Unit 1
Numbers to 10

Overview

In Unit 1, your child will firm up her knowledge of the numbers to 10. She'll practice reading, writing, and comparing numbers to 10. She'll also learn how to recognize the numbers 6 to 10 as combinations of "5 and some more" and how to split and join small quantities. With these skills in place, she'll be ready to start learning the addition facts in Unit 2.

Your child will also review several basic kindergarten skills: counting to 20 by 1s and 2s, composing shapes, continuing patterns, and identifying left and right.

Week 1   Review
Week 2   Combinations of "5 and Some More"
Week 3   Split and Join Numbers to 10

What Your Child Will Learn

In this unit your child will learn to:

- Read, write, and compare numbers to 10
- Represent the numbers from 0 to 10 with counters on the ten-frame, tallies, coins, and paper bills
- Recognize the numbers from 6 to 10 as combinations of "5 and some more"
- Split quantities into parts (for example, split a group of 5 into 2 and 3)
- Join parts to find a total (for example, join 4 and 3 to make 7)

Recommended Math Picture Books (Optional)

These picture books are scheduled in the optional Enrichment and Review lessons at the end of each week.

- *Missing Math: A Number Mystery,* by Loreen Leedy. Two Lions, 2008.
- *Two Ways to Count to 10: A Liberian Folktale,* retold by Ruby Dee and illustrated by Susan Meddaugh. Square Fish, 1990.
- *Anno's Counting Book,* by Mitsumasa Anno. Crowell, 1977.

These books are a delightful way to enjoy math, but they are not required. They're listed at the beginning of each unit, so you have time to buy them or request them from the library.

Week 3
## Split and Join Numbers to 10

Overview

This week, your child will preview addition and subtraction as she learns to split numbers into parts and join parts to make totals. She'll also practice the combinations that equal 5 and the combinations that equal 10.

Teaching Math with Confidence: The Part-Total Mat

You'll introduce the Part-Total Mat to your child this week. This simple mat will help your child understand the essential idea that we can join numbers together to make a total and that we can split a total into parts. For example, the Part-Total Mat below shows 2 and 3 can be joined to make 5, and 5 can be split apart into 2 and 3.
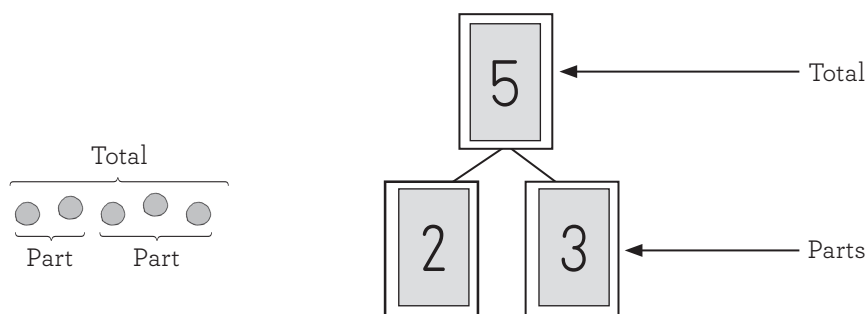
Your child will use the mat this week to record her results as she splits and joins quantities. She'll develop a deeper understanding of the relationships between these parts and totals, so that she is well-prepared for addition and subtraction. Later in the program, she'll use the Part-Total Mat to help write and solve addition and subtraction equations.

$$2 + 3 = 5$$
$$3 + 2 = 5$$

$$5 - 2 = 3$$
$$5 - 3 = 2$$
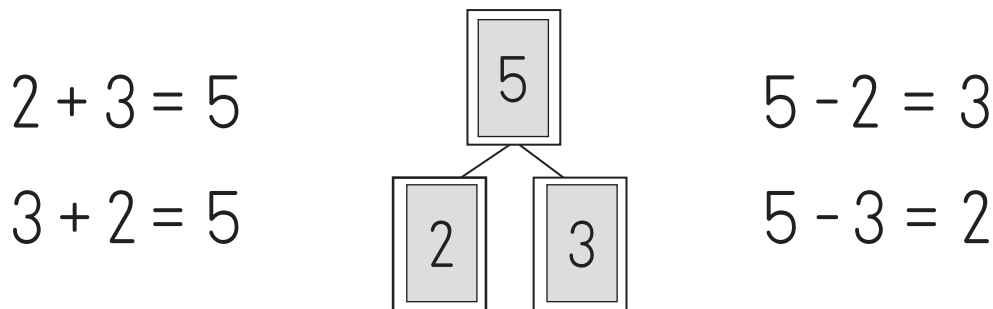
If you have used other math programs, you may have seen other versions of these diagrams. Sometimes they're made from circles or oriented horizontally, and sometimes they're called "Part-Whole" diagrams rather than "Part-Total." No matter what they're called or how they look, they all express the same fundamental concept.

Extra Materials Needed for Week 3

- Small toy
- Plastic plate, optional
- For optional Enrichment and Review Lesson:
    - × *Anno's Counting Book,* by Mitsumasa Anno

Lesson 3.1
Split 5 into Parts

	Purpose	Materials
Warm-up	• Count objects by 2s with a leftover • Practice memory work • Review finding combinations of one-dollar and five-dollar bills	• Counters • Play money
Activities	• Use the Part-Total Mat to identify parts and totals • Find combinations that make 5	• Counters • Part-Total Mat (Blackline Master 4) • Number Cards • Small toy • Play money
Workbook	• Find combinations that make 5	• Workbook pages 3.1A and 3.1B

Warm-up: Counting, Memory Work, and Review

- Secretly count out 15 counters and place them on the table. **About how many pennies do you think there are?** *Answers will vary.* Help your child count by 2s to find the actual number of counters. Demonstrate how to add on the final counter: **14 and 1 more is 15.**

> If your child finds the counting activities repetitive, vary the objects you ask her to count. Food, toys, or seasonal items all make counting more fun and interesting.

- **Raise your right hand. Raise your left hand.**
- Show your child the following play money combinations. Have her tell the value of each.
    - × 3 one-dollar bills *($3)*
    - × 1 five-dollar bill *($5)*
    - × 1 five-dollar bill and 2 one-dollar bills *($7)*
    - × 1 five-dollar bill and 3 one-dollar bills *($8)*
   - × 2 five-dollar bills *($10)*

Activity: Introduce the Part-Total Mat

This week you'll learn about splitting and joining numbers. Today, you'll split a group of 5 into parts and learn how to record the parts and total on a special mat.

Place 5 counters on the table. **Let's pretend the counters are cookies for us to split.** Split the counters as shown. **If I get 2 cookies, how many do you get?** *3*.

In math this year we'll use a mat called the Part-Total Mat to show how we split and join groups. Show your child the Part-Total Mat (Blackline Master 4). **The total goes in the box at the top. The parts go in the boxes at the bottom.**
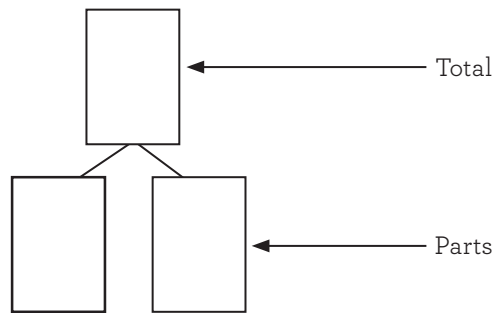
We have a total of 5 cookies. Place Number Card 5 on the mat as shown. **I split the cookies into two parts. I got 2 cookies, and you got 3.** Place Number Cards 2 and 3 on the mat.
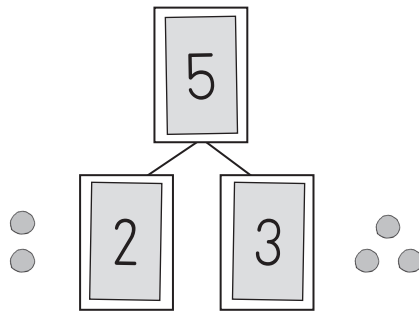
If you find the Number Cards cumbersome, place the Part-Total Mat in a plastic page protector and write the numbers with dry-erase marker instead.

See the Week 3 **Teaching Math with Confidence** for more information about the purpose of the Part-Total Mat and how to use it.

Let's split the cookies a different way. If I get 4 cookies, how many do you get? *1.* Have your child split the counters to match and show the parts and total with Number Cards on the Part-Total Mat.
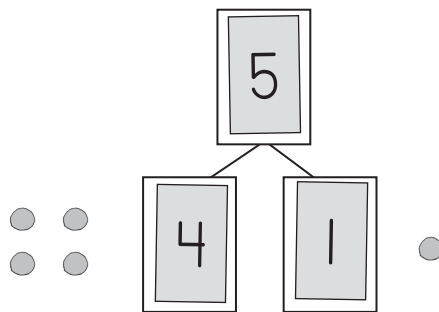
Your child can arrange the parts on the Part-Total Mat in any order. In the above example, your child can switch the 1 and 4.

If I get 0 cookies, how many do you get? *5*. Have your child split the counters to match and show the parts and total on the Part-Total Mat.
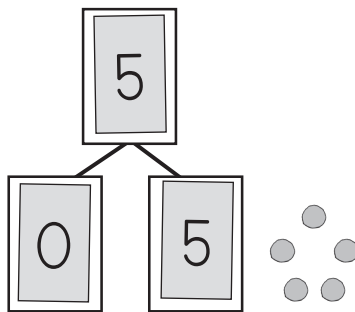

Activity: How Much More Money Do I Need?

Have your child choose a toy to use in the lesson and bring it to the table. **Let's pretend you want to buy this toy, and it costs $5.** Write $5 on an index card and place it next to the toy. **But, you only have 4 dollars.** Give your child a 4 $1-bills.

How many more dollars do you need to buy the toy? *$1*. If she's not sure, place Number Cards on the Part-Total Mat to help: **You need a total of $5, so 5 goes in box at the top. You already have $4, so 4 is one of the parts. 4 and what make 5?** *1*.
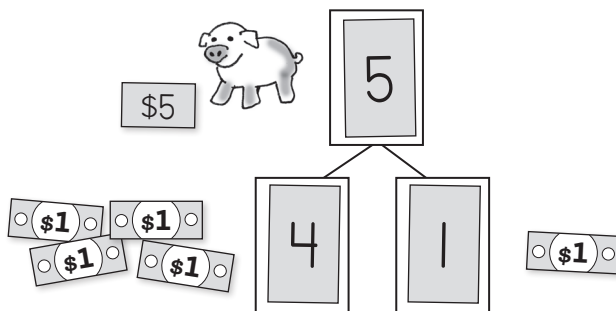
Repeat this process with the following problems. Act out each problem with play money and use the Part-Total Mat as needed to find the answers.

- **If you have $2, how many more dollars do you need to buy the toy?** *$3*.
- **If you have $1, how many more dollars do you need to buy the toy?** *$4*.
- **If you have $0, how many more dollars do you need to buy the toy?** *$5*.
- **If you have $3, how many more dollars do you need to buy the toy?** *$2*.
- **If you have $5, how many more dollars do you need to buy the toy?** *$0*.

Workbook: Combinations That Make 5 and Review

Have your child complete workbook pages 3.1A and 3.1B.

Lesson 3.2
Join Parts to Make a Total

	Purpose	Materials
Warm-up	• Count objects by 2s with a leftover • Practice memory work • Review patterns and ordinal numbers	• Counters • Pattern blocks
Activities	• Join parts to make a total • Represent parts and totals on the Part-Total Mat • Visualize quantities and totals	• Pattern blocks • Plastic plate, or piece of paper • Part-Total Mat (Blackline Master 4) • Number Cards
Workbook	• Find totals with small numbers	• Workbook pages 3.2A and 3.2B

Warm-up: Counting, Memory Work, and Review

- Have your child count out 17 counters. Ask him to count by 2s to 16, then add 1 more counter for a total of 17.

- **Hop on your right leg. Hop on your left leg.**

- Begin a pattern as shown:
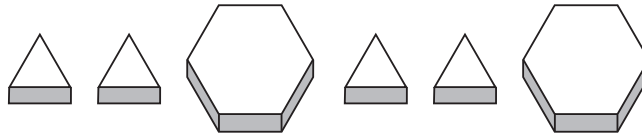
  Have your child continue the pattern. Then, briefly review ordinal numbers: **Which block did I place first? Second? Fifth? Fourth? Third?**

Activity: Join Parts to Make a Total

In the last lesson, you split a group of 5 into parts and learned how to record the parts and total on the Part-Total Mat. Today, we'll join parts to make a total.

We're going to play restaurant today. Let's pretend the pattern blocks are crackers. I'll be the customer, and you can be the server. Could you please serve me 2 triangle crackers and 3 square crackers? *Child places 2 triangles and 3 squares on a plastic plate (or blank piece of paper) and pretends to serve it to you.*
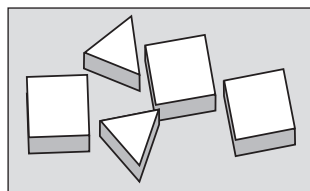
Let's put cards on the Part-Total Mat to match the crackers. There are 2 triangle crackers, so I'll put a 2 on the mat to stand for them. Place Number Card 2 on the mat as shown below. **There are 3 square crackers, so I'll put a 3 on the mat to stand for them.** Place Number Card 3 on the mat.
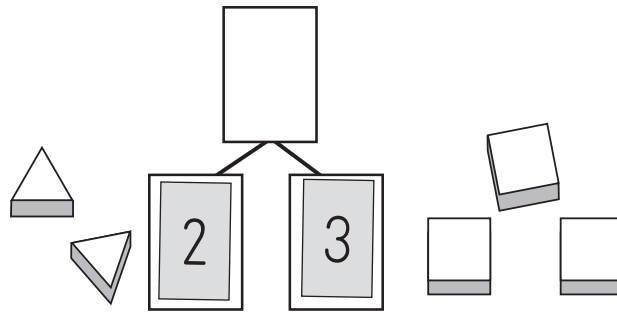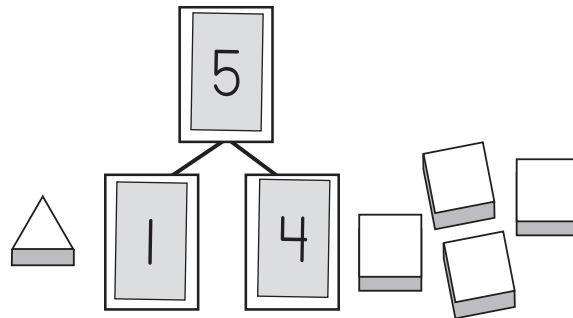

Once you join the squares and triangles, how many crackers are there in total? *5.* **So, let's put a 5 in the total box.** Place Number Card 5 on the mat.
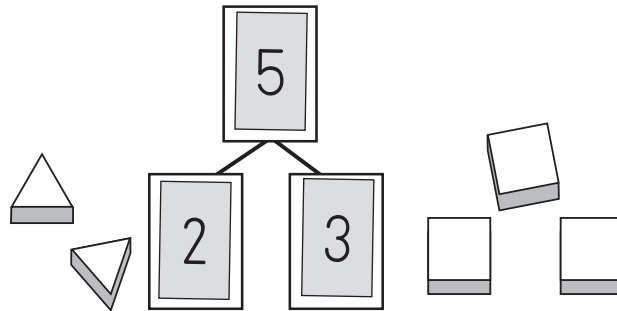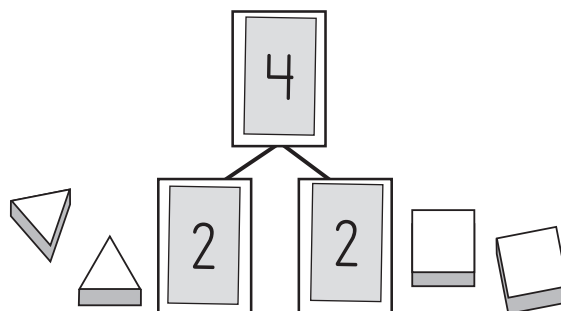

Repeat with the following orders. For each order, have your child model the problem with pattern blocks and place the corresponding cards on the Part-Total Mat.
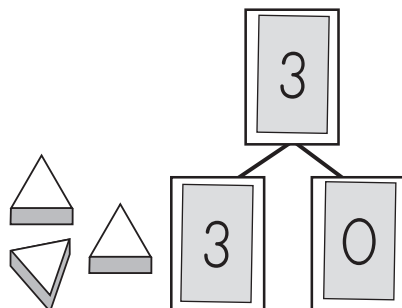
I'd like 1 triangle cracker and 4 square crackers, please.

I'd like 2 triangle crackers and 2 square crackers, please.

**I'd like 3 triangle crackers and 0 square crackers, please.**

The numbers in this lesson are small so your child focuses on making sense of the Part-Total Mat. If your child wants more of a challenge, use 6-10 total crackers instead.

Activity: Find Totals of Boys and Girls

We can also use the Part-Total Mat for real-life parts and totals. Let's use it to show the children in our family. How many boys are in our family? How many girls? *Answers will vary*.

Have your child place Number Cards on the Part-Total Mat to match the number of boys and girls in your family. For example, if you have 2 boys and 1 girl, have him place a 2 and a 1 on the mat.
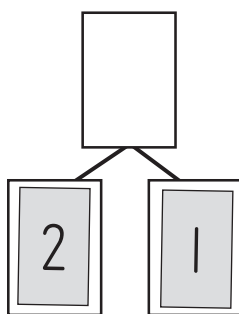
What's the total number of children in our family? *Answers will vary*. Have your child place the Number Card that matches the total on the Part-Total Mat. For example, if you have 2 boys and 1 girl, have your child place Number Card 3 at the top of the mat.
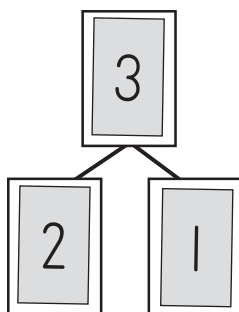
Repeat this activity with several other families you know. Try to include a larger family, as well as a family with either no boys or no girls (so your child practices finding the total when one part is 0).

If your child has trouble finding the totals, use counters to stand for each child. Then, have your child count all the counters to find the total.

Workbook: Find Totals and Review

Have your child complete workbook pages 3.2A and 3.2B.

Lesson 3.3
Split 10 in Many Ways

	Purpose	Materials
Warm-up	• Count to 20 by 2s • Practice memory work • Review combinations of "5 and some more" on the ten-frame	• Counters • 100 Chart (Blackline Master 3) • Double ten-frames (Blackline Master 1) • Paper
Activities	• Find combinations that make 10 • Represent parts and totals on the Part-Total Mat	• Counters • Double ten-frames (Blackline Master 1) • Part-Total Mat (Blackline Master 4) • Number Cards
Workbook	• Find combinations that make 10	• Workbook pages 3.3A and 3.3B

Warm-up: Counting, Memory Work, and Review

• Have your child count by 2s to 20. Have her cover each number on the 100 Chart with a counter as she says it.

• **Wink your right eye. Wink your left eye.**

• Secretly place 9 counters on the ten-frame and cover the counters with a piece of paper.


I'm going to show you some counters for just a second. When I lift the paper, tell me how many counters there are, as fast as you can. Lift the piece of paper for just a few seconds. **How many counters?** *9.* After your child responds, lift the paper and allow her to check her answer.

Repeat with 5, 6, 7, 8, and 10 counters, in random order. Encourage her to think about the combinations of "5 and some more" rather than counting.

Activity: How Many Ways to Split 10?

In the last lesson, we joined parts together to make totals. Today, we'll split a group of 10.

Let's pretend we have 10 candies to share. Place 10 counters on the ten-frame.
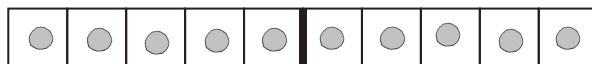
How many different ways do you think there are for us to split these 10 candies? *Answers will vary.* **Let's see how many different ways we can find. I'll make a chart to keep track.**

Draw a simple chart like the following on a piece of paper.

Rebekah										
Mom										

What's one way we could split the counters? Have your child place a pencil on the ten-frame to split the counters between the two of you, either evenly or unevenly. Then have your child place Number Cards on the Part-Total Mat to match. Record how many counters each of you get in the chart.
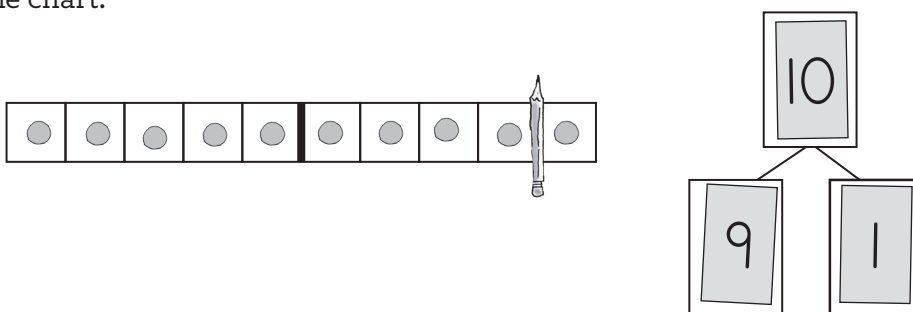
Rebekah	9									
Mom	1									

Sample answer.

Have your child find more ways to split the counters until she can't think of any more.

After she finishes, show her the chart below and discuss if there are any ways you missed.

Rebekah	9	8	7	6	5	4	3	2	1	0	10
Mom	1	2	3	4	5	6	7	8	9	10	0

The goal of this activity is for your child to understand that numbers can be split in many ways, not to teach her how to find all possible combinations. It's fine if she only finds a few ways to split the counters. Later in elementary school, she will learn how to make organized lists to keep track of all possible combinations.

Activity: Play Make 10 Go Fish

Play one round of Make 10 Go Fish.

This game is just like the classic Go Fish game, but players find pairs of cards that equal 10 rather than cards with the same number.

Make 10 Go Fish

**Materials:** 2 sets of Number Cards (0–10)

Object of the Game: Collect the most pairs of cards that make 10.

Shuffle two sets of Number Cards (0–10). Deal out 5 cards to yourself and 5 cards to your child. Spread the rest of the cards face down on the table to be the "fishpond."

On your turn, ask for a card that would create a total of 10 with a card already in your hand. (For example, if you have a 6, ask for a 4.) Your opponent must give you the card if she has it. If she doesn't have the card, she says, "Go fish!" and you take a card from the fishpond.

Play until you have paired all the cards. Players who run out of cards before the fishpond is used up may take 2 cards from the fishpond to continue playing. Whoever has more pairs at the end of the game is the winner.

Leave 10 counters on the ten-frame as you play. Your child can split the counters into 2 parts if she is not sure which card to ask for. For example, if she has a 6:
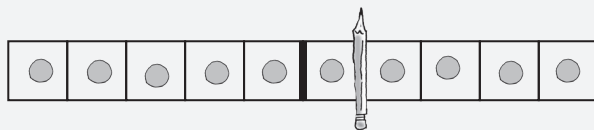
I have a 6, so I need a 4.

Games provide a fun and motivating way for your child to practice her math skills. However, they also take some time. If you don't have time for a particular game (or if your child is resistant to it), skip the game and simply practice the skill instead. For example, if you don't have time to play Make 10 Go Fish, tell your child a number from 0 to 10 and have her name the matching number that makes 10.

Workbook: Find Parts and Totals and Review

Have your child complete workbook pages 3.3A and 3.3B.

Lesson 3.4
Combinations That Make 10

	Purpose	Materials
Warm-up	• Count to 20 by 2s • Practice memory work • Review writing numbers to 10	• Counters • 100 Chart (Blackline Master 3)
Activities	• Find combinations that make 10	• Counters • Double ten-frames (Blackline Master 1) • Part-Total Mat (Blackline Master 4) • Number Cards • Playing cards
Workbook	• Find combinations that make 10	• Workbook pages 3.4A and 3.4B

Warm-up: Counting, Memory Work, and Review

- With your child looking away, place counters on the 100 Chart so that the numbers you say when you count by 2s to 20 are covered.

   Have your child count by 2s to 20. Have him remove each counter after he says the number underneath it.

- **Touch your left ear. Touch your right ear.**

- Say a number from 0 to 10 and have your child write the number on a piece of paper. Repeat with all of the numbers from 0 to 10, in random order.

   > This informal assessment shows you how your child is doing with writing the numbers from 0 to 10. It's very common for first graders to have trouble with reversing numbers or forgetting the order of strokes, so don't worry if your child makes several mistakes.

Activity: Find Missing Parts of 10

In the last lesson, you split 10 in many ways. Today, you'll practice the combinations that make 10 some more.

Place Number Cards on the Part-Total Mat as shown. **What number is missing?** *1.*
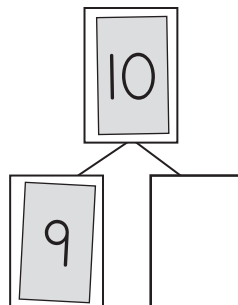
If your child isn't sure, have him place 10 counters on the ten-frame and split the counters into a group of 9 and 1. **You can split 10 into a group of 9 and a group of 1, so 1 is the missing number.**
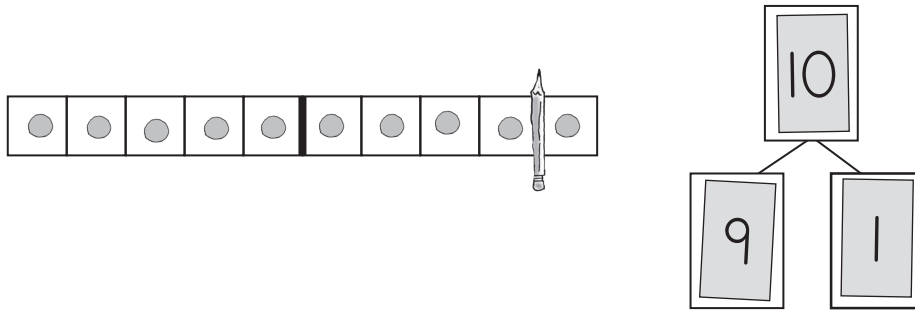
Ask your child to find the following missing numbers on the Part-Total Mat. Have him use counters on the ten-frame as needed to find the answers.
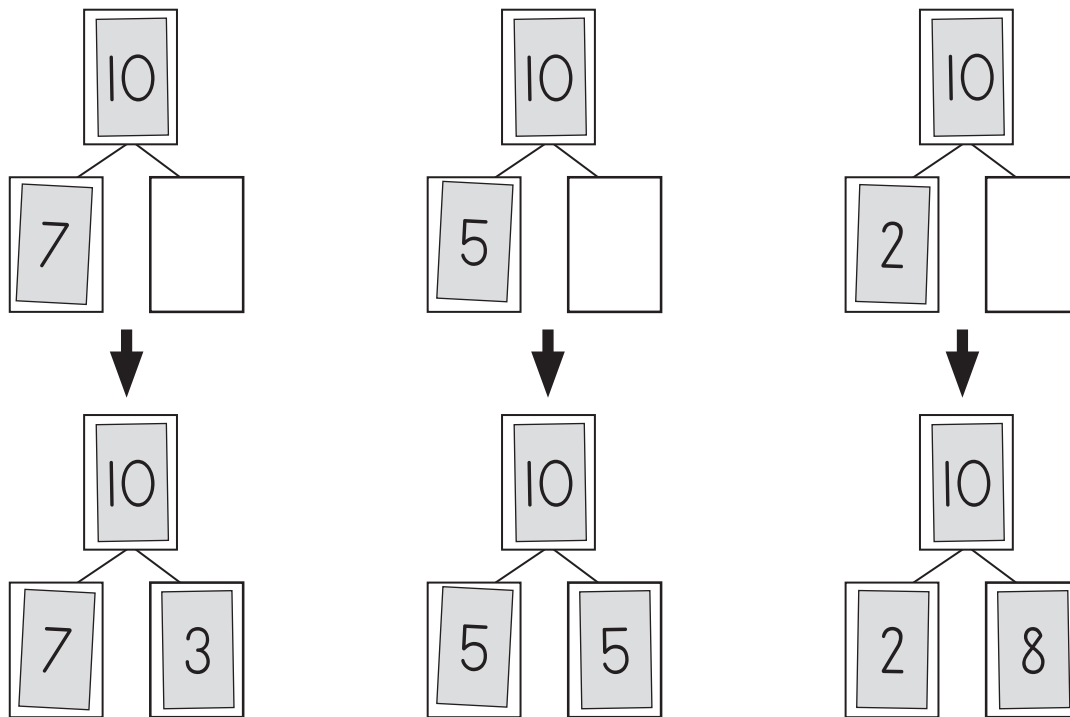
Activity: Play Make 10 Pyramid Solitaire

Have your child play one round of Make 10 Pyramid Solitaire. Allow your child to use the ten-frame and counters as needed.

If your child is still learning the pairs that make 10, Make 10 Pyramid may be too complicated. If so, play Make 10 Go Fish again instead. See Lesson 3.3 (page 52) for directions. Both games practice the same skills, so use whichever game your child enjoys more.

Make 10 Pyramid Solitaire

Materials: Deck of playing cards with face cards removed

Object of the Game: Remove as many cards as possible from the pyramid. (The best score possible is 0. Depending on how the cards are dealt, it's not always possible to remove every card.)

Shuffle the cards. Deal them out face-up in a pyramid shape. An example is shown below. Start at the top and place each new row so it slightly overlaps the previous row. Place the remaining cards in a face-down pile.
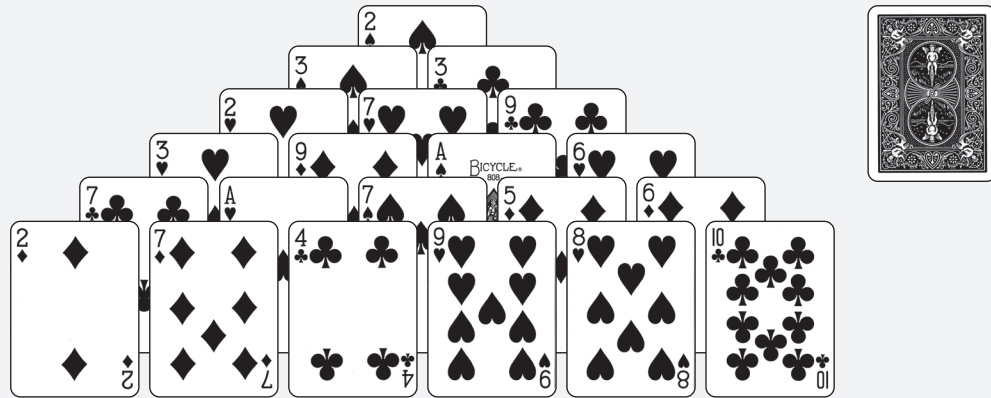
Look for pairs that make 10 in the bottom row of the pyramid. For example, in the sample game above, you could remove the 8 and 2, since they make a 10. You could also remove the 10, since it equals 10 by itself.

As more cards are uncovered, use those to make 10 as well. You can only use cards that are fully uncovered. For example, in the pyramid below, you can remove the 4 and 6; however, you cannot use the 5, 7s, or Ace in the second row from the bottom.
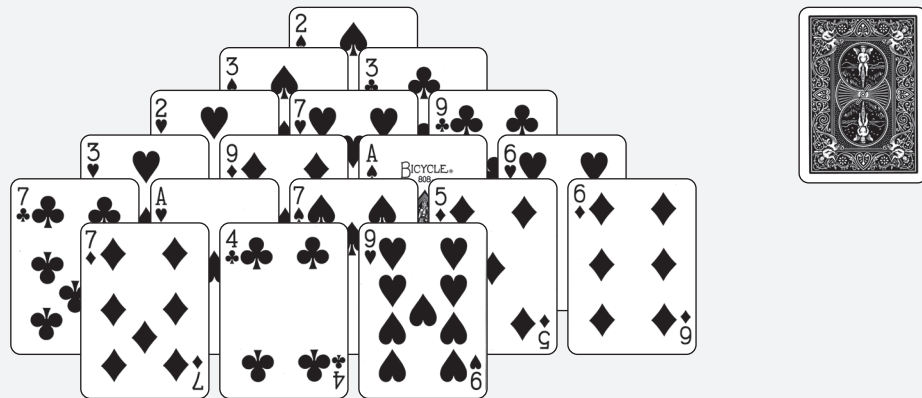
Once you have removed as many cards as possible from the pyramid, flip over the top card from the face-down pile. See if you can use it to make a 10 with a card in the pyramid. As more cards are uncovered in the pyramid, you may also find more pairs there.

Continue flipping over the top card in the pile and removing pairs that make 10 until no more are possible. (You are allowed to flip through the face-down pile as many times as you wish.) Count how many cards are left in the pyramid for the final score.

Workbook: Find Combinations That Make 10 and Review

Have your child complete workbook pages 3.4A and 3.4B. He can use the ten-frame printed at the top of 3.4A to help. If he has trouble finding any of the missing numbers, have him place his pencil on the printed ten-frame to split the counters to match the Part-Total diagram.

Many first graders have a short attention span. If your child struggles to complete the workbook pages, try breaking it into chunks throughout the day. Set a timer for 5 minutes at a time and ask your child to give his best effort for the full 5 minutes. Children are often amazed at how much they can get done in a short amount of time when they give their work their full attention.

Lesson 3.5
Enrichment and Review (Optional)

	Purpose	Materials
Warm-up	• Review counting • Review memory work • Review your child's favorite or most challenging activities from Week 3	• Varies, depending on the activities you choose
Picture Book	• Find numbers represented in many different ways	• *Anno's Counting Book,* by Mitsumasa Anno
Enrichment Activity	• Use real-life objects to represent a number in many ways	• Varies

Warm-up: Counting, Memory Work, and Review

- Have your child count to 20 by 1s and 2s.

- Quiz your child on the memory work through Week 2. See page 499 for the full list.

> New memory work is introduced every 2 weeks, so there is no new memory work on the odd-numbered weeks.

- If you have time, repeat one or two of the activities from this week's lessons. Choose activities your child especially enjoyed or found challenging.

Math Picture Book: *Anno's Counting Book*

Read *Anno's Counting Book,* by Mitsumasa Anno. As you read, discuss the many ways each number is represented on its page. For example, on the page showing the number 5, you can find 5 trees, 5 wisps of smoke, 5 flags, 5 adults, 5 children, and a clock reading 5:00 (among many others!) Point out that any of the pictures depict splitting a number into parts. For example, the 5 children are split into a group of 3 and a group of 2.

Enrichment Activity: Number Display

Have your child pick a number from 1 to 10 and create a display of real-life objects that show the number many different ways. For example, for the number 5, she might include 5 stuffed animals, 5 grains of rice, a clock set to 5:00, the number 5 circled on a calendar, a 5-dollar bill, and a die showing 5 dots.

Encourage her to use a variety of sizes in her display and point out how a given number can look quite big or quite small depending on what objects you use to model it. For example: **5 stuffed animals look a lot bigger than 5 grains of rice!**
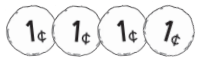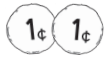
Week 3 Answer Key

3.1A

Complete.

5
2   3

5
4   1

5
5   0

5
1   4

5
0   5

5
3   2

3.1B

Complete.

1¢ 1¢ 1¢ 1¢ → 4¢

1¢ 1¢ → 2¢

→ 0¢

5¢ 1¢ 1¢ 1¢ 1¢ → 9¢

5¢ 1¢ 1¢ → 7¢

Copy the shape.

3.2A

Complete.

4
1   3

4
2   2

3
0   3

6
3   3

5
4   1

7
2   5

3.2B

**Fill the outline with pattern blocks two different ways.
Write how many blocks you use.**

_____ blocks

_____ blocks

Many answers are possible.

Complete.

$5 $1 $1 $1 $1 → $9

Week 3 Answer Key

3.3A

Complete.

10
9 | 1

10
6 | 4

10
5 | 5

10
8 | 2

10
7 | 3

10
10 | 0
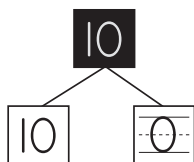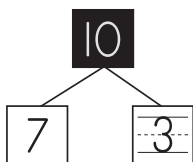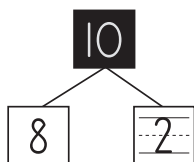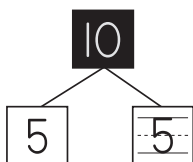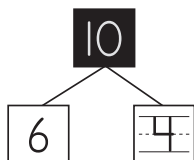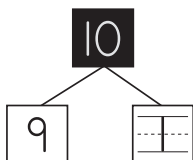
3.3B

Color the numbers you say when you count by 2s.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Draw tallies to match.

||| — 3

|||| || — 7

|||| — 5

| — 1

|||| | — 6

|||| |||| — 9
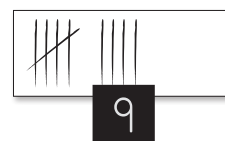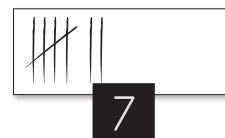
3.4A

Complete. Use the ten-frame at the top to help.

10
6 | 4

10
5 | 5

10
8 | 2

10
7 | 3

10
9 | 1

10
4 | 6
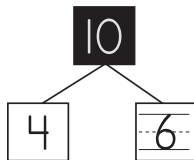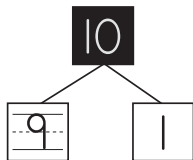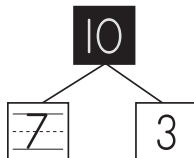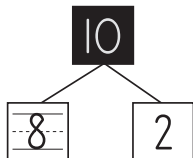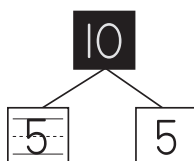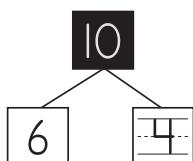
3.4B

Write the numbers that come before and after each number.

7 | 8 | 9

5 | 6 | 7

3 | 4 | 5

0 | 1 | 2

Complete the maze. Find the numbers in order from 1 to 10.
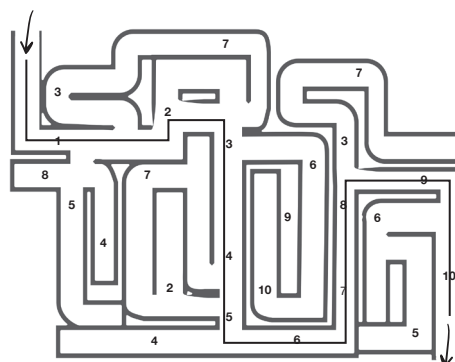
Unit 1 Checkpoint

What to Expect at the End of Unit 1

By the end of Unit 1, most children will be able to:

- Recognize the written numerals from 0 to 10 and write them mostly fluently. Many children will still reverse some of the numbers, especially 3s and 5s.
- Compare two numbers up to 10.
- Recognize quantities on the ten-frame without counting.
- Recognize up to 10 tallies without counting.
- Identify the value of small combinations of coins or paper bills. Many children will need to be reminded of the name or value of coins.
- Split small quantities into parts and join parts to find a total.

Is Your Child Ready to Move on?

In Unit 2, your child will learn the addition facts with sums up to 10 (such as 8 + 2 = 10, or 3 + 3 = 6). Before moving on to Unit 2, your child should already know how to:

- Recognize quantities from 0 to 10 on the ten-frame without counting.
- Read and write the numbers to 10 mostly automatically, even if she sometimes reverses them

Your child does not need memorize the combinations that equal 5 or 10 before moving on to Unit 2.

What to Do If Your Child Needs More Practice

If your child is having trouble with any of the above skills, spend a day or two practicing the corresponding review activities below before moving on to Unit 2. If your child did not use *Kindergarten Math with Confidence* last year, she likely will benefit from a little extra practice at recognizing quantities to 10 on the ten-frame.

Activities for recognizing quantities to 10 on the ten-frame

- Race to 10 (Lesson 2.1)
- Identify Combinations of "5 and Some More" (Review activity, Lesson 2.2)
- Ten-Frame Flash (Review activity, Lesson 3.3)

Activities for reading and writing numbers to 10

- War (0-10) (Lesson 1.2)
- Guess the Secret Number (1-10) (Lesson 1.3)
- Number Dictation (Review activity, Lesson 3.4)

Lesson 6.3
More Missing Addends

	Purpose	Materials
Warm-up	• Count to 50 • Practice memory work • Review finding combinations of one-dollar and five-dollar bills	• 100 Chart (Blackline Master 3) • Play money
Activities	• Solve missing addend word problems • Practice finding combinations that make 10	• Small toy • Play money • Number Cards, optional • Part-Total Mat (Blackline Master 4), optional • Playing cards • Counters, optional • Double ten-frames (Blackline Master 1), optional
Workbook	• Find missing addends in equations equal to 10	• Workbook pages 6.3A and 6.3B

Warm-up: Counting, Memory Work, and Review

- Count in unison with your child to 50. Point to each number on the 100 Chart as you say it.

- Say the days of the week in unison with your child. Then alternate saying the days with your child: **Sunday,** *Monday,* **Tuesday,** *Wednesday,* **Thursday,** *Friday,* **Saturday. How many days are in a week?** *7.*

- Have your child tell the value of the following play money combinations.
    - × 4 one-dollar bills *($4)*
    - × 1 five-dollar bill and 1 one-dollar bills *($6)*
    - × 1 five-dollar bill and 4 one-dollar bills *($9)*
    - × 2 five-dollar bills *($10)*
    - × 1 five-dollar bill and 3 one-dollar bills *($8)*

Activity: Solve Missing Addend Word Problems

In the last lesson, you found missing addends in addition equations. Today, we'll write missing addend equations about money.

Have you ever wanted to buy something but didn't have enough money? *Answers will vary.* Have your child choose a toy to use in the lesson and bring it to the table. **Let's pretend you want to buy this toy, and it costs $10.** Write $10 on an index card and place it next to the toy. **But, you only have $7.** Give your child a $5-bill and 2 $1-bills.
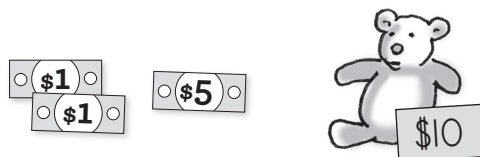
Let's write a matching addition equation. Write 7 + ___ = 10 on a piece of paper.

$$7 + \underline{} = 10$$

Ask the following questions about the equation:

- **What does the 7 stand for?** *(The $7 that I have.)*
- **What does the 10 stand for?** *(The cost of the toy.)*
- **What does the blank stand for?** *(The number of dollars I still need.)*

How many more dollars do you need to buy the toy? *$3.* If she's not sure, encourage her to think of the pairs that make 10: **7 and what make 10?** *3.* **7 and 3 make 10, so you need $3 more.**

If your child isn't sure, place 7 counters on the ten-frame. **How many more counters do I need to make 10?** *3.* Discourage her from counting to find the answers.

Repeat this process with the following problems. For each, write a matching missing addend equation and have your child find the answer.

- **Let's pretend the toy costs $10 and you have $5. How many more dollars do you need?** *5 + ___ = 10. I need $5.*
- **Let's pretend the toy costs $10 and you have $9. How many more dollars do you need?** *9 + ___ = 10. I need $1.*
- **Let's pretend the toy costs $10 and you have $2. How many more dollars do you need?** *2 + ___ = 10. I need $8.*
- **Let's pretend the toy costs $10 and you have $10. How many more dollars do you need?** *10 + ___ = 10. I need $0, so I have enough!*

Activity: Play Make 10 Go Fish

Play one round of Make 10 Go Fish. See Lesson 3.3 (page 52) for directions.

Workbook: Find Missing Addends and Review

Have your child complete workbook pages 6.3A and 6.3B. Allow your child to use the ten-frame and counters as needed.

Lesson 8.2
Fourths

	Purpose	Materials
Warm-up	• Count nickels by 5s • Practice memory work • Review +3 and +4 addition facts	• Coins • Counters • Addition Climb to the Top game board (on Workbook page 5.1A) • 2 decks of playing cards
Activities	• Learn fourths must be equal to each other • Cut shapes into fourths	• Food item that can easily be broken or torn in fourths, such as a banana, cookie, or slice of bread • Index cards • Scissors
Workbook	• Recognize fourths • Split shapes into fourths	• Workbook pages 8.2A and 8.2B

Warm-up: Counting, Memory Work, and Review

- Place 9 nickels on the table. **Each nickel is worth 5¢. So, we can count the nickels by 5s to find out how much they are worth.** Have your child count by 5s to find the total value. **How many cents are the nickels worth?** *45¢*.

- **How many sides does a triangle have?** *3*. **A square?** *4*. **A rectangle?** *4*.

- Play Addition Climb to the Top. See Lesson 5.1 (page 81) for directions.

Activity: Introduce Fourths

In the last lesson, we cut food and index cards into halves. Today, we'll cut food and index cards into fourths.

Show your child a food item that can easily be cut or broken into pieces, like a banana, cookie, or slice of bread. **Let's pretend we wanted to split this food among four people.**

To help your child understand the context, name specific people. For example: **Let's pretend you, Grandpa, Aunt Louise, and I wanted to share the food.**

Can you split it into four equal parts? *Child breaks food item into four equal parts.*

You split the food into 4 fourths. When we cut something into fourths, we must get 4 parts that are equal.

Fourths are sometimes called quarters. This book uses fourths, because it makes it easier for children to remember fourths are cut into *four* pieces.

Activity: Cut Index Cards into Halves and Fourths

Let's pretend this index card is a brownie, and we want to share it equally with 4 people. Let's cut it into fourths so we get 4 equal pieces.

It's often easier to cut things into fourths if you cut them in half first. Have your child use scissors to cut the card in half. Then, have him cut each part in half again, for a total of 4 equal pieces.
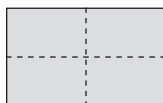
Compare the sizes of the 4 pieces and discuss whether they are equal. Emphasize that fourths must always be equal, even if your child's pieces didn't turn out exactly even.

Give your child two more index cards. **Can you cut each of these cards into fourths in a different way?** Encourage him to first cut the card in half, and then cut each half into 2 equal pieces. If your child is stumped, demonstrate the following ways.
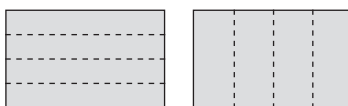
Your child can cut the index card into fourths in many ways. Accept your child's answer as long as the 4 pieces are equal.

Cut an index card into 4 unequal pieces. **Did I cut the index card into fourths? Why or why not?** *Sample answer: No, because the 4 parts aren't equal.*
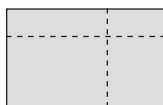
Cut an index card into 3 equal pieces. Did I cut the index card into fourths? Why or why not? *Sample answer: No, because fourths are 4 equal pieces, not 3.*
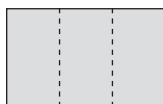
Workbook: Recognize Fourths and Review

Have your child complete workbook pages 8.2A and 8.2B.

Lesson 11.4
Practice Subtraction Facts to 10

	Purpose	Materials
Warm-up	• Count by 10s to 70 • Practice memory work • Review patterns	• Counters • Small plastic zip-top bag • 6 bags of 10 counters assembled in previous lessons • Pattern blocks
Activities	• Solve addition and subtraction word problems • Compare and contrast addition and subtraction word problems • Practice subtraction facts to 10	• Counters • Double ten-frames (Blackline Master 1) • Number Cards • Part-Total Mat (Blackline Master 4) • Subtraction Climb to the Top game board (on Workbook page 11.1A) • Playing cards
Workbook	• Practice subtraction facts	• Workbook pages 11.4A and 11.4B

Warm-up: Counting, Memory Work, and Review

• Have your child count out 10 counters and place the counters in a zip-top bag. Add this bag to the bags you previously assembled and demonstrate how to count the bags by 10s: **10, 20, 30, 40, 50, 60, 70.**
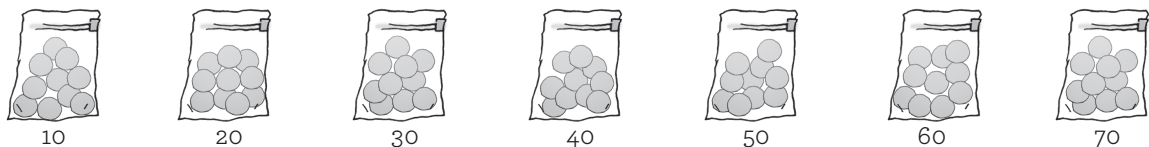
• Have your child say the months. **How many months are in a year?** *12*.

• Begin a pattern as shown:
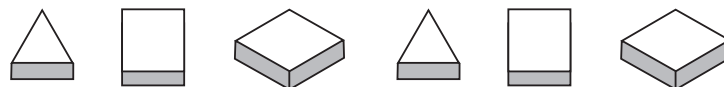
Have your child add several blocks to continue the pattern. Then, have your child look away. Use an index card to cover one of the blocks in the pattern. Have your child guess which shape is covered and then check by removing the slip of paper. Repeat several times, covering a different block each time.

Activity: Solve Take-Away and Take-Apart Subtraction Problems

In the last lesson, you learned about take-apart subtraction. Today, we'll review both take-apart and take-away subtraction.

Ask your child the following word problems. Have your child illustrate each story and write a matching subtraction equation.

- **You have 9 candies. Then you eat 7. How many do you have left?** *2.*

$$9 - 7 = 2$$

- **You have 9 candies. 7 are red and the rest are green. How many are green?** *2.*

$$9 - 7 = 2$$

What do these stories have in common? *Sample answers: Both are about candy. Both have 9 and 7 in them. Both are about splitting the candy into two groups.* If your child doesn't mention it, point out that both problems have the same numbers and are about splitting the candy into two parts.

How are these stories different from each other? *Sample answers: In one story, the candy is eaten up. In the other story, the candy is two different colors.*

> Comparing and contrasting word problems helps children look beyond surface-level commonalities and differences and think more deeply about the underlying structure of the problems. You'll continue to do this throughout the book.

Activity: Play Subtraction Climb to the Top

Play Subtraction Climb to the Top. See Lesson 11.1 (page 175) for directions.

> If your child already knows the subtraction facts covered in Subtraction Climb to the Top, choose a different subtraction game to play instead.

Workbook: Practice Subtraction Facts and Review

Have your child complete workbook pages 11.4A and 11.4B. Encourage your child to think of the problems as missing addend problems and allow him to use the ten-frame and counters as needed.

Lesson 13.4
Pairs That Make 20

	Purpose	Materials
Warm-up	• Count from 70 to 100 • Practice memory work • Review writing numbers from 11 to 20	• 100 Chart (Blackline Master 3)
Activities	• Find combinations that make 20	• Counters • Double ten-frames (Blackline Master 1) • Number Cards • Part-Total Mat (Blackline Master 4)
Workbook	• Find combinations that make 20	• Workbook pages 13.4A and 13.4B

Warm-up: Counting, Memory Work, and Review

- Count in unison with your child from 70 to 100. Point to each number on the 100 Chart as you say it.

- Have your child say the months. **How many months are in a year?** *12*.

- Name the numbers from 11 to 20 in random order. Have your child write each number on a piece of paper.

> This activity informally assesses how fluently your child can write the numbers to 20.

Activity: Find Missing Parts of 20

You've already learned the combinations that make 10. Today, you'll use what you know about the pairs that make 10 to find the pairs that make 20.

Let's pretend we have 20 candies to share. Place 20 counters on the double ten-frames.
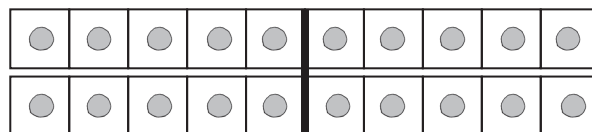
Let's pretend that you get 19. Place a pencil on the ten-frames to split the 20 counters into a group of 19 and a group of 1. **You already know 9 and 1 make 10. So, 19 and what make 20?** *1*.
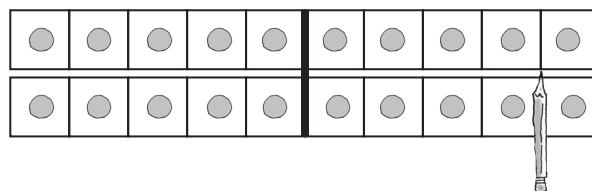
Have your child place Number Cards on the Part-Total Mat to match the counters.
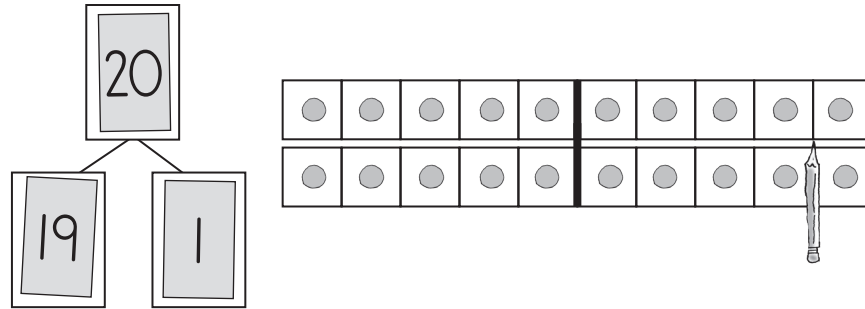
Repeat with the following questions. Encourage your child to think about the pairs that make 10 to help find the answers. For example: **7 and 3 make 10. So, 17 and what make 20?** *3.*

Let's pretend you get 17 candies. How many do I get? *3.*
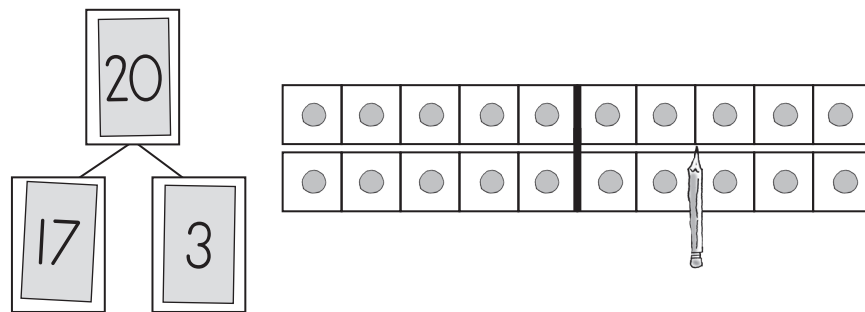
Let's pretend you get 14 candies. How many do I get? *6.*
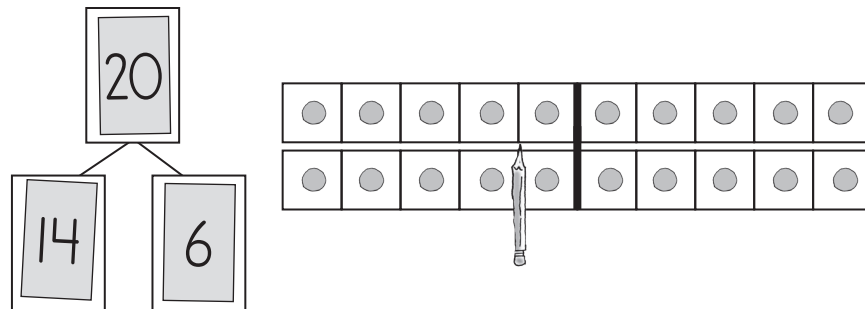
Let's pretend you get 10 candies. How many do I get? *10.*
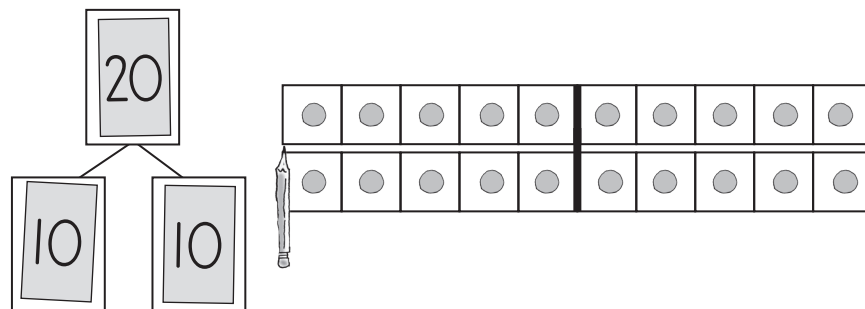
Activity: Play Make 20 Memory

Play one round of Make 20 Memory.

Make 20 Memory

Materials: 1 set of Number Cards (0-20) plus 1 additional 10-card, 22 cards total

Object of the Game: Collect the most pairs that equal 20.

Split the cards into two groups. Place Number Cards 0-9 in one group and Number Cards 11-20 in another group. Add a 10-card to each group so each has 11 cards.
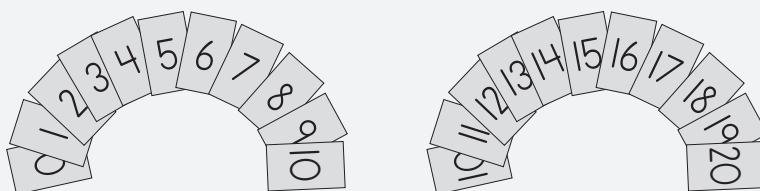
Shuffle each group separately and arrange it in a face-down grid on the table. Place the grid with Number Cards 10-20 on the left side of the table and the grid with Number Cards 0-10 on the right side of the table.
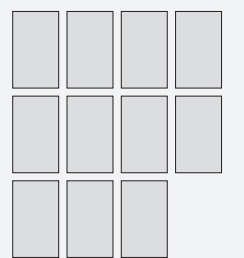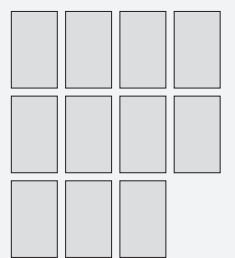
Number Cards 10-20   Number Cards 0-10

Children usually find it easier to identify the combinations that make 20 when they begin with the greater number. Arranging the cards like this ensures your child always starts with a number 10 or greater.

On your turn, flip over 2 cards (1 from each grid). If the cards have a sum of 20 (like 19 and 1, or 16 and 4), keep the pair. Otherwise, turn them back over.

Play then passes to the other player. Play until all the cards have been paired. Whoever has found the most pairs wins.

If your child isn't sure which card he needs to make a pair, have him place 20 counters on the ten-frame and split them to see which card he needs.

Workbook: Find Pairs That Make 20 and Review

Have your child complete workbook pages 13.4A and 13.4B.

Lesson 13.5
Enrichment and Review (Optional)

	Purpose	Materials
Warm-up	• Review counting • Review memory work • Review your child's favorite or most challenging activities from Week 13	• Varies, depending on the activities you choose
Picture Book	• Understand even and odd numbers in the context of mittens	• *Missing Mittens*, written by Stuart J. Murphy and illustrated by G. Brian Karas
Enrichment Activity	• Practice the numbers to 20 in the context of spending money	• 5 index cards or small slips of paper • 5 small toys or household items for a pretend store • Play money

Warm-up: Counting, Memory Work, and Review

- Have your child count to 80 by 1s, 2s, 5s, or 10s. (Choose whichever counting sequence your child needs to practice the most.)

- Quiz your child on the memory work through Week 12. See page 499 for the full list.

- If you have time, repeat one or two of the activities from this week's lessons. Choose activities your child especially enjoyed or found challenging.

Math Picture Book: *Missing Mittens*

Read *Missing Mittens*, written by Stuart J. Murphy and illustrated by G. Brian Karas. As you read, discuss the pictures of the even and odd numbers of mittens.

Enrichment Activity: Pretend Store

Set up a pretend store by laying five small toys in a row. Write $12, $14, $15, $19, $20 on 5 index cards and place an index card in front of each item.

Give your child some play ten-dollar bills, five-dollar bills, and one-dollar bills to use to pretend to buy things. Encourage her to think about the combinations that make 10 as she pays for each item. For example: *10 and 4 make 14, so I need 1 ten-dollar bill and 4 one-dollar bills.*

Lesson 14.2
Introduce Bar Graphs

	Purpose	Materials
Warm-up	• Count by 10s to 100 • Practice memory work • Review addition facts	• 100 Chart (Blackline Master 3) • Counters • 2 decks of playing cards
Activities	• Make and interpret a bar graph	• Workbook page 14.2A • Die
Workbook	• Review previously learned material	• Workbook page 14.2B

Warm-up: Counting, Memory Work, and Review

- Demonstrate how to count by 10s to 100: **10, 20...** Cover each number on the 100 Chart as you say it. Then, have your child count by 10s to 100. Have him remove each counter after he says the number underneath it.

1	2	3	4	5	6	7	8	9	○
11	12	13	14	15	16	17	18	19	○
21	22	23	24	25	26	27	28	29	○
31	32	33	34	35	36	37	38	39	○
41	42	43	44	45	46	47	48	49	○
51	52	53	54	55	56	57	58	59	○
61	62	63	64	65	66	67	68	69	○
71	72	73	74	75	76	77	78	79	○
81	82	83	84	85	86	87	88	89	○
91	92	93	94	95	96	97	98	99	○

- **Name the even numbers in order to 20.** *2, 4, 6, 8, 10, 12, 14, 16, 18, 20.* **Name the odd numbers in order to 19.** *1, 3, 5, 7, 9, 11, 13, 15, 17, 19*.
- Play Addition War. See Lesson 6.4 (page 100) for directions.

Activity: Make a Number Race Bar Graph

In the last lesson, you made a Heads and Tails Tally Chart. Today, you'll make a bar graph. Bar graphs are like tally charts, but they use bars to show the same information.

We'll make the bar graph on your workbook page. Show your child Workbook page 14.2A.

1				
2				
3				
4				
5				
6				

Can you find the title? *Child points to title.* Read the title to your child.

To make the graph, roll the die and color in a matching square. So, if you roll a 6, color in the first empty square next to the 6. I wonder which row you will fill first!

Have your child roll the die and color the matching square until one row is completely full. Make sure he colors in the boxes from left to right, without skipping any boxes.

Sample final Number Race Bar Graph.

Activity: Interpret the Number Race Bar Graph

Use the following questions to discuss your chart. (These sample answers are based on the sample chart above, but your child's answers should be based on his chart.)

- **How many 1s did you roll?** *Sample answer: 4.*
- **How many 2s?** *Sample answer: 2.*
- **How many 3s?** *Sample answer: 2.*
- **How many 4s?** *Sample answer: 5.*
- **How many 5s?** *Sample answer: 1.*
- **How many 6s?** *Sample answer: 4.*
- **Which number did you roll the least?** *Sample answer: 5.*
- **Which number did you roll the most?** *Sample answer: 4.*
- **Did you roll any of the numbers the same number of times?** *Sample answer: I rolled 2s and 3s the same number of times.*
- **How many times did you roll the die in all?** *Sample answer: 18.* If your child is not sure, suggest he count the number of boxes he colored.

   Also show your child how to write an addition equation that matches the total number of rolls.

$$4 + 2 + 2 + 5 + 1 + 4 = 18$$

Sample equation showing the total number of rolls.

Writing this equation helps your child understand how to use addition to find the total number of rolls, but he is not expected to be able to add these 6 numbers. He can simply count the number of colored boxes instead.

- **Were there more 1s or 2s?** *Sample answer: 1s.* **How many more?** *Sample answer: 2 more.* Suggest that your child look at the difference between the lengths of the bars to answer.

  Also show your child how to write a subtraction equation that shows this difference. Start your equation with whichever number is greater and subtract the lesser number from it.

  $$4 - 2 = 2$$

  Sample equation based on the sample tally chart above.

Workbook: Review

Have your child complete workbook page 14.2B.

Lesson 15.2
Add Multiples of 10

	Purpose	Materials
Warm-up	• Count dimes by 10s • Practice memory work • Review the Tens Chant	• Coins • Number Cards
Activities	• Begin to understand the meaning of the tens-place in two-digit numbers • Use place-value thinking to add multiples of 10	• Number Cards • Counters
Workbook	• Add multiples of 10	• Workbook pages 15.2A and 15.2B

Most children need explicit, incremental instruction to make sense of the abstract concept of place value. This unit is designed to provide gradual, clear, and step-by-step teaching so that your child has plenty of time to make sense of this tricky topic. If your child grasps place value quickly, feel free to condense lessons or skip unneeded review activities.

Warm-up: Counting, Memory Work, and Review

- Place 10 dimes on the table. Have your child count by 10s to find the total value. **How many cents are the coins worth?** *100¢.*

- **Name the even numbers in order to 20.** *2, 4, 6, 8, 10, 12, 14, 16, 18, 20.* **Name the odd numbers in order to 19.** *1, 3, 5, 7, 9, 11, 13, 15, 17, 19.*

- Have your child put Number Cards 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100 in order. Rhythmically say the Tens Chant with your child and have him point to the matching card as he chants each number. See Lesson 15.1 (page 236) for the full Tens Chant.
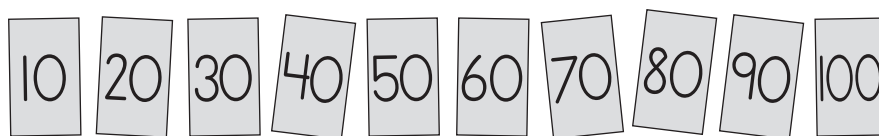
Activity: Discuss Place Value in the Number 40

In the last lesson, you learned how to read and write the numbers you say when you count by 10s to 100. Today, you'll learn to add these numbers.

Show your child Number Card 40. **How many digits are in this number?** *2.* **What are the digits?** *4 and 0.*

Remember, the value of each digit depends on its place. Point to the 4 on the card. **This spot is called the tens-place. What digit is in the tens-place?** *4*. **The 4 in 40 doesn't stand for 4 counters! It stands for 4 groups of 10 counters.** Place 4 bags of 10 counters next to the Number Card.

Point to the 0 on the card. **This spot is called the ones-place. What digit is in the ones-place?** *0*. **This means there are 0 extra ones.**

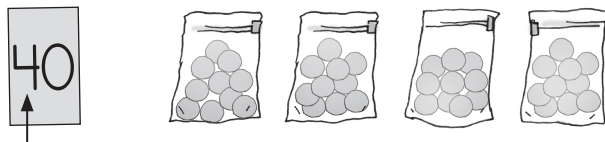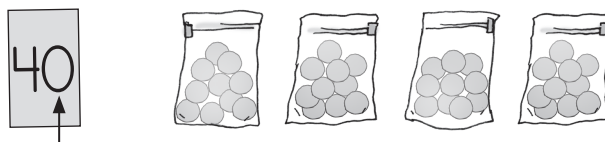**All of the numbers we say when we count by 10s have a 0 in the ones-place. You'll learn how to read and write numbers with a different digit in the ones-place in Week 16.**

Activity: Add Groups of 10

In this unit, we're going to play Cookie Store during some of the lessons. We'll pretend you work at the Cookie Store, and that I'm a customer. We'll pretend the counters are cookies, and you sell them individually or in bags of 10. Discuss your child's experience with bakeries and buying cookies.

> Teaching place value in the context of the Cookie Store gives your child a concrete way to understand the difference between "ones" and "tens." Feel free to modify these activities depending on your child's interests. If your child loves to pretend, he can choose a name for his store, make a sign, and wear an apron while filling your cookie orders. But if he dislikes pretend games or finds them babyish, you can simply use bags of counters and loose counters to teach these lessons, without emphasizing the Cookie Store context.

I'd like 2 bags of chocolate chip cookies and 3 bags of sugar cookies, please. How many total bags is that? *5*. Have your child model the problem with bags of counters and write an equation to match: 2 + 3 = 5.

$$2 + 3 = 5$$
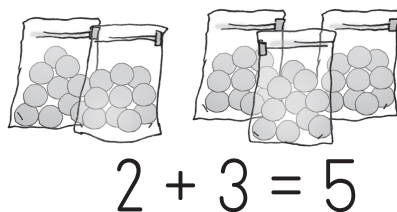
Now, let's write an addition equation about the cookies instead of the bags.

I have 2 bags of chocolate chip cookies, so how many chocolate chip cookies is that? *20*.

I have 3 bags of sugar cookies, so how many sugar cookies is that? *30*. Write 20 + 30 = on a piece of paper.

$$2 + 3 = 5$$
$$20 + 30 = 50$$

This looks like a tough addition problem! But if you use what you know about 2 + 3 and groups of 10, it's not so hard.

2 plus 3 equals 5. So, 2 groups of 10 plus 3 groups of 10 equals how many groups of 10? *5.*

What do 5 groups of 10 equal? *50.* **So, how many cookies do I get in all?** *50.* Have your child complete the equation.
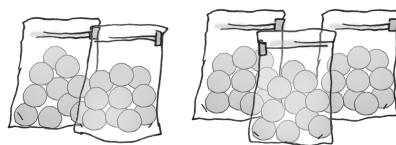
$$20 + 30 = 50$$

Repeat this process with the following addition equations. Have your child model each problem with bags of counters.

- 2 + 2 = 4; 20 + 20 = *40*
- 5 + 1 = *6*; 50 + 10 = *60*
- 4 + 3 = *7*; 40 + 30 = *70*
- 7 + 2 = *9*; 70 + 20 = *90*
- 2 + 5 = *7*; 20 + 50 = *70*

It's easy for children to simply parrot the words "tens-place" and "ones-place" without really understanding them. But when your child uses place-value concepts to add and subtract, he starts to understand place value at a deeper level. Make sure to keep the focus on these place-value concepts as you work through the addition equations with your child.

Workbook: Add Multiples of 10 and Review

Have your child complete workbook pages 15.2A and 15.2B. If your child has trouble with any of the problems on 15.2A, have him model them with bags of counters.

Lesson 18.3
Measure with Pattern Blocks, Part 2

	Purpose	Materials
Warm-up	• Count backward from 50 • Practice memory work • Review take-apart subtraction word problems	• 100 Chart (Blackline Master 3), optional • Coins • Counters

Activities	• Measure length with repeated units
	• Estimate and measure length in inches (or centimeters)
	• Use repeated units to measure and cut a given length
		• 5 "skinny" household items, such as a toothpick, pencil, screwdriver, fork, and comb
		• *If you use U.S. customary units:*
		  × square pattern blocks
		• *If you use metric units:*
		  × centimeter cubes or squares
		• Index cards or small slips of paper
		• 8 narrow paper strips, about 8 inches long (or 10 cm) and ¼-inch (or 0.5 cm) wide
		• Scissors
		• Glue, optional
		• Construction paper, optional

Workbook	• Measure length with repeated units	• Workbook pages 18.3A (or metric 18.3A) and 18.3B

Note for Families that Use the Metric System

To modify this lesson for the metric system:

- say "centimeters" instead of "inches" every place it appears in the lesson
- use centimeter blocks or cubes instead of square pattern blocks
- use metric workbook page 18.3A (See the Week 18 Materials Note for download instructions.)

Warm-up: Counting, Memory Work, and Review

- Have your child count backward from 50 to 35. If she has trouble, have her point to each number on the 100 Chart as she says it.

- Show your child a penny, nickel, and dime, and have her tell the name and value of each coin.

- Read the following word problems to your child. Have her model each problem with counters and then write and solve a subtraction equation to match.

  × **10 children are playing tag. If 5 are boys, how many are girls?** *5.*

$$10 - 5 = 5$$

× **You have 8 lollipops. Some are cherry-flavored, and some are watermel-on-flavored. If 7 are cherry-flavored, how many are watermelon-flavored?** *1.*

$$8 - 7 = 1$$

> If your child has trouble writing the subtraction equations, have her place Number Cards on the Part-Total Mat before writing each equation.

What do these word problems have in common? *Sample answers: Both are take-apart subtraction problems. Both are about finding part of a total. You can use subtraction to solve both problems.*

Activity: Measure Household Items in Inches (or Centimeters)

In the last lesson, you measured pieces of yarn with square pattern blocks. Show your child a square pattern block. **Do you remember how long the edge of each square pattern block is?** *1 inch.* **Today, you'll use pattern blocks to measure objects in inches.**

Try to hold your thumb and first finger one inch apart. *Child holds thumb and forefinger about one inch apart.* Place the pattern block between the thumb and finger to check his estimate.

Show your child 5 household items of different lengths. (See Materials for suggestions.) **Which is shortest?** *Answers will vary.* **Which is the longest?** *Answers will vary.* Have your child put the items in order from the shortest to the longest.
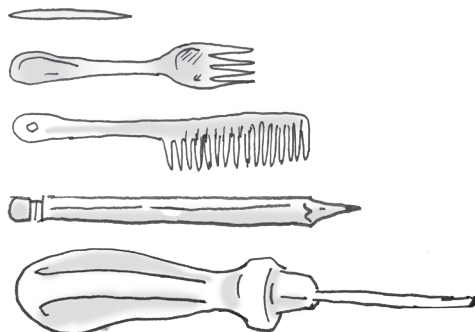
Point to the shortest item. **How many inches long do you think this item is?** *Answers will vary.*

Have your child measure the item by placing square pattern blocks in a line next to the item. Have her record the item's length in inches on an index card and place the card next to it.
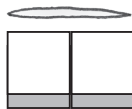
Have your child measure the rest of the items with square pattern blocks. Make sure she estimates the length of each object before measuring.

> You may find some of the items are not a whole number of inches. Use phrases like "a little more than 6 inches" or "a little less than 4 inches" to describe these lengths. Round these items' lengths to the nearest whole number of inches as you record them.

Activity: Use Pattern Blocks to Measure and Cut Paper Strips

We also measure when we need to cut things to the right size. Let's cut some paper strips to make a picture.

Place a paper strip on the table. **The first paper strip should be 5 inches long.** Line up 5 pattern blocks under the paper strip, starting at the left edge of the strip. Draw a line at the end of the blocks, and cut the strip along this line.
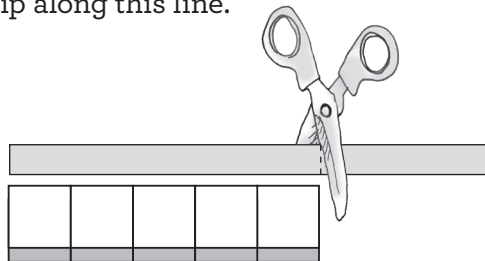
Have your child measure and cut the following sizes of paper strips:

- 1 additional 5-inch strip (for a total of 2)
- 3 6-inch strips
- 2 4-inch strips
- 1 3-inch strip

Show your child how to arrange these strips in the shape of a house as shown. If you have time, she can glue the strips to a piece of construction paper and add more details to the picture.
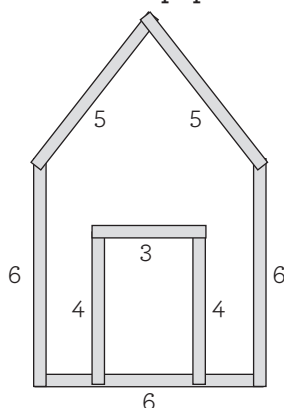
Workbook: Measure in Inches (or Centimeters) and Review

Have your child complete workbook pages 18.3A and 18.3B. Your child will need square pattern blocks to measure the straws on 18.3A.

If you use the metric system, have your child complete metric workbook page 18.3A. Your child will need centimeter squares or cubes to measure the lines.

You may need to show your child how to line up the pattern blocks along the vertical lines.

Lesson 21.3
Word Problems with +8 Facts

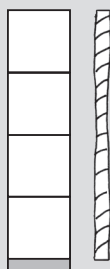|	Purpose	Materials
Warm-up	• Count nickels by 5s • Practice memory work • Review identifying numbers on the 100 Chart	• Coins • 100 Chart (Blackline Master 3) • Counters
Activities	• Write equations to match addition word problems and solve the equations • Practice +8 addition facts	• Counters • Double ten-frames (Blackline Master 1) • Adding 8s Crash game board (on Workbook page 21.1A) • Playing cards
Workbook	• Solve addition word problems • Practice +8 addition facts	• Workbook pages 21.3A and 21.3B

Warm-up: Counting, Memory Work, and Review

- Place 11 nickels on the table. Have your child count by 5s to find the total value. **How many cents is this?** *55¢*.

- Have your child say the months. **How many months are in a year?** *12*.

- Have your child cover the following numbers on the 100 Chart with counters: 76, 36, 43, 67, 27, 28, 24, 25, 49, 33, 39, 58, 54, 65. The final arrangement of counters should look like a heart.

Activity: Solve +8 Addition Word Problems

You have been working on learning the +8 addition facts. Today, you'll use the +8 facts to solve addition word problems. But watch out: there may be a subtraction problem mixed in, too!

Read the following word problems to your child. Have her model each problem with counters on the ten-frame and then write and solve an equation to match.

- **You have 8 square crackers. Then you get 5 round crackers. How many crackers do you have now?** *13*.

$$8 + 5 = 13$$
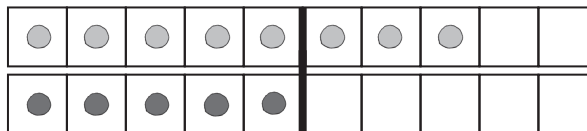
- **You have 8 almonds. Then you get 4 pistachios. How many nuts do you have now?** *12*.

$$8 + 4 = 12$$
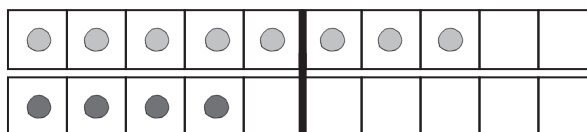
- **You have 8 strawberries. Then you eat 6 of the strawberries. How many strawberries do you have now?** *2*.

$$8 - 6 = 2$$

Activity: Practice Written Word Problems

Show your child workbook page 21.3A. **Let's practice the 3 steps for solving word problems**.

The first step is to read the problem slowly and carefully. Have your child read aloud the first problem (or read it aloud to her).

> You have 8 blue balloons.
> You have 3 yellow balloons.
> How many balloons do you have?

The second step is to write an equation to match the problem. Have your child write an equation to match the problem in the space provided on the worksheet.
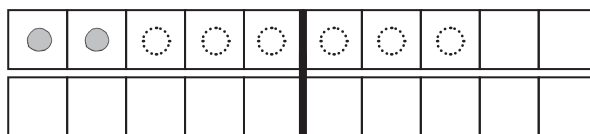
$$8 \oplus 3 = \underline{}$$

If your child is not sure whether to write a plus sign or minus sign in the circle, point out the picture on the worksheet. **Are we joining two groups together or separating two groups?** *Joining*. **So, since we're joining two groups, this is an addition problem.**

The third step is to complete the equation and write the answer in the sentence.

$$8 \oplus 3 = 11$$

I have 11 balloons.

Activity: Play Adding 8s Crash

Play Adding 8s Crash. See Lesson 21.1 (page 336) for directions. Keep 8 counters on the ten-frame visible as you play. Ask your child to visualize the second number in the problem before constructing it with counters. (Or, instead of constructing it with counters.) This will help her continue to learn to visualize the answers.

Workbook: Solve Word Problems and Review

Have your child complete workbook pages 21.3A and 21.3B. Help your child read the problems as needed and encourage her to follow the steps she practiced in the lesson.

Lesson 23.4
Tell Time to the Half Hour

|	Purpose	Materials
Warm-up	• Count ten-dollar bills by 10s • Practice memory work • Review reading the date on a calendar	• Play money • Printed 12-month calendar (January–December)
Activities	• Tell time to the half hour on a clock with hands	• Clock with hands
Workbook	• Tell time to the half hour on a clock with hands	• Workbook pages 23.4A and 23.4B

Warm-up: Counting, Memory Work, and Review

- Place 10 ten-dollar bills on the table. Have your child count by 10s to find the total value. **How many dollars is this?** *$100*.

- **How many cents equal 1 dollar?** *100*.

- Point to the current date on the calendar. Have your child read the date and identify the day of the week. Also point to a few other dates on the calendar and have your child read them and identify the days of the week.

Activity: Practice Reading a Clock with Hands to the Hour

In the last lesson, you learned how to tell time to the hour on a clock with hands. Today, you'll learn to tell time to the half hour.

Set a clock with hands to 7:00 and have your child identify the hour hand and minute hand.
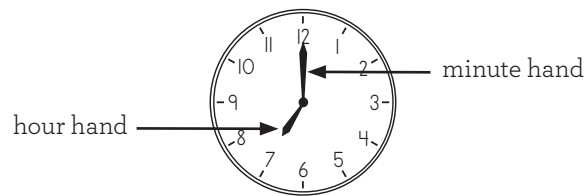
To what number is the hour hand pointing? *7*. **To what number is the minute hand pointing?** *12*. **So, what time does this clock show?** *7 o'clock*. Have your child write 7:00 on a piece of paper.

7:00

Set the clock to 11:00. **What time does this clock show?** *11 o'clock*. Have your child write 11:00 on a piece of paper.

Repeat with 1:00, 5:00, 6:00, 10:00, and 12:00. Each time, have your child name the time and write it on a piece of paper.

Activity: Tell Time to the Half Hour on a Clock with Hands

Set a clock with hands to 2:00. **What time does this clock show?** *2 o'clock.*

The minute hand tells us how many minutes past the hour the time is. But the tricky part about reading the minute hand is that the numbers for the minutes aren't printed on the clock!

> Your child will learn to tell time to the half hour in this lesson. He does not need to learn to tell time to the minute. This brief introduction to how the minute hand moves will help him understand why the minute hand points to the 6 on the clock face at 30 minutes past the hour.

Move the minute hand to the first tick mark past 12 (so the time reads 2:01). **As each minute passes, the minute hand moves to the next tick mark. The minute hand is 1 tick mark past 2:00, so the clock now shows 2:01.**

Have your child move the minute hand forward to the next tick mark. **What time does the clock show now?** *2:02.*

Have your child continue to move the minute hand forward one minute at a time and identify the time until he reaches 2:15.

Turn the minute hand to the 6 (so the time reads 2:30). **Can you figure out what time the clock says now?** *2:30.* Suggest he count the tick marks up to the printed 6 if he's not sure. Have your child write 2:30 on a piece of paper.

2:30

When the minute hand points to the 6, the time is 30 minutes past the hour. Another way to remember it is to notice the minute hand is halfway through the hour. A half hour is 30 minutes, so the time is 30 minutes past the hour.

Point out the hour hand on the clock. **Where is the hour hand now?** *Between the 2 and the 3.*

We know it's 2:30 and not 3:30, because the hour hand hasn't gotten to the 3 yet. Have your child slowly spin the minute hand forward to 3:00. **The hour hand moves closer and closer to 3 as the hour passes. Once the hour passes, the minute hand returns to the top of the clock again.**

Set the clock to 4:30. **What time does this clock show?** *4:30.* If your child says 5:30, remind him the hour hand hasn't reached the 5 yet. Have your child write 4:30 on a piece of paper.

Repeat with 5:30, 8:30, 10:30, 12:30, and 3:30. Each time, have your child name the time and write it on a piece of paper.

> Your child is not expected to fully master telling time to the half hour during this lesson. He will practice it more in the warm-ups and workbook pages during the next several weeks.

Workbook: Tell Time to the Half Hour and Review

Have your child complete workbook pages 23.4A and 23.4B.

Lesson 23.5
Enrichment and Review (Optional)

	Purpose	Materials
Warm-up	• Count to 100 by 1s, 2s, 5s, or 10s • Review memory work • Review your child's favorite or most challenging activities from Week 23	• Varies, depending on the activities you choose
Picture Book	• Understand units of time in the context of soccer	• *Game Time!*, written by Stuart J. Murphy and illustrated by Cynthia Jaber
Enrichment Activity	• Estimate and measure time in seconds	• Materials for creating an obstacle course • Stopwatch, phone with a stopwatch app, or clock with a second hand

Warm-up: Counting, Memory Work, and Review

- Have your child count to 100 by 1s, 2s, 5s, or 10s. (Choose whichever counting sequence your child needs to practice the most.)

- Quiz your child on the memory work through Week 22. See page 499 for the full list.

- If you have time, repeat one or two of the activities from this week's lessons. Choose activities your child especially enjoyed or found challenging.

Math Picture Book: *Game Time!*

Read *Game Time!*, written by Stuart J. Murphy and illustrated by Cynthia Jaber. As you read, discuss the different units of time included in the book. If your child participates in a sport, talk about how long your child's practices and games take.

Enrichment Activity: Measuring Seconds with an Obstacle Course

Have your child create a simple obstacle course, either inside or outside. Ask her to predict how long it will take to for her to complete the course. Then, use a stopwatch to time how long it takes for her to run the obstacle course, and compare the actual time to the predicted time.

Have your child run the course several times. Write down how long each run takes, and discuss whether each run is faster or slower than the previous one.