

# Chapter

# 1

## Place Value and Money

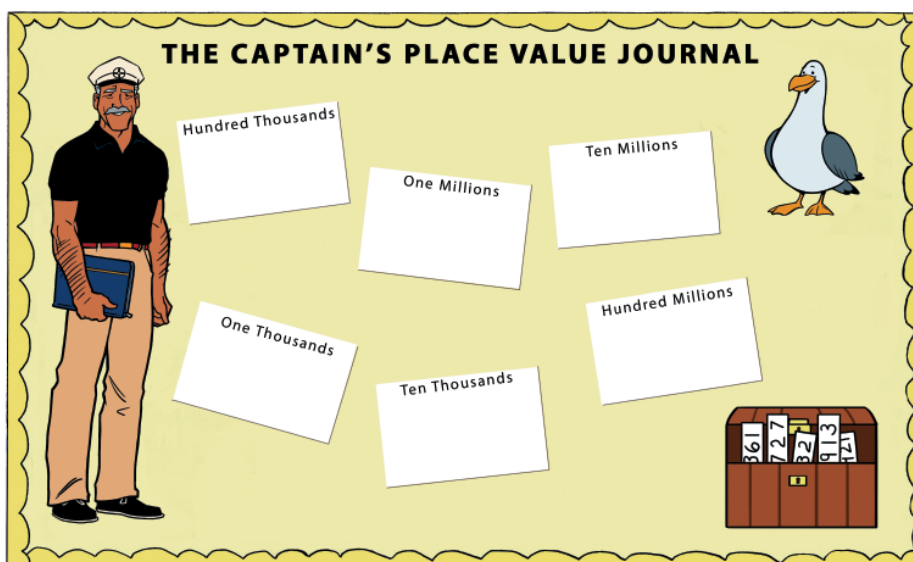
Lesson	Topic	Lesson Objectives	Chapter Materials
<b>1</b>	<b>Place Value</b>	<ul style="list-style-type: none"> <li>Demonstrate an understanding of place value in 1-, 2-, 3-, and 4-digit numbers</li> <li>Develop an understanding of the term <i>period</i></li> <li>Recognize the number of periods in a 1-, 2-, 3-, or 4-digit number</li> <li>Identify the value of the digits in a 4-digit number</li> </ul>	<p><b>Teacher’s Visual Packet:</b></p> <ul style="list-style-type: none"> <li>Chart 1: <i>One-Dollar Bill</i></li> <li>Chart 2: <i>Five-Dollar Bill</i></li> <li>Chart 3: <i>Ten-Dollar Bill</i></li> <li>Chart 4: <i>Clock</i></li> <li>Place Value Kit</li> <li>Place Value Pocket Chart Kit</li> <li>Decimal Place Value Pocket Chart Kit</li> <li>Money Kit</li> </ul> <p><b>Student Manipulatives Packet:</b></p> <ul style="list-style-type: none"> <li>Place Value Mat</li> <li>Decimal Place Value Mat</li> <li>Place Value Kit</li> <li>Place Value Pocket Chart Kit</li> <li>Decimal Place Value Pocket Chart Kit</li> <li>Money Kit</li> </ul> <p><b>Instructional Aids (Teacher’s Toolkit CD):</b></p> <ul style="list-style-type: none"> <li>Periods Comparison transparency (page IA1)</li> <li>Halfway Point transparency (page IA2)</li> <li>Halfway Point (page IA2) for each student</li> <li>Equivalent Amounts transparency (page IA3)</li> <li>Money Chart transparency (page IA4)</li> <li>Price Tags Pattern (page IA5)</li> <li>Cashier’s Drawer (page IA6) for each pair of students (optional for the teacher)</li> <li>Price Tags (page IA7) for each pair of students</li> <li>Rename 1,000 transparency (page IA8)</li> <li>Cumulative Review Answer Sheet (page IA9)</li> </ul> <p><b>Fact Reviews (Teacher’s Toolkit CD):</b></p> <ul style="list-style-type: none"> <li>Addition &amp; Subtraction Facts (pages 11–17)</li> </ul> <p><b>Other Teaching Aids:</b></p> <ul style="list-style-type: none"> <li>1,120 craft sticks, 100 rubber bands, 5 rolls of masking tape</li> <li>An <math>8\frac{1}{2} \times 11</math> sheet of paper for each student</li> <li>A coffee cup, playground ball, jump rope, set of flashcards, box of markers, packet of hot chocolate mix</li> <li>Judy Clock (or Chart 4: <i>Clock</i>)</li> <li>Fact family flashcards (addition/subtraction)</li> </ul> <p><b>Math 4 Tests and Answer Key</b></p> <p><b>Optional (Teacher’s Toolkit CD):</b></p> <ul style="list-style-type: none"> <li>ReTeaching pages 1–5</li> <li>Enrichment pages 1–6</li> <li>Extended Activities</li> </ul> <p>The teaching charts and a few visuals from the Teacher’s Visual Packet are included on the Teacher’s Toolkit CD for use by home educators or by those teaching small groups. You may prepare copies of the Pocket Chart Number Cards for use with the Place Value Pocket Chart and copies of the Fact Family Flashcard pattern; cut out the flashcards and prepare the addition/subtraction fact family flashcards to use for practice.</p>
<b>2</b>	<b>Place Value Periods</b>	<ul style="list-style-type: none"> <li>Develop an understanding that the value of each place is ten times greater than the place of lesser value immediately to its right</li> <li>Develop an understanding of the repetition of the Ones, Tens, and Hundreds places in each period</li> <li>Identify the value of the digits in a number with 9 or fewer digits</li> <li>Read and write numbers with 6 or fewer digits</li> </ul>	
<b>3</b>	<b>Place Value: Millions</b>	<ul style="list-style-type: none"> <li>Develop an understanding of the repetition of the Ones, Tens, and Hundreds places in each period</li> <li>Read numbers with 9 or fewer digits</li> <li>Write numbers in standard, expanded, and word form</li> <li>Identify the value of the digits in a number</li> </ul>	
<b>4</b>	<b>Compare Numbers</b>	<ul style="list-style-type: none"> <li>Compare numbers using strategies</li> <li>Compare numbers with 7 or fewer digits</li> <li>Compare numbers written in standard, expanded, and word form</li> </ul>	
<b>5</b>	<b>Order Numbers</b>	<ul style="list-style-type: none"> <li>Order numbers from least to greatest and greatest to least</li> <li>Identify even and odd numbers</li> </ul>	
<b>6</b>	<b>Round Numbers</b>	<ul style="list-style-type: none"> <li>Identify the numbers that are <math>\frac{1}{2}</math> of 10; 100; 1,000; 10,000; 100,000; and 1,000,000</li> <li>Round a number to the place with the greatest value</li> <li>Round a number to a place within the number</li> </ul>	
<b>7</b>	<b>Decimals: Tenths</b>	<ul style="list-style-type: none"> <li>Develop an understanding of decimals: tenths</li> <li>Rename 10 tenths as 1 one</li> <li>Read and write decimals to the Tenths place</li> </ul>	
<b>8</b>	<b>Decimals: Hundredths</b>	<ul style="list-style-type: none"> <li>Develop an understanding of decimals: hundredths</li> <li>Rename 10 hundredths as 1 tenth</li> <li>Read and write decimals to the Hundredths place</li> </ul>	
<b>9</b>	<b>Count Money</b>	<ul style="list-style-type: none"> <li>Write amounts of money</li> <li>Determine the value of a set of money</li> <li>Count out amounts of money</li> </ul>	
<b>10</b>	<b>Count Back Change</b>	<ul style="list-style-type: none"> <li>Count out amounts of money needed for purchases</li> <li>Count back change from a purchase</li> </ul>	
<b>11</b>	<b>Rename Numbers</b>	<ul style="list-style-type: none"> <li>Develop an understanding of renaming numbers</li> </ul>	
<b>12</b>	<b>Chapter 1 Review</b>	Review	
<b>13</b>	<b>Chapter 1 Test Grade 3 Review</b>	<ul style="list-style-type: none"> <li>Solve 2- &amp; 3-digit subtraction problems</li> <li>Solve 2- &amp; 3-digit addition problems</li> <li>Identify a number written in word form</li> <li>Tell time to the 5-minute interval</li> <li>Identify the equation that solves a word problem</li> </ul>	

## A Little Extra Help

Use the following to provide “a little extra help” for the student that is experiencing difficulty with the concepts taught in Chapter 1.

**Round numbers**—If a student is having difficulty visually determining which digit to check when rounding a number, direct him to circle the rounding digit (e.g., When rounding 3,540 to the nearest one thousand, circle the 3). Direct the student to look at the digit immediately to the right of the circled digit. Explain that if the digit is less than 5, he should round down (the circled digit remains the same), but if the digit is 5 or greater, he should round up (the circled digit increases by 1).

**Count back change**—Use real money or a Money Kit to help the student who needs additional practice in determining the coins and bills needed to count back change. Direct the student to play the role of the cashier as you play the role of the customer. Tell him the price of the item you want to purchase and hand him coins or a bill to purchase the item. Direct him to count back your change using the fewest coins possible. Remind the student to begin by saying the price of the item and then to *count on* the change, beginning with the coin that has the least value.



### Bulletin Board Preparation and Use

1. Enlarge and prepare the pictures of Captain Bailey, Clipper, and the Captain's Journal from the Bulletin Board Art on the Teacher's Toolkit CD. These pictures will be used for several bulletin boards throughout the year; you may want to laminate them.
2. Place the Captain's Journal in Captain Bailey's hand.
3. Laminate six  $11 \times 13$  sheets of construction paper for “pages” from the “Captain's Journal.” Write a place value heading at the top of each page: *One Thousands*, *Ten Thousands*, *Hundred Thousands*, *One Millions*, *Ten Millions*, and *Hundred Millions*.
4. Prepare and laminate the picture of the treasure chest.
5. Laminate several 5" strips of paper. Write a 4-, 5-, 6-, 7-, 8-, or 9-digit number on each strip, underlining a different digit in each number. Place the numbers in the treasure chest. Write the correct place value of the underlined number on the back of each strip.

The student will choose a number from the treasure chest and read the number aloud. If necessary, remind students not to use the word *and* when reading whole numbers. The student will then determine which place the underlined digit is in and attach it to the correct “page.”

In addition to the pictures of Captain Bailey and Clipper, the Teacher's Toolkit CD includes other bulletin board pictures that you may enlarge and reproduce.

An alternative bulletin board is provided on the Teacher's Toolkit CD.

# The Treasure Hunter

**LOG ENTRY**—Today I met Manuel López, the smartest treasure hunter around. He runs the salvage operation, and he's our best hope for finding the Mendoza Medallion.

"I'm Captain Bailey," I said, shaking his hand. "I'm a retired Navy man, but now I work for La Costa Museum in southern Florida."

He stared at me with those glittering dark eyes. He probably thought I was just another guy with treasure fever. I made up my mind to prove him wrong.

Even though his first few answers were gruff, he agreed to show me around. What a ship! He kept his salvage rig aboard a mammoth cruiser that made my sloop look like a baby's bathtub.

He stopped abruptly in front of a huge map spread out on a table. "Loot, that's what you would call it, *señor*. Loot to share, if you are willing to risk your life to find it."

As López pointed out landmarks on his map, I thought about my assignment from the museum director. No, I didn't want loot. My job was to find a priceless silver necklace—the Mendoza Medallion. I was sure we could arrange the details of the sale if the medallion turned up, no matter what López thought of me. But I was hoping against hope that he'd let me come along on the diving expedition too, so that I could have a chance to prove myself.

"The only thing I want from the loot you describe is a certain silver medallion on a silver chain," I said.

He shrugged. "Perhaps it is there. Perhaps not. Why does it matter so much to you, this medallion?"

"The museum I work for is interested in Spanish treasures," I said. "From all reports, this medallion is very fine, very old. It was already ancient—a family heirloom—when it started on its trip across the ocean."

López shot me a questioning glance, and I knew he was waiting for proof.

"Here, I've done all the research." I pulled out a sheaf of papers. "The archives give details and dates, even a map." I showed him page after page of my notes. "It sounds like the wreck you're going after. And the cargo list—"

"Enough!" He ran a hand through his spiky black hair, and the corners of his mouth turned up a reluctant grin. "I believe you, *señor*." He held up a hand and sniffed the air. "Do you smell supper? Will you join me?"

He led the way, talkative now that he was in a better mood. "Who do you say wants this treasure? A museum? Do they pay well for this?"

"Well enough. I know you'll be satisfied." Did I dare ask to come along? I'd always dreamed of going on an expedition for sunken treasure, but I'd never been this close to one before. Besides, if the medallion showed up while I was there, I could make sure it was properly cared for.

I listened to López talk while we ate an excellent meal. He told me the history of the treasure ship he planned to

explore. I already knew the details, but he was a fascinating storyteller.

"It was more than two hundred years ago, *señor*—you are right about the date. The fleet set sail for Spain under blue skies, but the ships never arrived. It was hurricane season, and one day the skies whipped up a terrible storm. Waves smashed into the ships, masts snapped off, anchors pulled free. Near here." He turned in his chair and jabbed a finger at a map. "If the passengers had not been so selfish, they could have saved themselves by throwing their heavy trunks of gold and silver overboard to lighten the ship's cargo. But the story is not finished. If we are careful on our hunt, we will find what they lost." His eyes gleamed. "We just have to dive in the right place."

This was my chance. I took a deep breath and asked, "Could you use an extra hand?"

He stared at me for a minute and then threw back his head and laughed. "You? Well, why not? I knew there was something I liked about you, *señor*."



## To the Parent

In Chapter 1, your child will study the following concepts about the place value system:

**Place value**—whole numbers through nine-digit numbers, decimals through hundredths

**Number forms**—standard, expanded, and word forms

**Compare & order numbers**

**Round to the greatest place value**

**Even & odd numbers**

**Count & write money amounts**

### Captain Bailey and Clipper

Captain Bailey is a retired naval officer who works for the La Costa Museum. The museum sent him to look for the Mendoza Medallion, a priceless silver necklace. His search leads him to contact Manuel López, a treasure hunter. Señor López agrees to take Captain Bailey onto his ship to explore for treasure. In the next chapter, Captain Bailey will meet Clipper, the ship's pet seagull.

### Math in the Home

Look and listen for four- to nine-digit numbers as you listen to programs and as you read magazines, newspaper articles, books, or household bills. Encourage your child to write the standard form for numbers that he hears and to round, order, and compare numbers that he sees in print (mileage on family cars, kilowatts used per month on electric bills).

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

The list above shows the fact families your child will be memorizing during this chapter. Provide opportunities for your child to practice these facts by using flashcards, by calling out the related facts orally, or by playing games.