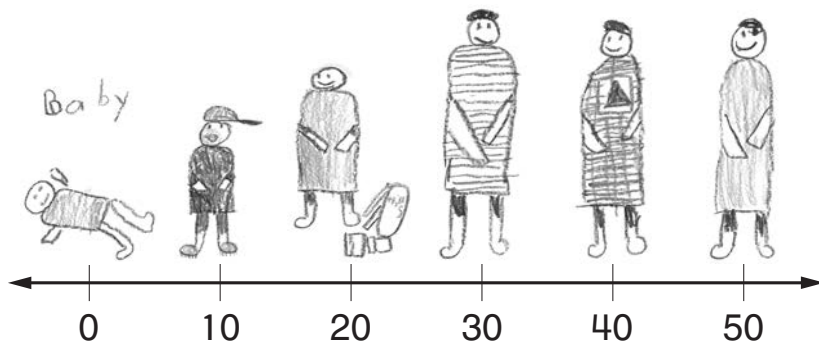




## Measurement and Basic Facts

Unit 4 focuses primarily on length measurement. Lesson activities will provide opportunities for children to measure with nonstandard units, such as hand spans and paces, as well as with standard units, such as feet and inches, using a ruler and a tape measure.



Children will practice basic measuring skills, such as marking off units “end to end,” aligning the 0-mark of a ruler with one edge of the object being measured, and measuring objects longer than the ruler.

Since most measurements are estimates, you will notice that estimation is used to report measurements. For example, *about 5 hand spans, a little less than 8 inches, almost 3 feet,* and so on.

Children will also practice other measurement skills. Children will read thermometers that have marks at two-degree intervals, and they will tell time to the nearest quarter-hour. Children will also explore timelines to develop a sense for sequencing events with the passage of time.

In this unit, children make number scrolls by writing numbers in extended number grids. This activity not only provides practice with writing numbers, but helps children develop a sense of the patterns in our place-value system.

-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
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

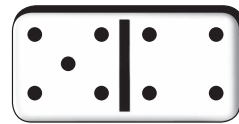
In the last two lessons, children will work toward developing addition “fact power.” Knowing the basic facts is as important to mathematics as knowing words by sight is to reading. This beginning work uses dominoes as models.



$$1 + 6 = 7$$



$$2 + 3 = 5$$



$$5 + 4 = 9$$

Please keep this Family Letter for reference as your child works through Unit 4.

## Vocabulary

Important terms in Unit 4:

**inch and foot** Units of length in the U.S. customary system.

**standard unit** A unit of measure that has been defined by a recognized authority, such as a government or a standards organization. For example, inches and feet are standard units.

**timeline** A number line showing when events took place.

**number scroll** A series of number grids taped together.

**fact power** A term for the ability to automatically recall arithmetic facts without having to figure them out.

**addition facts** The 100 possible sums of two 1-digit numbers—from  $0 + 0$  through  $9 + 9$ .

## Do-Anytime Activities

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

1. Use a standard measuring tool to measure the length of objects in your home to the nearest inch.
2. Practice counting by 2s using a thermometer.
3. Tell the time (on the hour, the half-hour, or the quarter-hour) and have your child draw a picture of a clock to represent each time.
4. Have your child tell you the time as minutes after the hour. *For example:* "It is about six-fifteen" or "It is about fifteen minutes after six."
5. 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!"



## Building Skills through Games

In Unit 4, your child will play the following games:

**Dime-Nickel-Penny Grab** Players mix 10 dimes, 8 nickels, and 20 pennies together. One player grabs a handful of coins. The other player takes the coins that are left. Each player calculates the value of his or her coins. The player with the larger total wins the round.

**High Roller** Players roll two dice and keep the die with the greater number (the “high roller”). Players roll the other die again and count on from the “high roller” to get the sum of the two dice.

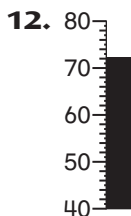
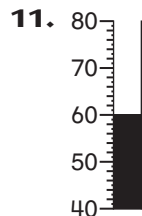
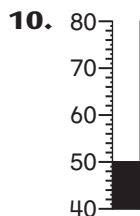
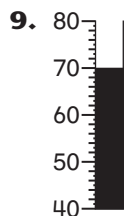
**Shaker Addition Top-It** Each player rolls two dice and calls out the sum of the dots. The player with the higher sum takes a penny. If there is a tie between players, each of these players takes a penny. The player with more pennies at the end of the game wins.

## 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 Unit 4.

### Home Link 4•1

1. 22, 24, 26    2. 72, 74, 76    3. 52, 54, 56  
4. 102, 104, 106    5. 70°F    6. 60°F  
7. 80°F    8. 58°F



13.  14. 

### Home Link 4•2

- 1.–2. Your child should give a reasonable answer for how many hand spans across and long his or her bed measures.  
3. 11    4. 10

### Home Link 4•3

- 1.–2. Your child should make marks on the foot long foot that are about the length of each family member’s foot.  
3. Sample answer: It is not a good idea for people to use their own feet to measure things because everybody’s feet are not the same length.  
4.–5. Your child should clearly write the numbers 8 and 9.

**Home Link 4•4**

1. 4    2. 3    3. 12    4. 21  
5. ~~HHH HHH HHH~~ IIII    6. ~~HHH HHH HHH HHH HHH~~







**Home Link 4•5**

- 1.–2. Your child should measure 2 objects to the nearest inch.  
3. 21¢

**Home Link 4•6**

- 1.–3. Your child should name and draw 3 measuring tools in your home such as a measuring cup, scale, or ruler.  
4. odd    5. even

**Home Link 4•7**

1.  10    2.  12  
3.  11    4.  9  
5.  9    6.  9

7. 25, 30, 40, 50, 55, 65, 70  
8. 90, 100, 110, 120, 130

**Home Link 4•8**

1. 1    2. 4    3. 8    4. 7    5. 6; 5; 9

**Home Link 4•9**

1. Your child should draw a picture of something that happens in your family for each day of the week.  
2. 16    3. 19    4. 31    5. 40

**Home Link 4•10**

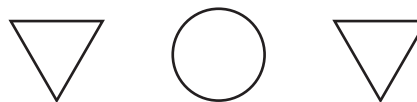
1. Sample answer: I counted by 1s and wrote one number in each square as I moved from left to right on the number grid. I taped number grids together to create a scroll.  
2. Sample answer: window shades or papyrus scrolls.  
3.

									100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130

4. 23, 0.23;    5. 41, 0.41

**Home Link 4•11**

1. 9    2. 9    3. 9    4. 9



5.

**Home Link 4•12**

$$2 + 4 = 6; \frac{4}{8} + \frac{2}{9}; 8 = 5 + 3; 7 = 4 + 3;$$

$$\frac{1}{7} + \frac{6}{9}; 8 + 2 = 10; 10 = 6 + 4$$

6, 8, 12