Introducing Addition Strategies

> ## Family Note
>
> In today's lesson, your child learned an important property of addition: The order in which the numbers are added does not matter. The sum, or answer, is always the same. We call this the *turn-around rule*.
>
> ***Please return this Home Link to school tomorrow.***

(1) Solve.

Jai has 3 shells.
His sister has 5 shells.
How many shells do they have in all?

_____ shells

Ellen found 5 rocks.
Her friend found 3 rocks.
How many rocks do they have in all?

_____ rocks

(2) Explain to someone at home how these number stories are alike and how they are different.

Practice

(3) Count up by 5s.

20, 25, _____, _____, _____, 45, _____

Two-Fisted Penny Addition

Family Note

Today your child learned about pairs of numbers that add to 10. Knowing these pairs is useful for later work with addition and subtraction facts. Help your child find pairs of numbers that add to 10 by doing Two-Fisted Penny Addition together.

Please return this Home Link to school tomorrow.

① Do Two-Fisted Penny Addition with someone at home:

- Place 10 pennies on the table. Grab some pennies with one hand. Pick up the rest with the other hand.

- Place each handful of pennies in its own pile.

- Use the table below to write how many pennies are in each pile.

Number of Pennies in One Hand	Number of Pennies in the Other Hand

Practice

② Shane has 4 model boats. He buys 2 more boats.

How many boats does Shane have now?

_____ boats

Pairs of Numbers That Add to 10

Family Note

In this lesson, children continue finding pairs of numbers that add to 10 by playing a game called *Penny Plate*. Have your child explain how to play the game and play it together at home. Once your child has mastered pairs of numbers that add to 10, play the game with larger numbers of pennies.

Please return this Home Link to school tomorrow.

(**1**) Manny has 10 balloons.

Some of the balloons are blue.

Some of the balloons are yellow.

Draw a picture to show how many of each color balloons Manny might have.

Practice

(**2**) Start at 5. Count up 5. Where do you land? _____

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<─────┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼──┼─────>
      0  1  2  3  4  5  6  7  8  9  10 11 12
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Family Letter

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.
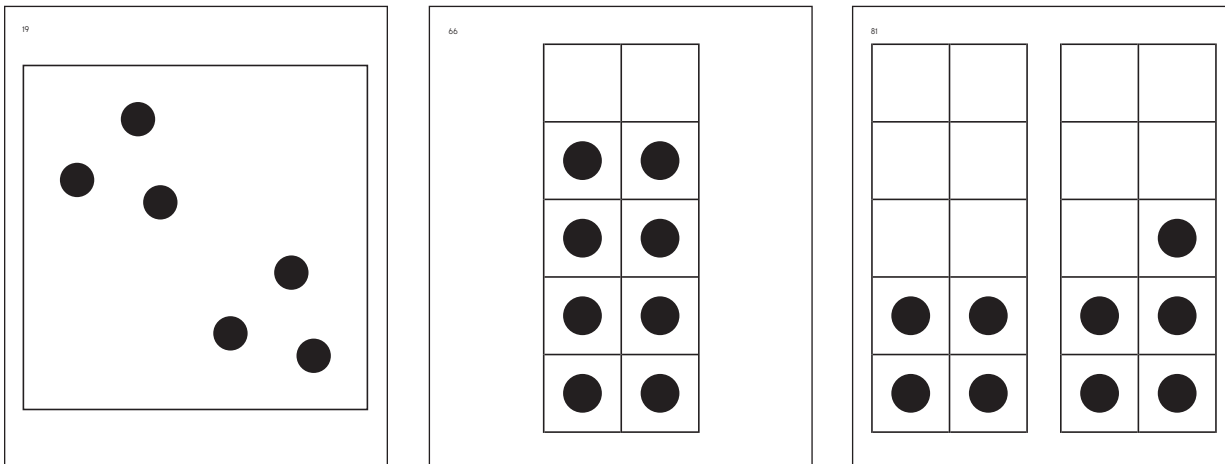
Sample Quick Look images

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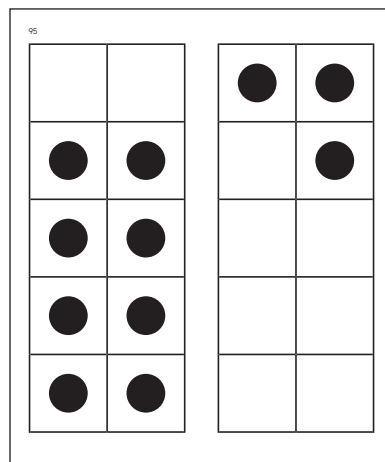
To solve $8 + 3$, children mentally manipulate the images to "make 10." So $8 + 3 = 10 + 1 = 11.$

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

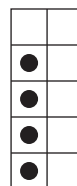# Ten Frames

Family Note

One way children explore pairs of numbers that add to 10 is by using ten frames. In one of today's Explorations, your child used a ten frame to help find all the possible combinations of 10 red and green apples. Also in today's lesson, children played a subtraction game and collected data about objects in the room.

Three ten frames are shown below. Have your child explain to you why these are called ten frames. Throughout the year, children will work with ten frames to help them identify, compare, break apart, and add numbers.
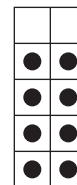
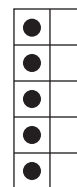***Please return this Home Link to school tomorrow.***

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1 How many dots are in the ten frame? _____

How many blank spaces are in the ten frame? _____

2 How many dots are in the ten frame? _____

How many blank spaces are in the ten frame? _____

3 How many dots are in the ten frame? _____

How many blank spaces are in the ten frame? _____

Practice

4 How many chairs are in your house?

_____ chairs

Finding All of the Ways to Make 10

> **Family Note**
>
> Today your child was asked to find all possible combinations of 10 apples if some are red and some are green. Children then explained how they knew they had found *all* the combinations. This task extended children's work with finding pairs of numbers that add to 10 and encouraged them to use patterns (such as putting the combinations in a logical order) to solve problems.
>
> ***Please return this Home Link to school tomorrow.***

(1) There are 10 toys in a toy box.
Some toys are blocks, and some toys are dolls.
Draw a picture of the toys in the toy box.

(2) Draw a different picture of toys in the toy box.

Practice

(3) There are 2 bananas and 3 oranges in a bowl.
How many pieces of fruit are there in all?

_____ pieces of fruit

More Uses of Ten Frames

Family Note

You have already seen your child use ten frames to identify pairs of numbers that add to 10. Today, children were shown ten frames on Quick Look Cards for a few seconds and asked to identify the number represented. This activity helps children develop mental images for numbers, which helps them become fluent with addition and subtraction.

Please return this Home Link to school tomorrow.

(1) Show the number 6 in three different ways.

(2) Show the number 5 in three different ways.

Practice

(3) Count by 5s.

35, _____, _____, 50, _____, 60, _____, 70

Labeling Counts

(1) Draw a picture of a group of objects.
Fill in the unit box.
Tell how many objects you counted.

Unit

Practice

(2) Start at 9.
Count back to 4.
How many spaces did you move?
_____ spaces

Change-to-More Number Stories

Family Note

Your child first learned about number stories in Unit 1. Today children examined a specific type of number story called change-to-more, in which more is added to the starting amount. To help make sense of these situations, children use change diagrams (shown below) to help them organize the information in the story.
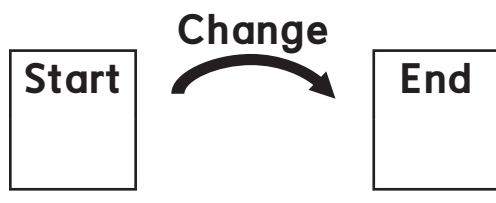
Please return this Home Link to school tomorrow.

Solve. Fill in the change diagrams.

1 Kendra hit 3 home runs at her first softball game.
She hit 2 home runs at her next game.
How many home runs did she hit in all? _____ home runs

Change

Start		End
	_____	
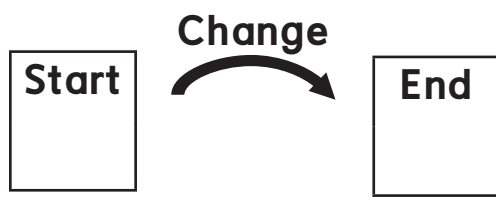
2 David told 4 jokes yesterday.
He told 5 more jokes today.
How many jokes has David told in all? _____ jokes

Change

Start		End
	_____	

Practice

3 Count by 1s.

17, 18, 19, _____, _____, _____, _____, _____

Change-to-Less Number Stories

Family Note

Today your child continued exploring real-life number stories. Children learned about change-to-less number stories, in which things are taken away from starting quantities. Work with your child to make sure he or she can identify the information needed to complete the change diagrams below.
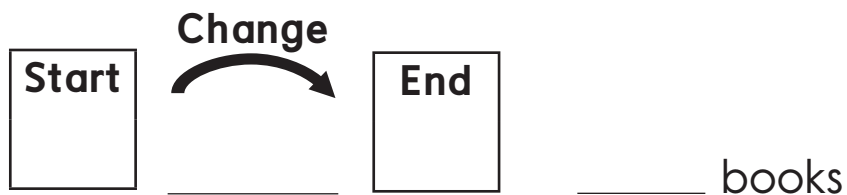
Please return this Home Link to school tomorrow.

Complete the change diagrams to solve the number stories.

1 Erin had 8 balloons. 3 balloons popped.
How many balloons does Erin have left?

Change

Start _____   End   _____ balloons
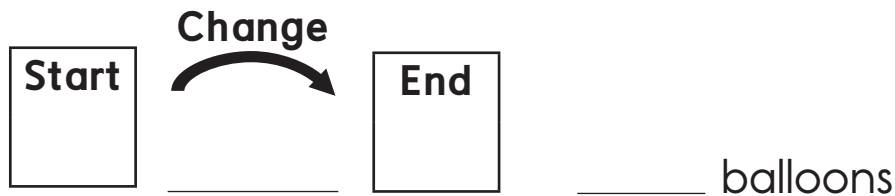
2 Kesha had 10 books. She read 7 of the books.
How many books does Kesha have left to read?

Change

Start _____   End   _____ books

Practice

How many tally marks?

3 ~~HHT~~ ~~HHT~~ / _____ tally marks

4 ~~HHT~~ ~~HHT~~ ~~HHT~~ _____ tally marks

5 /// _____ tally marks

Number Models

Family Note

In the last two lessons, children worked with change-to-more and change-to-less situations using change diagrams. Today they wrote number models using numbers and mathematical symbols (+, −, =) to represent these number stories. Do not worry if your child still needs help writing number models. There will be many opportunities for your child to practice this throughout the year.

Please return this Home Link to school tomorrow.

Write a number model for each number story.
Use the change diagrams to help you.

(1) Rebecca read 4 books last week. She read 4 more books this week. How many books did Rebecca read in all?

Change

Start	End

_____ + _____ = _____
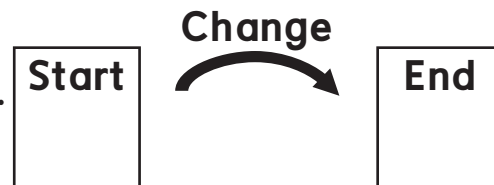
_____ books

(2) The zoo had 9 lions. 3 lions moved to another zoo. How many lions were left?

Change

Start	End

_____ − _____ = _____
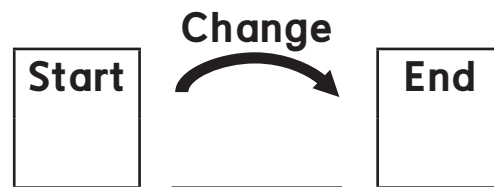
_____ lions

Practice

(3) Count the windows in your home. Use tallies to show how many windows you have.
_____ windows

Finding Unknowns

Family Note

Today your child wrote number models to represent number stories in which various pieces of information were missing or unknown. Children used an empty box like this ☐ to show which part was unknown. Once they solved the number story, they filled in the box with the correct answer. This skill will be further explored and practiced many times throughout the year.

Please return this Home Link to school tomorrow.

(1) Write a number model to describe the number story.
Then solve the problem.
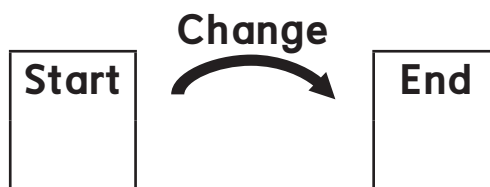
Clint read 5 of his books.
He has 3 more books to read.
How many books will Clint read in all?

Change

| **Start** | | **End** |

_____

Number model: _____

_____ books

(2) Write a number story for this equation.

$$7 - \boxed{} = 3$$

Practice

(3) Write a pair of numbers that add to 10.
Use the turn-around rule to write another pair.

Number Stories

In Unit 3, children continue learning about number stories. In Unit 2, they solved stories based on change situations in which starting quantities get larger or smaller. In Unit 3, they learn to model and solve parts-and-total situations in which two quantities are combined to make larger quantities. They use parts-and-total diagrams to organize the information about these situations and write number models to describe them.

Total
17

Part	Part
9	*8*

**Janis had 9 blue fish and 8 red fish.**

How many fish does Janis have in all?

$$9 + 8 = 17$$

Children also explore the relationship between counting and addition and subtraction. They practice counting up and back on number lines to add and subtract, investigate patterns in number lines and number grids that will help them count more efficiently, and do activities with calculators and Frames-and–Arrows diagrams to help them connect counting patterns to addition and subtraction.

Vocabulary   Important terms in Unit 3:

Frames and Arrows A diagram consisting of frames connected by arrows used to represent number sequences. Each frame contains one number, and each arrow represents a rule that determines what number goes in the next frame.

Rule
-5

35	30	25	20	15	10
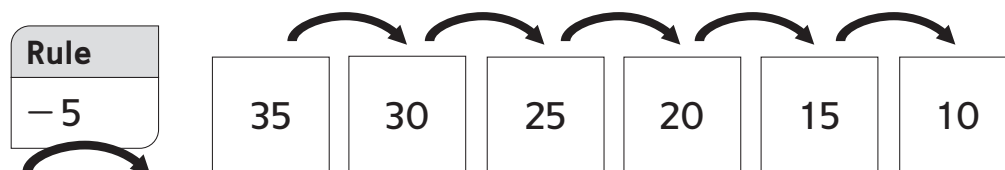
The Family Note on Home Link 3-9, which you will receive later, provides a more detailed description of Frames and Arrows.

Parts-and-Total Diagram A diagram used to model problems in which two or more quantities (parts) are combined to get a total quantity.

Total	
13	
Part	**Part**
8	*5*

Do-Anytime Activities

To work with your child on concepts taught in this and previous units, try these activities:

1. Count by 1s, 5s, or 10s aloud with your child. For a challenge, try starting at different numbers. "Count up by 10s starting at 3: 3, 13, 23, 33 …"

2. Have your child tell you a number story for a given number sentence, such as 3 + 5 = 8. For example, "I had 3 dogs. Then I got 5 more dogs. Now I have 8 dogs."

3. Using the number grid, select a number and have your child point to a number that is 1 more or 1 less than the selected number. Or do problems like this: "Start at 28. Count back (or up) 5 spaces. On which number did you land?"

−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

Building Skills through Games

Your child will play these games and others in Unit 3:

Domino Top-It
Children compare total numbers of dots on dominoes in this variation of *Top-It.*

Subtraction Bingo
Bingo cards have a number in each space. Players take turns flipping over two number cards and calling out the difference. They mark the differences on their cards until one player covers 4 spaces in a row.

As You Help Your Child with Homework

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

Home Link 3-1

1. 8

2. 2

3. 45, 46, 47, 48

Home Link 3-2

1. 4; 3

2. Sample answer: Mark had 4 blue ribbons. He won 3 more blue ribbons. Now he has 7 blue ribbons.

3. 16

4. 20

5. 35

Home Link 3-3

1. Answers vary.

2. Answers vary.

3. 5; 5; Yes

Home Link 3-4

1. Pictures vary but should show 5 fish and 3 cats.
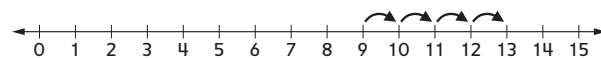8; Sample answer: 5 + 3 = 8

2. 7

Home Link 3-5

1. 10, 20

2. 5, 10, 15, 20

3. 2, 4, 6, 8

4. 1, 2, 3, 4

5. Sample answer: When you count by 5s, you land on all the count-by-10 numbers plus some more numbers.
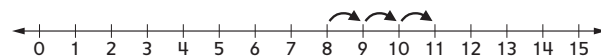
6. 10

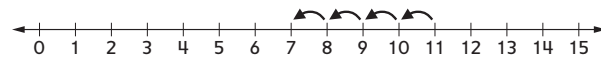**7.** 8

Home Link 3-6

Sample answers shown for Problems 1–3.

1. 13

2. 11

3. 7

4. 18

Home Link 3-7

1. 5

2. 15

3. 9

4. 6

5. 7

6. 4

7. 20

8. ~~HHH~~ ~~HHH~~ ~~HHH~~ ~~HHH~~

Home Link 3-8

1.

									0
1	2	3	4	☒	6	7	8	9	☒
11	12	13	14	☒	16	17	18	19	☒
21	22	23	24	☒	26	27	28	29	☒
31	32	33	34	☒	36	37	38	39	☒
41	42	43	44	☒	46	47	48	49	☒

2. 10; 5

3. 24

4. 31

5. 39

6. 46

Home Link 3-9

1. 7; 11; 15

2. 17; 14; 13

3. 15; 20; 25

4. 9; 8; 4; 3

Home Link 3-10

1. Sample answers: add 2; + 2; count up by 2s

2. Sample answers: add 5; + 5; count up by 5s

3. Sample answers: subtract 3; − 3; count back by 3s

4. Answers vary.

Home Link 3-11

1. 3, 6, 9, 12, 15, 18, 21

2. 20, 18, 16, 14, 12, 10, 8

3. 45, 40, 35, 30, 25, 20, 15

4. $9 + 9 = 18$; $7 + 3 = 10$