Lesson 1 Review Number Fluency, Addition, and Subtraction

Objective

Your student will review skills and concepts involving number fluency, addition, and subtraction.

You Will Need

- ☐ *Dash into Math!* page 9
- ☐ 10-Frame, *Flash's Math Tools* page 1
- ☐ Double 10-Frame, *Flash's Math Tools* page 2
- ☐ Base-10 Blocks
- ☐ 3 Reads Strategy, *Flash's Math Tools* page 3
- ☐ Two-Color Counters
- ☐ dry-erase board and marker
- ☐ Connecting Cubes

Math Vocabulary

less, more, plus sign, expression, equation, equal sign, minus sign, sum

Before You Begin

If you are new to the *All About Math* program, have your student take the Placement Test for Level 2 on page 9.

At the beginning of each lesson, you will find a cream-colored "Before You Begin" section like this one. Review these instructions before you begin the lesson. The actual lesson plan you will teach to your student begins after the "Before You Begin" section.

The first Level 2 lesson will be a review of concepts taught in Level 1. You can break up this review into multiple sessions, depending on your student's needs.

Review Sections and Working Toward Fluency

Throughout Level 2, the "Review" section of each lesson will engage your student in various fluency activities as you review previously taught skills.

Fluency is the ability to easily recall math facts. In working toward fluency, your goal is not to focus on having your student memorize a list of facts but to build conceptual learning and the use of effective strategies.

Four key components to fluency are:

- Flexibility: Understanding the relationships between numbers and being able to understand and use numbers in different ways.

- Appropriate strategy use: Knowing when and how to use a strategy, such as counting on.
- Efficiency: Using the best way to solve a problem.
- Accuracy: Getting the correct answer.

Your student will build on all these components as she works through the Level 2 lessons.

In this lesson, your student will review using numbers to tell how many objects are in a group, comparing numbers, solving addition and subtraction story problems, adding two-digit numbers, and composing a ten.

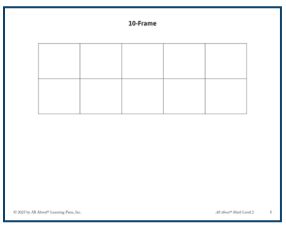
Review

Counting Objects to Tell How Many

"Let's review counting objects to tell both 'how many' and which group has less or more. When we count groups of objects, we need to keep track of which ones we have counted and which ones we still need to count." Create a group of 13 unconnected connecting cubes, and place them in front of your student.

"How can you count this group and keep track of the ones you have already counted?" *I can line them up and touch each one as I count. I can move them away from the group as I count them.*

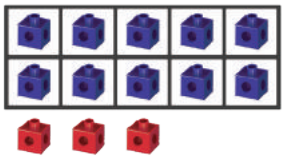
"That's an excellent way to keep track of your counting. Use that strategy, and tell me how many connecting cubes are in this group." *I counted 13.*



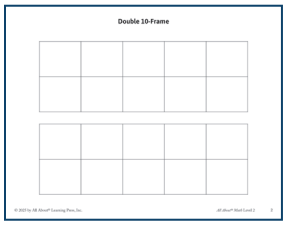
10-Frame

Remove the *10-Frame* from *Flash's Math Tools* on page 1.

"Another way to find the amount in a group is to use a *10-Frame*. It will help us keep the connecting cubes organized. When we have a full *10-Frame*, we know it always has 10 cubes, so we can count on from the number 10. Place one cube in each box of the *10-Frame* until they are all full, and then place the extra ones under the *10-Frame*."

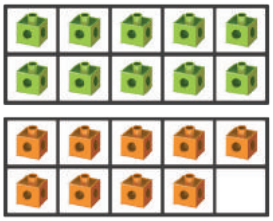


"We can see there are 13 cubes because there is a group of 10 and 3 more. We can count on from 10: 11, 12, 13." (Point to each cube as you model counting on.) Keep the group of 13 connecting cubes on the *10-Frame* to use as a comparison with the next number.



Double 10-Frame

Remove the *Double 10-Frame* from *Flash's Math Tools* on page 2. Place a new group of 19 connecting cubes on the *Double 10-Frame*.



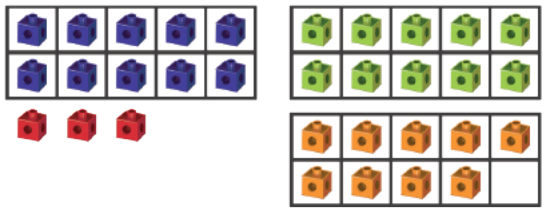
"This group of connecting cubes is organized on a *Double 10-Frame*. It is similar to the *10-Frame* we used earlier, but it has 2 *10-Frames*. Use the way the cubes are organized to help you count, and tell me how many connecting cubes are in this group." *Nineteen.*

> The goal is for your student to understand that a full *10-Frame* represents 10 without having to count them one at a time. She should start with the group of 10 and then count on: 11, 12, 13, 14, 15, 16, 17, 18, 19. If your student is not ready to use the counting on strategy, she can continue to count the connecting cubes one by one. After she has counted, model how to start with the number 10 and then count on with the remaining cubes to find the total.
>
> **Tip!**

"Yes. There are 19 connecting cubes in this group. How did you know?" *I saw that a 10-Frame was full of connecting cubes, so that meant there were 10. Then, I counted on from there.*

Show the group of 13 connecting cubes that includes the *10-Frame* and the group of 19 connecting cubes that includes the *Double 10-Frame*.

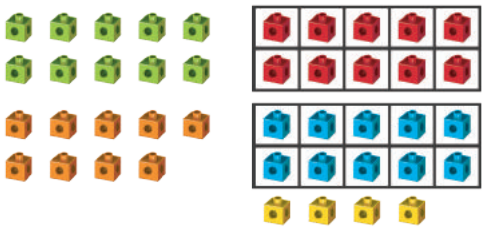
Review
(continued)



"Which group has less, 13 or 19? Remember that **less** means a smaller amount." *Thirteen.*

"Great job! Each number has a group of 10, but 13 has only 3 more ones, and 19 has 9 more ones. That means 13 is less than 19." Remove the 19 connecting cubes from the *Double 10-Frame* and place them in the same pattern on the side. While you do that, give your student a group of 24 connecting cubes and have her put them on the *Double 10-Frame*.

"Let's count another group of connecting cubes on the *Double 10-Frame*. How many cubes are there? Explain how you counted them." *24. I filled in 2 of the 10-Frames. That made 20. Then, I saw 4 more, so I counted on.*



"Which group has more, 19 or 24, and how do you know? Remember that **more** means a larger amount." *Twenty-four has more because it has 2 filled-in 10-Frames and some more ones.*

> If your student needs more practice with efficiently counting objects, you can continue to give your student groups of connecting cubes to count. Since you will provide a *Double 10-Frame* to help her organize the cubes, you will want to stay below 30 (she can place the extras under the bottom *10-Frame*). Encourage your student to either use the *Double 10-Frame* or organize the cubes into groups of 10 as she counts them.
>
> **Tip!**

"Great job counting to find how many connecting cubes are in each group!"

Review
(continued)

Comparing Numbers

Write 16 and 23 on the dry-erase board. "Tell me the numbers I wrote on the dry-erase board." *You wrote 16 and 23.*

"We are going to compare these 2 two-digit numbers. Is 16 greater than or less than 23?" *Less than.*

"That's right! How did you know?" *I know that 16 has 1 group of ten and that 23 has 2 groups of ten, so 16 is less than 23.*

> If your student is unsure when comparing the two numbers, allow her to build the numbers on the *10-Frame* and on the *Double 10-Frame*. This will provide a visual to help her understand that the numbers represent quantities.
>
> 
>

"When you compare numbers, you look at the digit in each place. The number 16 has a 1 in the tens place, so it has 1 group of 10. The number 23 has a 2 in the tens place, so it has 2 groups of 10. There are symbols we can use to show our comparisons." Write the less than (<) symbol and the greater than (>) symbol at the bottom of the dry-erase board.

"This is the 'less than' symbol (point to the <) and the 'greater than' symbol (point to the >). Remember that this symbol is like a hungry alligator's open mouth and the wide open side always faces a greater number! Add the correct comparison symbol between the numbers to show that 16 is less than 23." Your student should add the less than (<) symbol.

"You got it! The small, closed end of the symbol (the point) is closer to the lesser number." Write 75 and 71 on the dry-erase board.

"What are these two numbers?" *They are 75 and 71.*

"Is 75 greater than or less than 71?" *Greater than.*

"How do you know?" *Both numbers have 7 groups of 10, so I need to look at the other digit. There are 5 more ones in 75 and 1 more one in 71, so 75 is greater than 71.*

"Nice job! When you compare 2 two-digit numbers, you need to first look at the tens place. If the numbers in the tens place are the same, then you look at the ones place."

"Use the correct symbol to show that 75 is greater than 71." Your student should use the greater than (>) symbol to show that 75 is greater than 71. (*Answer: 75 > 71*)

Review
(continued)

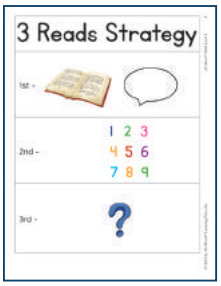
Repeat the steps to compare the following numbers:

- 58 and 40
- 72 and 76
- 37 and 47

Answer Key

58 > 40, 72 < 76, 37 < 47

Solving Addition and Subtraction Story Problems



3 Reads Strategy

Remove the *3 Reads Strategy* from page 3 in *Flash's Math Tools*.

"We are going to use the *3 Reads Strategy* to help us understand and solve some story problems. We will read a story problem three times, checking for different information each time. (As you read each bulleted item, point to that step on the *3 Reads Strategy* poster.) Here's what we will focus on."

- "First read: What is the story about?"
- "Second read: What numbers do we read or hear?"
- "Third read: Decide how to answer the question."

"Listen as I read this story problem aloud. Mya finds 6 leaves while on a nature walk. Her friend gives her 3 more. How many leaves does Mya have altogether?"

"After the first reading, the question is: What is this story problem about?" *Mya has some leaves, and then her friend gives her more.*

Reread the story problem. "After the second reading, the question is: What are the numbers, and what do they represent?" *Mya has 6 leaves, and her friend gives her 3 more.*

Reread the story problem. "After the third reading, the question is: How many leaves does Mya have altogether? Do you need to add or subtract to solve this story problem?" *Add.*

"How do you know?" *It says her friend gives her more and asks how many altogether.*

Review
(continued)

"Yes. A **plus sign** is a symbol we use when we add, or put numbers together. We can write the expression 6 + 3 to show how to solve this problem. An **expression** has numbers (point to the 6 and the 3) and symbols (point to the plus sign) and represents the value, or amount, of something."

"Use these two-color counters or make a drawing to show the action in the story problem." Your student can start with 6 two-color counters or drawings and then add 3 more. Then, she can find the total by counting on from 6.

"What is the answer to the question?" *The answer is 9 leaves.*

"Nice work! Let's solve another story problem. Listen as I read the story problem aloud. Teagan gathers 6 sticks on the nature walk. He drops 3 of them. How many sticks does Teagan have left?"

"Before you begin solving the story problem, I will reread the story problem after each question:"

- "What is the story problem about?"
- "What are the numbers, and what do they represent?"
- "What question is being asked?"

"Do you need to add or subtract to solve this story problem, and how do you know?" *I need to subtract because the story said that he drops some, and that is taking away.*

"Solve the story problem by using the two-color counters or the dry-erase board." Your student can start with 6 two-color counters or drawings and then take away or mark out 3. Then, she should find how many are left.

"How many sticks does Teagan have left?" *The answer is 3 sticks.*

"That's right! Let's write an equation to match the story problem."

"Remember, an **equation** uses numbers and symbols to tell us a math sentence. An equation is like an expression, but it has an equal sign. An **equal sign** is a symbol that we use to show that both sides have the same amount. This is what the equal sign looks like." Write an equal sign on the dry-erase board.

"What is the name of the symbol that we use when we subtract?" *Minus sign.*

"Yes! A **minus sign** is a symbol that we use when we take some away from a group. This is what a minus sign looks like." Write a minus sign on the dry-erase board.

Review
(continued)

"Now, I will write an equation on the dry-erase board to match the story problem." Write the equation 6 - 3 = 3, and then ask your student to read the equation aloud.

Two-Digit Addition

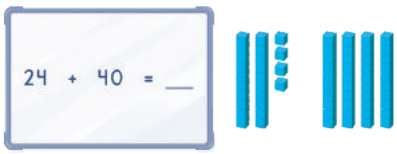
"We can use base-10 blocks to help us solve two-digit addition problems." Write the equation 24 + 40 = ____ on the dry-erase board. Have your student build each number with the base-10 blocks and solve the equation.

If your student is new to using base-10 blocks, show her how 10 ones units equals a tens block (tens rod). First, model how to build numbers or ask guiding questions like:

- "How do you represent 24?"
- "How do you represent 40?"
- "How can we find the sum?"

There are different ways that your student can solve this equation. She can put all the base-10 blocks together and count them, or use the counting on strategy. With this strategy, your student starts with the number 24 and then counts on by tens from that number to reach the total amount.

Work with your student to solve the equation by using the strategy of her choice.



"What is your answer?" *Sixty-four.*

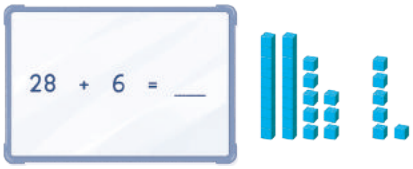
"Great job! Write in the **sum**, which is the answer when you add, on the dry-erase board. Let's do another one!" Repeat the previous steps with the equation 65 + 20 =___. (*Answer: 85*)

Composing a Ten

Write the equation 28 + 6 =___ on the dry-erase board.

"First, build the two numbers by using base-10 blocks." Look to see that your student uses 2 tens blocks and 8 ones cubes to make 28 and that she uses 6 ones cubes to make 6.

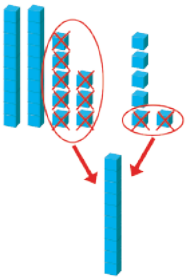
Review
(continued)



"How many tens blocks are there altogether?" *Two.*

"How many ones cubes are there altogether?" *Fourteen.*

"When we have more than 10 ones cubes, it means that we need to regroup our base-10 blocks. Regrouping helps us add and count more efficiently. Trade 10 ones cubes for 1 tens block."



"How many tens blocks are there now?" *Three.*

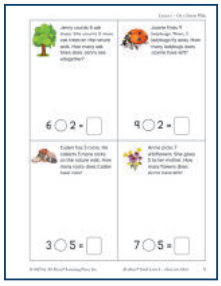
"How many ones cubes are there now?" *Four.*

"Count them to find your total. What is 28 + 6?" *Thirty-four.*

Repeat the previous steps with the equation 57 + 4 = ___. (*Answer: 61*)

Complete Activity Sheet

"Let's practice solving story problems."



On a Nature Walk

Turn to page 9 in the *Dash into Math!* activity book.

"A group of children went on a nature walk and counted different things along the way. You are going to help the children by deciding if each story problem uses addition or subtraction and solving the problem." Read the story problems as needed. Your student can draw, build, count on, or use another strategy to solve each equation.

Review
(continued)

Answer Key

Oak trees: +, 8; Ladybugs: -, 7; Rocks: +, 8; Wildflowers: -, 2

Look For
Your student might get confused about whether to add or subtract to solve the story problem.

Here's How to Help: Start by carefully reading through the story, using the *3 Reads Strategy* to ask a question after each reading. Have your student act out the story by adding or taking away two-color counters or connecting cubes according to the actions described. This hands-on method helps with visualizing the problem and makes it easier to write the correct symbol.

Math Reflection

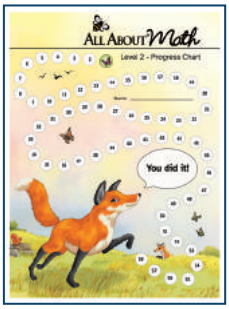
"Let's Reflect!"

Ask some questions to guide your student's reflection:

- "Which topic is your favorite?"
- "What was one thing you found easy?"
- "Which topic would you like more practice with?"

Track Your Progress

Mark the Progress Chart



Have your student mark Lesson 1 on the Progress Chart.

Lesson 2 Story Problems and Expressions

Objective

Your student will learn to represent and solve Add To and Take From story problems where the result is unknown.

You Will Need

- ☐ *Dash into Math!* page 11
- ☐ dry-erase board and marker
- ☐ Base-10 Blocks

Math Vocabulary

regrouping

Before You Begin

Preview Story Problems and Expressions

The focus of this lesson will be for your student to build critical thinking skills by making sense of various Result Unknown story problems. The problems will require your student to decide if the numbers are being added to (Add To) or subtracted from (Take From) one another. He will represent a story problem by writing expressions with two-digit numbers. Being able to independently write expressions that match a story problem will help him clearly see how to solve the problem (Result Unknown). It will also help lay a foundation for writing equations in the next lesson.

After determining the needed operation (addition or subtraction), your student will apply different strategies to solve each problem. The use of base-10 blocks is encouraged and will be used throughout this lesson. If your student is unsure about how to represent a number by using base-10 blocks, provide practice by writing a number on the dry-erase board. Discuss the digits in the tens and ones places and the base-10 block that is used to represent each place. Use the blocks to make the number on the dry-erase board.

Review

Counting On

"Let's practice counting on from a number. I am going to say a number, and you are going to count on from that number until I say stop."

Say the number 63, and stop your student at the number 73.

Review
(continued)

Solving Problems

"When solving story problems, we often need to add numbers together or subtract them from each other. What symbol can we use to show that two numbers are being added together?" *The plus sign.*

"That's right! Show me what the plus sign looks like on the dry-erase board. What symbol can we use to show subtraction, or taking one number away from another?" *The minus sign.*

"Show me what the minus sign looks like on the dry-erase board."

"Nice work. You have also learned different strategies to help you solve story problems. Share a few strategies with me that you like to use." He might share strategies such as using math tools (two-color counters and a *10-Frame*), making a drawing, or using the *3 Reads Strategy*.

"Those are great strategies! As we work through story problems, think about which strategy you would like to use to find the answer."

New Teaching

Solving Story Problems

"We are going to explore some fun things to do in the fall! In the fall, it starts to get a little cooler outside, and the leaves start to change colors. What do you like about the fall?" Allow your student to share 1 or 2 things he enjoys about the season.

"Those are great things about the fall! As we explore some of the fun things to do, we will work to solve some story problems. Listen carefully as I read the first problem."

"There were 25 pumpkins for sale in the pumpkin patch. The farmer puts 20 more pumpkins in the patch. How many pumpkins are there now? Let's use the base-10 blocks to help model this story."

"Build a model to show the 25 pumpkins that were in the patch at the beginning." Your student should use 2 tens blocks and 5 ones cubes.

"The second part of the story tells us that the farmer put 20 more pumpkins in the patch. Use base-10 blocks to represent the amount of pumpkins that were added to the patch." Your student should add 2 tens blocks.

New Teaching
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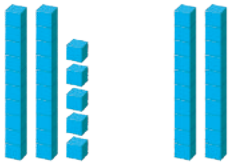


"The base-10 blocks help us represent what is happening in the story. There were 25 pumpkins (point to the first group of base-10 blocks) and 20 more pumpkins (point to the 2 tens blocks that were just added). Now, write your expression that matches our model on the dry-erase board." (*Answer: 25 + 20*)

"You wrote 25 to represent the pumpkins that were originally in the patch and then 20 to represent the number of added pumpkins. Why did you use a plus sign between the numbers?" *I used a plus sign to show that more pumpkins were added.*

"Good. Now, let's solve the problem. The story asks us how many pumpkins there are now. What can we do to solve the problem?" *Count all the base-10 blocks.*

"Count the base-10 blocks to find out how many pumpkins are now in the patch. How many pumpkins are in the patch?" *Forty-five.*

Your student might choose to individually count each base-10 block to find the total amount. He might also recognize that he can count on from 25 to find the total. Each strategy for finding the total is acceptable to use, depending on your student's confidence level. If he chooses to individually count each base-10 block, you can model how to count on as a more efficient way to find the total.

"Yes, 25 and 20 more is 45. Let's try another story problem! Listen carefully as I read the story aloud. There are 38 people on a hayride. Then, 5 more people join them. How many people are now on the hayride?"

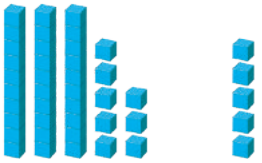
"Represent the 38 people on the hayride by using the base-10 blocks." Your student should use 3 tens blocks and 8 ones cubes.

"Nice work. I see 38 people represented in your model. In the story, 5 more people join them. Do you think we need to add or subtract 5 to show this?" *Add 5.*

"Yes. How do you know?" *More people are joining the group.*

"Add to your model to show 5 more people joining."

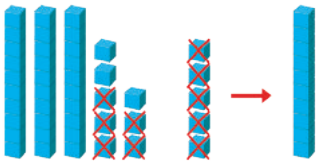
New Teaching
(continued)



"Your model shows 38 people on the hayride (point to the representation of 38) and 5 more people joining them (point to the representation of 5)." Write 38 + 5 and 38 - 5 on the dry-erase board.

"Which expression represents our story problem, and how do you know?" *The expression 38 + 5, because people joined them on the hayride. That means I need to add.*

"Right! Now, let's find out how many people are on the hayride altogether. In your model, I notice 13 ones cubes altogether. When we have 10 or more ones cubes, we can regroup our base-10 blocks to make counting them and finding the answer easier. We can trade 10 ones cubes for 1 tens block. We still have the same amount but grouped in a different way. We call that **regrouping**." Have your student trade 10 ones cubes for 1 tens block.



"Count the base-10 blocks. How many people are on the hayride?" *Forty-three.*

"After seeing the pumpkin patch and taking the hayride, we will now do some apple picking! Listen closely to our next problem. The red apple tree has 19 apples. You pick 3 apples from the tree. How many apples are now on the tree?"

"We can start by making a model of the 19 apples that were in the tree. We could use the base-10 blocks to represent the numbers in our story problem, but this time, let's try a new way by making a drawing. Making a drawing is like using the base-10 blocks. We will use a rectangle for each tens block and a small square for each ones cube. I will start by making a drawing on the dry-erase board to represent the apples on the tree." Draw 1 rectangle and 9 small squares on the dry-erase board.

New Teaching
(continued)

"In the story, you picked 3 apples from the tree. Since you removed apples, should you add or subtract?" *Subtract.*

> This story requires a different operation than the previous ones. If your student is unsure about why to subtract, say, "Instead of adding more apples to the tree, you took some apples away from the tree. So instead of adding to the model, you need to subtract."

"How can you show that you need to subtract 3 apples from the model?" *I can cross them off or erase them.*

"Yes. Cross off or erase 3 small squares from the model."

"You started with 19 apples and took away 3 apples. Write an expression on the dry-erase board to represent your model." Your student should write the expression 19 - 3 on the board.

> If your student is unsure about what expression to write, guide him by rereading the story. Pause after each part of the story that will be used to make the expression. Explain that since 3 apples were taken away, the expression needs a minus sign.

"Good work. The story ends by asking us how many apples are now on the tree. What does your model show us?" *There are 16 left.*

"Right. How did you find your answer?" *I counted each base-10 drawing.*

"That is a good strategy! The original 19 apples minus 3 apples equals 16 apples."

"When we were solving the story problems, we had to decide if we needed to add or subtract. How did you know when you needed to add?" *When we were putting two groups together, we were joining them, which told me that I needed to add.*

New Teaching
(continued)

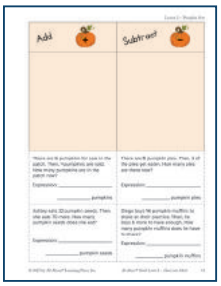
"How did you know when you needed to subtract?" *When we took something away from a group, I needed to subtract.*

"What symbol do we use in the expression to show that we are adding?" *The plus sign.*

"What symbol do we use in the expression to show that we are subtracting?" *The minus sign.*

Complete Activity Sheet

"Let's solve some more story problems!"



Pumpkin Sort

Remove page 11 from the *Dash into Math!* activity book. Cut out the 4 story problems from the bottom of the page.

"Your help is needed to sort some pumpkins at the fall festival."

Have your student read each story problem (assist as needed) and decide if the needed action is addition or subtraction. Then, have him sort the story problems into the correct columns based on the operation needed to solve each. Finally, have him write the expression that matches each story problem and solve that story problem.

Encourage your student to make a model of his choice to help him sort the story problems and solve them.

Answer Key

- Add: 22 + 70, 92 pumpkin seeds; 46 + 6, 52 pumpkin muffins
- Subtract: 16 - 4, 12 pumpkins; 15 - 3, 12 pumpkin pies

Math Reflection

"Let's Reflect!"

Ask some questions to guide your student's reflection:

- "How do you represent the numbers in a story problem?"
- "What is one thing you found easy?"
- "What is one thing you want to practice more?"

New Teaching
(continued)

Extended Practice (*Optional*)

If your student is not able to solve a story problem, or he expressed the need for more practice, continue working on this skill.

"Listen to the story problem, and decide if you need to add or subtract. After you decide if you need to add or subtract, represent the story by using base-10 blocks or a drawing. Then, write the expression that matches the story problem on the dry-erase board, and solve it."

Read each of the following story problems aloud to your student, one at a time:

- "There are 34 people in the corn maze. Then, 9 more people join them. How many people are now in the corn maze?" (*Answer: 34 + 9, 43*)
- "There are 18 pecan pies for sale. The baker sells 5 of the pies. How many pies are left?" (*Answer: 18 - 5, 13*)

Prompt your student with the following if he is struggling to begin:

- "How can you make a model to represent the story?"
- "Do you need to add or subtract?"
- "How can you write an expression to represent the story?"
- "How can you use your model to solve the story problem?"

Solving and understanding story problems is a developing skill. With practice and support, your student will become more comfortable with doing so. You can proceed to the next lesson without full mastery of this skill.

Flash's Math Fun!

Picking Pumpkins

"Let's practice our math skills!"

Materials

- Picking Pumpkins Patch, *Dash into Math!* page 13
- Picking Pumpkins Stories and Equations, *Dash into Math!* pages 15 and 16
- crayons
- dry-erase board and marker

Directions

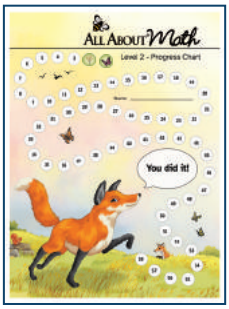
1. Cut apart the *Picking Pumpkins Stories and Equations*, and scatter the pumpkins on top of the *Picking Pumpkins Patch* face down.
2. The players take turns picking a pumpkin from the patch. If needed, you can help read the problem.
3. The player writes the expression that the problem represents on the dry-erase board and then solves the problem. The players check each other's work.
4. If the story problem is solved correctly, that player keeps the card and colors or decorates the pumpkin. If the story problem is solved incorrectly, the pumpkin is placed back in the patch.
5. Play continues until all the pumpkins have been picked from the patch.

Answer Key

A: 15 - 2, 13; B: 10 - 5, 5; C: 24 + 8, 32; D: 13; E: 35; F: 70

Track Your Progress

Mark the Progress Chart



Have your student mark Lesson 2 on the Progress Chart.

Lesson 7 Solving Different Types of Story Problems

Objective

Your student will learn to solve a variety of story problems and to write equations that match each problem.

You Will Need

- ☐ *Dash into Math!* pages 41 to 45
- ☐ Double 10-Frame, *Flash's Math Tools* (optional)
- ☐ Two-Color Counters
- ☐ dry-erase board, pocket, and marker
- ☐ Connecting Cubes
- ☐ tape

Before You Begin

Preview Solving a Variety of Story Problems

Previously, your student focused on solving one type of story problem at a time. In this lesson, your student will continue to practice solving a variety of story problems and writing equations. But, the missing values will be in various locations, and your student will have to decide which value is unknown.

Some problems will be Put Together/Take Apart Addend Unknown story problems. Others will be Compare, Difference Unknown story problems, where your student will be asked to find "how many more." Your student will build models, solve equations, and write addition and subtraction equations to represent the story problems.

Review

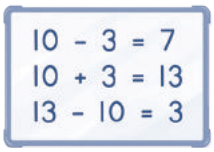
Daily Review

As part of your math time each day, refer to your student's *Daily Review Tracker*. Choose 1 or 2 skills, and take a few minutes to practice.

Review
(continued)

Matching Equations

"You've been doing a lot of great work with story problems." Write the equations 10 – 3 = 7, 10 + 3 = 13, and 13 – 10 = 3 on the dry-erase board, one under the other, with space to separate them.



"I have written 3 equations on the dry-erase board. As you listen to a story problem, think about which equation matches it. Here's the first story problem. There are 10 seahorses holding onto seaweed in the aquarium. Then, 3 more seahorses swim over to join them. How many total seahorses are there?"

"Which equation represents this story problem, and how do you know?" *The equation is 10 + 3 = 13, because the story problem started with 10 seahorses, and then 3 more joined them.*

"Yes! Now, listen to another story problem. There are 10 seahorses holding onto seaweed in the aquarium. Then, 3 of the seahorses leave to swim around. How many seahorses are left holding onto seaweed? Which equation matches this story problem, and how do you know?" *The equation is 10 – 3 = 7, because the story problem started with 10 seahorses, but then 3 left.*

"Yes. How do you know that the last equation, 13 – 10 = 3, does not match either of these story problems?" *Neither of the story problems started with 13.*

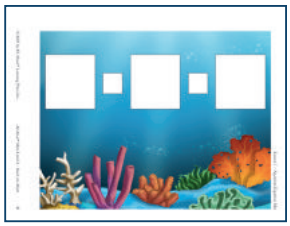
"Good; let's use what we know to solve more story problems!"

New Teaching

Story Problems with a Missing Addend

"Imagine we are on a trip to the aquarium! While at the aquarium, we will practice solving some more story problems and writing equations that represent the stories."

New Teaching
(continued)



Aquarium Equation Mat

Remove the *Aquarium Equation Mat* from *Dash into Math!*, page 41. Place the *Aquarium Equation Mat* into a dry-erase pocket.

"Listen carefully as I read a story problem. Macy is gathering her money to take to the aquarium. She has 15 coins in her piggy bank. Of those coins, 8 are copper colored, and the rest are silver. How many of her coins are silver?"

"Let's use the information from the problem to write an equation. How many coins does Macy have in her piggy bank?" *Fifteen.*

"Yes; write that in the first box. Does 15 represent the total or a number that is being added to or taken away?" *The total.*

"That's right. Put the equal sign in the box next to the 15."

"The problem says that 8 of Macy's coins are copper, and we need to find out how many are silver. What can you write to show this?" *I can write 8 plus and leave the last box blank.*

"Let's solve the problem and find the number of silver coins that Macy has." Allow your student to solve the problem with manipulatives or using mental math.

"How many silver coins does Macy have?" *Seven.*

"Right, Macy has 7 silver coins! Write 7 in the empty box of our equation."

"How does this equation represent the story problem?" *Macy has 15 total coins, 8 of them are copper, and 7 of them are silver.*

Story Problems that Compare

Clear the numbers from the dry-erase pocket. "Macy and her family are on their way to the aquarium! It takes 20 minutes to drive there from their house. Macy's friend, Henry, and his family are meeting them

New Teaching
(continued)

there. It takes Henry 9 minutes to get to the aquarium. How many more minutes does Macy's family have to drive to get to the aquarium than Henry's family?"

"Let's make a model to represent our problem. Which math tool would you like to use: connecting cubes, two-color counters, or drawing a picture?" Let your student choose the math tool she would like to use, and have her make models of Macy's drive and Henry's drive.

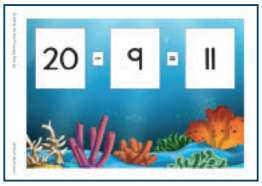
"Now that we have our models, let's think back to the question of how many more minutes it takes for Macy and her family to get to the aquarium. Should we add or subtract?" *Subtract.*

"Good." Write a minus sign after the first number box on the *Aquarium Equation Mat*.

"To find the difference, we will start with Macy's 20-minute ride and take away Henry's 9-minute drive. (Have your student write 20 - 9 on the *Aquarium Equation Mat*). This last box represents how many more minutes Macy and her family have to drive to get to the aquarium."

"If we take away 9 from 20, how many are we left with?" *Eleven.*

"Right! So, Macy's drive to the aquarium takes 11 more minutes than Henry's." Have your student write = 11 to fill in the *Aquarium Equation Mat*.



"Another equation we can write to represent this story is 20 = 9 + 11." (Write the equation on the dry-erase board.)

"Henry's 9-minute drive (point to the 9) plus 11 more minutes (point to the 11) is the same as the 20-minute drive that Macy has (point to the 20)."

"In one problem we solved, we found a missing addend. In the other, we compared numbers to find the difference. How were the problems we solved similar?" *They were both about going to an aquarium. They can both be represented by equations.*

"How were the problems different?" *In one, we subtracted, and in the other, we added. One had a missing number, and the other asked how many more.*

New Teaching
(continued)

"What types of equations did we write to represent the story problems?" *Addition and subtraction.*

Complete Activity Sheet

"Let's practice solving more story problems and writing equations."

Aquarium Adventure

Remove page 43 from the *Dash into Math!* activity book. Cut along the dotted lines. Then, fold the edges together to make a cube. Tape the sides together.

"Let's have more fun solving story problems at the aquarium! Roll the cube, and then we'll work to write an equation and solve the problem."

Encourage your student to use manipulatives or drawings to help her solve the problems. Have your student use the *Aquarium Equation Mat* to write an equation that represents each story problem. Have her solve at least 3 problems.

Answer Key

- Amelia: 5; 9 – 4 = 5 or 4 + 5 = 9
- Alex: 16; 19 – 3 = 16 or 3 + 16 = 19
- Ellie: 3; 8 – 5 = 3 or 3 + 5 = 8
- Crew: 3; 17 – 14 = 3 or 14 + 3 = 17
- Vivian: 20; 18 + 2 = 20
- Kai: 6; 12 – 6 = 6 or 12 = 6 + 6

Look For

This activity book page has a variety of story problem types. Your student might be unsure of what value she needs to solve for.

Here's How to Help: Use either the connecting cubes or the *Double 10-Frame* and two-color counters to act out the story problems. Have her repeat the question in the problem. Match each part of the story to a number in the equation.

New Teaching
(continued)

Math Reflection

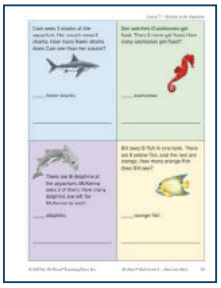
"Let's Reflect!"

Ask some questions to guide your student's reflection:

- "How do you write an equation for a story problem?"
- "How can you use math tools to help you solve story problems?"
- "What is one thing you want to practice more?"

Extended Practice (*Optional*)

If your student struggles to solve the story problems or write a matching equation, or she expressed the need for more practice, continue working on this skill.



Animals at the Aquarium

Turn to page 45 in the *Dash into Math!* activity book.

"It's time to explore the aquarium! Solve the story problems to find out how many of each animal lives at the aquarium. Use the story problem to help you write an equation."

Read each story problem with your student. Encourage her to use manipulatives or the dry-erase board to make a drawing to help solve the problem. She will also write equations that match the problems.

Your student is building problem-solving skills. With practice and support, she will improve, and her confidence will grow. You can proceed to the next lesson without full mastery of this skill.

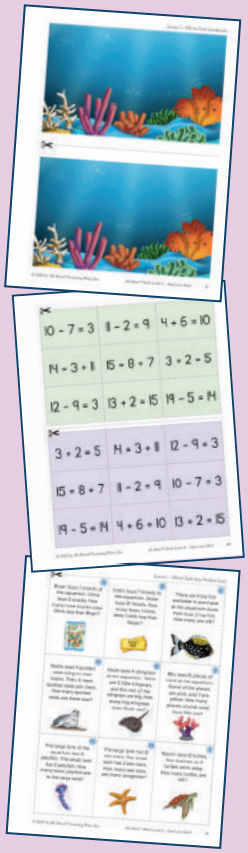
Answer Key

- Sharks: 3; 6 – 3 = 3 or 3 + 3 = 6
- Seahorses: 17; 12 + 5 = 17
- Dolphins: 16; 18 – 2 = 16 or 16 + 2 = 18
- Fish: 5; 13 = 8 + 5 or 13 – 8 = 5

Flash's Math Fun!

Fill the Tank

"Let's practice our math skills!"



Materials

- Fill the Tank Gameboards, *Dash into Math!* page 47
- Fill the Tank Equation Cards, *Dash into Math!* page 49
- Fill the Tank Story Problem Cards, *Dash into Math!* page 51

Directions

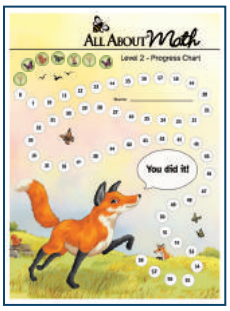
1. Cut out the *Fill the Tank* equation cards, the *Fill the Tank* story problem cards, and the 2 gameboards.
2. Give each player 1 *Fill the Tank* gameboard and 1 set of *Fill the Tank* equation cards. Each player gets either all the green equation cards or all the purple equation cards. Spread them out, with the equation side up, in the workspace. Then, shuffle the story problem cards and place them face down in a stack.
3. Player 1 takes the top card from the story problem card stack and solves the problem. If the problem is correctly solved, Player 1 finds her matching equation card, flips it over, and adds that fish to her tank. If the problem is not correctly solved, the story problem card returns to the bottom of the stack.
4. Player 2 takes a turn.
5. The first player to place 4 fish into her tank is the winner! Optional rule: Choose 1 fish at random to be the winning fish. The first player to add that fish to her tank is the winner!

Answer Key

A: 3 + 2 = 5, B: 10 – 7 = 3, C: 11 – 2 = 9, D: 4 + 6 = 10, E: 14 = 3 + 11, F: 15 = 8 + 7, G: 19 – 5 = 14, H: 13 + 2 = 15, I: 12 – 9 = 3

Track Your Progress

Mark the Progress Chart



Have your student mark Lesson 7 on the Progress Chart.