

## Introducing Addition

In Unit 2, your child begins learning strategies for solving addition problems. Children create a class “Strategy Wall” that lists all the strategies they learn and practice. Strategies covered in this unit include counting on, using the turn-around rule, and using pairs of numbers that add to 10 (such as 3 and 7, or 9 and 1). Children will continue to learn strategies that help them become fluent with addition within 20 as the year progresses.

An important tool for addition is the ten frame. Ten frames are especially helpful for identifying pairs of numbers that add to 10, as well as for illustrating other facts within 10.



10 frames: 7 dots and 3 blanks

$$7 + 3 = 10$$



7 dots: 1 full column of 5 dots and  
1 column with 2 dots

$$5 + 2 = 7$$

Children also begin modeling number stories using change diagrams to organize information. (See below.) They use numbers and symbols to write number models that represent these problems.

## Vocabulary

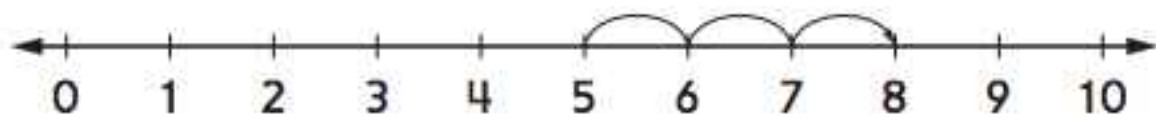
Important terms in Unit 2:

**change diagram** A diagram used in *Everyday Mathematics* to model situations in which quantities are either increased or decreased. The diagram includes a starting quantity, an ending quantity, and the amount of change.



A change diagram for  $9 + 5 = 14$

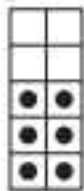
**counting on** An addition strategy that involves starting with one number being added and counting on the other number. For example, to solve  $5 + 3$ , start at 5 and count on.



**Math Boxes** A collection of problems to practice skills.



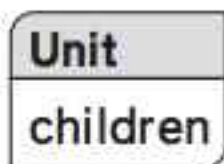
**ten frame** An array of 10 squares used to organize small numbers.



Ten frame showing 6

**turn-around rule** A rule for solving addition problems based on a property of addition. If you know that  $6 + 8 = 14$ , then, by the turn-around rule, you also know that  $8 + 6 = 14$ .

**unit box** A box displaying the unit for numbers. For example, in a problem that involves the number of children in a classroom, the unit box would show the word *children*.



## Do-Anytime Activities

To work with your child on concepts taught in this unit and in Unit 1, try these activities:

1. Select a number less than 10. Have your child name the other number needed to make a sum of 10. For example, if you say 7, your child should say 3.
2. Create number stories together and solve them using a change diagram or a number grid. For example, "Carrie had 14 stickers. She gave 3 of them to her friends. How many stickers does Carrie have now?"

-9	-8	-7	-6	-5	-4	-3	-2	-1	0
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Counting back from 14

3. Make up number stories and number models together for everyday events. For example, when riding in the car, count things you see and make up stories such as: "I saw 3 red cars. Then I saw 2 blue cars. How many cars did I see in all?  $3 + 2 = ?$ "

## Building Skills through Games

Your child will play these games and others in Unit 2.

### High Roller

Players roll two dice. They keep the die with the greater number (the high roll) and then reroll the other die. They count on from the high roll to get the sum of the two dice.

### Penny Plate

Players begin with a specified number of pennies, usually 10. One player hides some of the pennies under the plate. The other player counts the visible pennies and guesses how many pennies are hidden using knowledge of numbers that add to 10.

### Roll and Total

Players roll a pair of dice: one dot die and one labeled with the numerals 3 through 8. They find the sum and record the result.

### Ten-Frame Top-It

Children compare the numbers of dots on ten-frame cards in this variation of *Top-It*.

## As You Help Your Child with Homework

As your child brings assignments home, you may want to go over the instructions together, clarifying them as necessary. The answers listed below will guide you through the Home Links for this unit.

### Home Link 2-1

- 8; 8
- Explanations will vary but should include that the numbers are being added in a different order, but the answer is the same.
- 30; 35; 40; 50

### Home Link 2-2

- Sample answers:

Number of Pennies in One Hand	Number of Pennies in the Other Hand
5	5
8	2
7	3
1	9

- 6

### Home Link 2-3

- Answers vary.
- 10

### Home Link 2-4

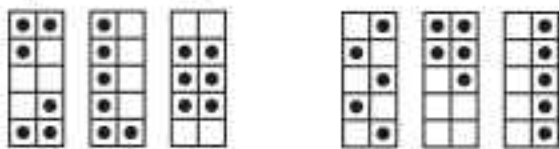
- 4, 6
- 8, 2
- 5, 5
- Answers vary.

### Home Link 2-5

- Answers will vary but should show a total of 10 toys; some dolls and some blocks.
- 5

### Home Link 2-6

Sample answers given for 1 and 2.



- 40; 45; 55; 65

### Home Link 2-7

- Answers vary.
- 5

### Home Link 2-8

- 5;
 

Start	Change	End
3	add 2	5
- 9;
 

Start	Change	End
4	add 5	9

- 20, 21, 22, 23, 24

### Home Link 2-9

- |       |        |     |
|-------|--------|-----|
| Start | Change | End |
| 8     | 3 less | 5   |

 ; 5
- |       |        |     |
|-------|--------|-----|
| Start | Change | End |
| 10    | 7 less | 3   |

 ; 3

- 11
- 15
- 3

### Home Link 2-10

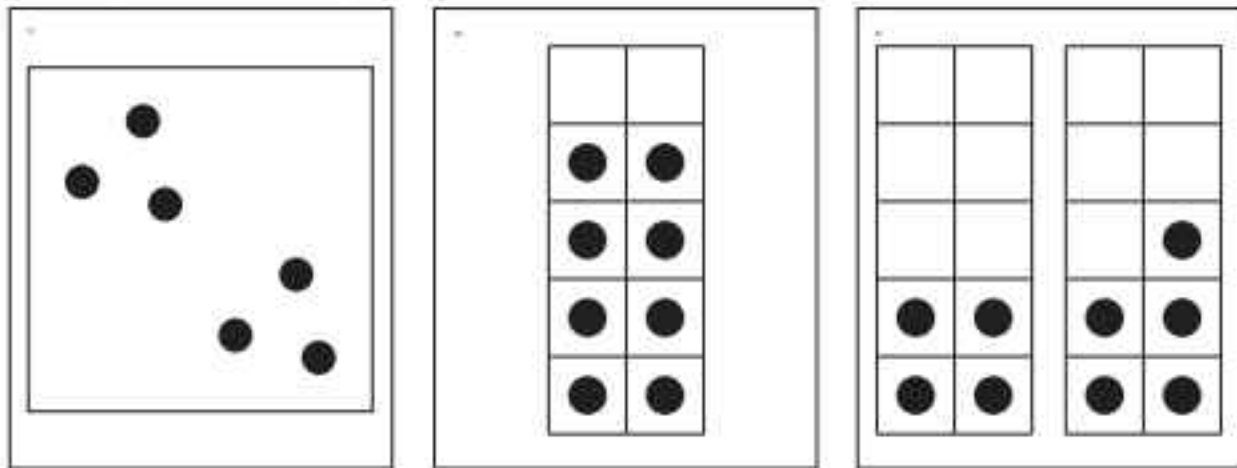
- $4 + 4 = 8$ ; 8
- $9 - 3 = 6$ ; 6
- Answers vary.

### Home Link 2-11

- $5 + 3 = \square$ ; 8
- Sample answer: Sophie had 7 crayons. She lost some crayons. She has 3 crayons left. How many crayons did Sophie lose?
- Sample answer: 3 and 7, 7 and 3

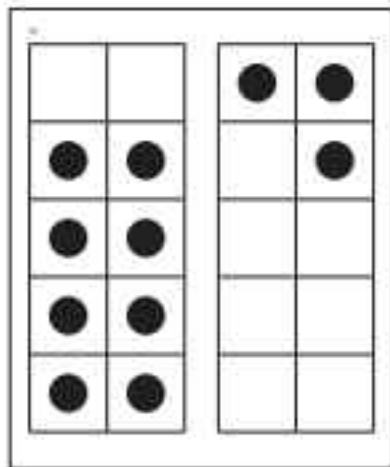
### Quick Looks in *First Grade* *Everyday Mathematics*

Throughout first grade, children engage in activities referred to as “Quick Looks.” Quick Looks use images of dot patterns or ten frames to encourage children to break numbers apart and put them together in flexible ways. Being able to think flexibly about numbers is an important skill to help children develop strategies for solving addition and subtraction facts. Children are shown each image for 2–3 seconds, and then they share *what* they saw and *how* they saw it.



Sample Quick Look images

Children explain finding the total number of dots in the second image above in various ways, such as, “I saw 4 and 4 and that makes 8,” “I skip counted: 2, 4, 6, 8,” and “There are 2 missing from the ten frame, and I know  $10 - 2 = 8$ .” Quick Looks with more complex images are used later to help children develop important fact strategies for solving more difficult facts. See below:



To solve  $8 + 3$ , children mentally manipulate the images to “make 10.” So  $8 + 3 = 10 + 1 = 11$ .

Encourage your child to talk about the ways that he or she figured out the total dots on the Quick Looks done in class.