *Compare Smaller Unknown* problems. Securing the Big Idea: In this lesson, students are *securing* understanding that drawings, bar diagrams and equations can be used to make sense of word problems and strategies can be used to solve them.	Solve & Share: Students begin this lesson with a *Compare Smaller Unknown* problem. Encourage all students to use drawings, bar diagrams and equations to show their thinking. Sequence the share to highlight a variety of student strategies for making sense of the problem, including a bar diagram with labels. If no students use a bar diagram with labels, plant the idea with a student during problem solving so that you have a student to share this strategy. Visual Learning: Allow students to make sense of and solve the problem in the animation so they are better prepared to discuss. As with lesson 7-3, The Do You Understand? Show Me! (TE p.404) further supports students as they develop understanding of the *more* and *less than* relationships. Consider having students work in partners to model the statements. Independent Practice/Math Practices and Problem Solving: For item 7, encourage students to notice patterns in how addends change, while the sum remains constant. This provides another opportunity to build the big idea of equivalence. Notice the instructional note at the beginning of this document, item 7 provides opportunities to write equivalent expressions such as 36 + 22 = 37 + 21 (36 + 22 is *the same as* 37 + 21). Assess and Differentiate: In the *Intervention Activity*, "Dare to Compare!" (TE, p.407A), encourage students to use concrete manipulatives and drawings to develop or reinforce their understanding of the quantities and relationships represented in the comparison bar diagrams. *CTC: *Solve & Share* (student work samples)
Lesson 7-4: Solve Two-Step Problems		
2.OA.A.1 MP.1 MP.2 MP.4 MP.6	Access Prior Learning: In lesson 6-8, second grade students solved one-step and two-step word problems. Developing the Big Idea: In this lesson, students are *developing* understanding that drawings and equations can be used to make sense of and solve two-step word problems; and that these problems include a hidden question that needs to be answered first.	As stated in the "Progressions for the Common Core State Standards in Mathematics", two-step problems should not involve the most difficult subtypes (CCSWT, 2011, p.20-21). During this lesson, students will focus on identifying the hidden question that needs to be solved first, before solving for the final answer. Solve & Share: This two-step problem is an *Add To Result Unknown/Take Away Result Unknown* problem. The use of connecting cubes supports students as they model the actions within the problem. During the share, focus the discussion on how students made sense of the problem, and how they identified the first, hidden question before finding the final answer. Independent Practice/Math Practices and Problem Solving: When solving the quick check items (marked with a pink check), students may find item 8 more challenging than items 3 or 9 because it contains a *change unknown* problem type. Continue to encourage students to use concrete manipulatives. Item 3: *Put Together Whole Unknown/Take Away Result Unknown* Watch for students who reason about the numbers in this problem. These students may subtract 8-7 to get 1, and then add 16, resulting in 17 frogs left. This strategy simplifies the computation needed to solve the problem and demonstrates flexibility with number and operations. Item 8: *Add To Result Unknown/Take Away Change Unknown* Item 9: *Take Away Result Unknown/Add To Result Unknown*

Lesson 7-5: Continue To Solve Two-Step Problems		
2.OA.A.1 MP.1 MP.3 MP.4 MP.6	Access Prior Learning: In lesson 7-4, second grade students solved two-step word problems by first identifying the hidden question needed to find the final answer. Securing the Big Idea: In this lesson, students are *securing* understanding that drawings and equations can be used to make sense of and solve two-step word problems; and that these problems include a hidden question that needs to be answered first.	Solve & Share: The two-step problem presented contains the *Take Away Change Unknown* and *Add To Start Unknown* problem types. In addition to the challenge of *change unknown* problems, some students may find the context of this problem challenging. The use of role-playing can support students in clarifying the meaning of "return some books" and "take out 15 more books". If students have been told to use the key word strategy (see the Instructional Note at the beginning of this document as to why the key word strategy should be AVOIDED), they may perceive "take out" to mean subtraction, when in fact, in this context it refers to addition. If students continue to struggle with the context of this problem, consider changing the context but maintaining the problem types and numbers. Assess and Differentiate: In the *Intervention Activity*, "Come and Go" (TE, p.419A), students work with two-step word problems including *Add To* and *Take From* problem types. Also, provide these students opportunities to work with two-step word problems that include *Put Together* and *Take Apart* problem types with unknowns in all positions. Reference Table 1. Common addition and subtraction situations at the beginning of this document for examples. *CTC: *Quick Check* (digital platform)
Lesson 7-6: Math Practices and Problem Solving: Reasoning		
2.OA.A.1 MP.1 MP.2 MP.3 MP.4 MP.7	Access Prior Learning: In first grade, students engaged in Math Practice 2: Reason Abstractly and Quantitatively. Developing the Big Idea: In this lesson, students are *developing* understanding of Math Practice 2: Reason Abstractly and Quantitatively through writing and solving word problems.	Consider using the *Math Practice 2 Animation* on Pearson Realize Online for an example of MP.2 behaviors. Also, reference the Math Practices and Problem Solving Handbook for suggestions for developing, connecting and assessing MP.2 (TE, p.F24-F24A). MP. 2 Behaviors: • Identifies and understands the quantities in the problem. • Shows and explains how quantities are related (e.g., bar diagram). • Translates real-world contexts correctly to numbers, expressions, equations, or concrete or pictorial representations. • Connects numbers, expressions, equations, or concrete or pictorials representations back to real-world contexts. Independent Practice/Math Practices and Problem Solving: If students struggle to write number stories, encourage them to tell their stories orally before writing, as suggested in the *Coherence* note (TE p.422). Modeling with manipulatives is also helpful.

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