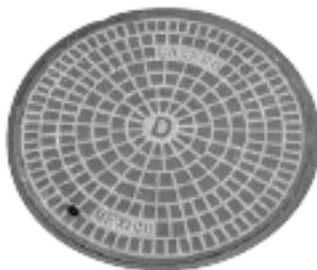
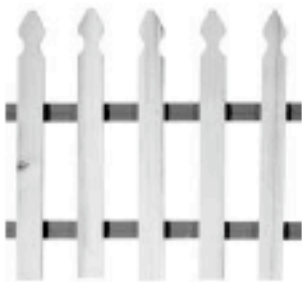




## Visual Patterns, Number Patterns, and Counting

Children will have several experiences with patterns that use objects, colors, and numbers.



<b>Count by 10s</b>	0, 10, 20
<b>Count by 5s</b>	0, 5, 10, 15, 20
<b>Count by 2s</b>	0, 2, 4, 6, 8, 10
<b>Count by 3s</b>	0, 3, 6, 9, 12

As patterns with numbers are investigated, children will look more closely at patterns found in odd and even numbers. They will observe patterns in the ending digits of counts by 2s, 3s, 5s, and 10s. Frames-and-Arrows diagrams will be introduced to help children investigate number sequences. (See explanation on next page.)

Children also will continue to develop time-telling and money-counting skills. They will practice telling time on the hour and the half-hour. They will continue to work with real coins, so please send 10 dimes to school. (As before, please send these coins in a sealed envelope with your child's name on it.)

Finally, we will begin work on addition and subtraction. This is an important topic—it will be developed throughout the year. It is not too early for children to begin solving very simple problems.



2, 4, 6, 8, 10, 12  
12 is an even number.



**Please keep this Family Letter for reference as your child works through Unit 3.**

## Vocabulary

Important terms in Unit 3:

**number grid** A table in which consecutive numbers are arranged in rows, usually 10 columns per row. A move from one number to the next within a row is a change of 1, a move of one number to the next within a column is a change of 10.

									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

Number grids are used to develop place-value concepts and problem-solving strategies for addition and subtraction.

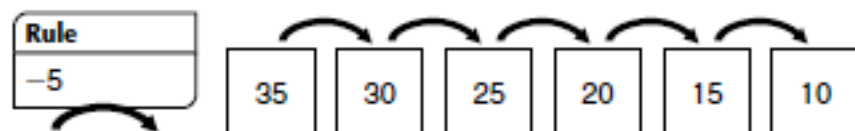
**pattern** A repetitive order or arrangement.



**even number** Any counting number that ends in 0, 2, 4, 6, or 8. An even number of objects can always be grouped into pairs.

**odd number** Any counting number that ends in 1, 3, 5, 7, or 9. When an odd number of objects is grouped into pairs, there is always one object that cannot be paired.

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



The Family Note on Home Link 3-8, which you will receive later, provides a more detailed description of Frames and Arrows.

## Do-Anytime Activities

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

1. Count and pair objects found around the house and determine whether there is an odd or even number of items.
2. Using the same collection of objects, arrange them to make an ongoing pattern. Then have your child make and describe his or her own pattern.
3. Using the number grid, select a number and have your child point to the 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 do you land?"

### Counting back from 28

-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

In this unit, your child will be practicing counting on a number line, exchanging coins, and adding by playing the following games:

### Bunny Hop

Players begin at 0 on a number line marked from 0 to 20. Players take turns rolling a die and hopping the number of spaces equal to the number of dots shown on the die. The first player to hop to 20 and then back to 0 wins the game. Players must use an exact roll to land on 20 and on 0.

### Coin-Dice

Players take turns rolling two dice and picking up the number of pennies equal to the number of dots shown on the dice. Whenever possible, players exchange 5 pennies for 1 nickel, 10 pennies for 1 dime, or 2 nickels for 1 dime. To pick up the last coins, the number of dots on the dice must match the number of remaining pennies.

### Domino Top-It

Each player turns over a domino and calls out the sum of the dots on the domino. The player with the higher sum keeps both dominos. If there is a tie, each player chooses another domino. The player with the higher sum keeps all of the dominos. The player with more dominos at the end of the game wins.



## 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 answers listed below will guide you through the Home Links for this unit.

### Home Link 3•1

2. If possible, help your child find an article of clothing with a pattern that he or she can wear to school.

3. 50, 40, 30, 20, 10

4. 25, 20, 15, 10, 5

### Home Link 3•2

1. Sample answer: 4 people; even  
2. Sample answer:  
odd: 3, 7, 13, 19  
even: 2, 6, 12, 20

3. 3 beds, odd

4. 15, 20, 25, 30, 35

5. 55, 60, 65, 70, 75

6. 95, 100, 105, 110, 115

### Home Link 3•3

1. 6  
3. 10  
5. 12; 15; 16; 18  
2. 7  
4. 15  
6. 74; 77; 78; 80

### Home Link 3•4

1. Sample answer: 1648; even  
2. Sample answer: odd  
3. 14; ~~HTT~~ ~~HTT~~ ~~HTT~~ ~~||||~~  
4. 23; ~~HTT~~ ~~HTT~~ ~~HTT~~ ~~HTT~~ ~~||||~~

5. 29  
6. 36

### Home Link 3•5

1. 10, 20  
3. 2, 4, 6, 8  
5. All odd numbers on the number line should be circled.  
6. 12  
2. 5, 10, 15, 20  
4. 3, 6, 9, 12  
7. 9

### Home Link 3•6

1. 7, 7  
3. 5, 5  
5. 6; 8; 12; 14  
2. 7, 7  
4. 16, 16

### Home Link 3•7

7. 9  
8. 8

### Home Link 3•8

1. 7, 11, 15  
3. 15, 20, 25  
2. 17, 14, 13  
4. 28; 30; 32; 36

### Home Link 3•9

1. Add 2  
2. Add 5  
3. Subtract 3  
4. 18

### Home Link 3•10

1. 5, 2, 10  
3. Clock should show 7:30.  
4. Clock should show 3:30.  
2. 13, 19, 30

### Home Link 3•11

1. 2 dimes  
3.  $\text{\textcircled{D}}$   $\text{\textcircled{P}}$   $\text{\textcircled{P}}$ , 12  
4.  $\text{\textcircled{D}}$   $\text{\textcircled{P}}$   $\text{\textcircled{P}}$   $\text{\textcircled{P}}$   $\text{\textcircled{P}}$ , 14  
5.  $\text{\textcircled{D}}$   $\text{\textcircled{D}}$   $\text{\textcircled{N}}$ , 25  
7. 30; 40; 60; 70; 80  
2.  $\text{\textcircled{D}}$ , 10  
6.  $\text{\textcircled{D}}$   $\text{\textcircled{D}}$ , 20

### Home Link 3•12

1. 25; 0.25  
3. 23; 0.23  
5. Sample answer: 2, 4, 6, 8  
2. 45; 0.45  
4. 37; 0.37

### Home Link 3•13

- 2a. blue  
3. 13  
2b. yellow

### Home Link 3•14

1. Sample answer: 3, 9, 15, 23