



San Diego Unified School District

Instructional Module to Enhance the Teaching of

HARCOURT

Math

California Edition

Grade 2

Module 11 - Revised

Money and Time

– WORK IN PROGRESS –

Harcourt Math: Grade 2
Money and Time
 11 Days

Key Mathematical Concepts:

- Count on to find total amounts
- Count mixed collections of coins
- Use notation and symbols
- Identify different ways to make the same amount
- Compare amounts to prices
- To tell time
- Solve a problem by using an appropriate strategy

<p>Chapter 8: Using Money Lesson 8.1: Make the Same Amounts Lesson 8.2: Same Amounts Using Fewest Coins Lesson 8.3: Compare Amounts to Prices Lesson 8.4: Make Change Lesson 8.5: Problem Solving</p>	<p>Chapter 10: Parts of a Group Lesson 10.1: Daily Events Lesson 10.2: Problem Solving Lesson 10.3: Using a Calendar Lesson 10.4: Estimate Time Lesson 10.5: Time Relationships Assessment</p>
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<u>Day 1</u> Unit 2 Lesson 8.1	<u>Day 2</u> Unit 2 Lesson 8.2	<u>Day 3</u> Unit 2 Lesson 8.3	<u>Day 4</u> Unit 2 Lesson 8.4	<u>Day 5</u> Unit 2 Lesson 8.5
<u>Day 6</u> Unit 2 Lesson 10.1	<u>Day 7</u> Unit 2 Lesson 10.2	<u>Day 8</u> Unit 2 Lesson 10.3	<u>Day 9</u> Unit 2 Lesson 20.4	<u>Day 10</u> Unit 2 Lesson 20.5
<u>Day 11</u> Unit 2 Assessment				

MODULE 11 – MONEY AND TIME

Modules represent individual units of study that lead to essential learnings

THREADS THROUGHOUT THE YEAR:

The threads represent ongoing learning opportunities in which students should be actively engaged throughout all units of inquiry during the entire school year. These items should not be isolated to any one particular unit of inquiry

Students will:

- Develop understanding of numbers and the number system and use their understanding to solve problems and recognize reasonable results.
- Develop understanding of and fluency in basic computation and procedural skills.
- Use mathematical reasoning to solve problems.
- Communicate their mathematical thinking by using words, numbers, symbols, graphs and charts.
- Express generalizations of patterns and relationships.
- Develop logical thinking to analyze evidence and build arguments to support or refute a hypothesis.
- Make connections among mathematical ideas and between other disciplines.
- Develop and use strategies, skills, and concepts to solve problems.
- Use appropriate tools, including technology, as vehicles to learn mathematical concepts.

These are essential learnings that represent bigger ideas/concepts:

- Students know the value of coins and show different combinations of coins that equal the same value.
- Students model and solve problems by representing, adding, and subtracting amounts of money.
- Students understand efficient strategies for combining coins and for making change.
- Students tell time to the nearest quarter hour and know relationships of time (e.g. minutes in an hour, days in a month, weeks in a year).
- Students determine the duration of intervals of time in hours (e.g., 11:00 a.m. to 4:00 p.m.).

These are essential questions that learners ask themselves in order to achieve the essential learnings:

- How many different ways can I make a specific amount of money using various denominations of coins* and bills?
- How can I create efficient ways for combining coins and making change?
- How do I determine the duration of time intervals in hours?
- How can I tell time to the nearest quarter hour?
- How do I determine how much time has passed between events?
- How do I make an estimate for the length of time of a determined event and know if the estimate is reasonable?

* Presented in previous grade(s)

Resources: Van de Walle, Chapters 19, pp. 341-342

GRADE 2
Order of Units
2003-2004 School Year
TRADITIONAL CALENDAR

September October	Module 1: Addition and Subtraction Strategies and Facts, Place Value, and Graphing. Chapters 6, 1-4, 5	25 days
October	Module 2: Geometry Chapters 17 and 18	11 days
October November	Module 3: Money and Time Chapters 7 and 9	12 days
November	Module 4: 2-Digit Addition and Subtraction Chapters 11-13	16 days
December	Module 5: Measurement Chapters 19 and 20	13 days
January February	Module 6: 2-Digit Addition and Subtraction Chapters 14 - 16	19 days
February	Module 7: Number Sense and Fractions Chapters 21 and 22	11 days
February March	Module 8: Multiplication and Division Chapters 28 - 30	16 days
March April	Module 9: 3-Digit Addition and Subtraction Chapters 25 and 26	16 days
April	Module 10: Number Sense and Fractions Chapters 23 and 24	11 days
April May	Module 11: Money and Time Chapters 8 and 10	11 days
May	Module 12: 3-Digit Addition and Subtraction Chapter 27	10 days
	Days to be used throughout the year (at teacher's discretion) when more time is necessary to make meaning of a concept.	9 days

GRADE 2
Order of Units
2003-2004 School Year
YEAR ROUND CALENDAR

September October	Module 1: Addition and Subtraction Strategies and Facts, Place Value, and Graphing. Chapters 6, 1-4, 5	25 days
October	Module 2: Geometry Chapters 17 and 18	11 days
October November	Module 3: Money and Time Chapters 7 and 9	12 days
November	Module 4: 2-Digit Addition and Subtraction Chapters 11-13	16 days
December	Module 5: Measurement Chapters 19 and 20	13 days
January February	Module 6: 2-Digit Addition and Subtraction Chapters 14 - 16	19 days
February March	Module 7: Number Sense and Fractions Chapters 21 and 22	11 days
March April	Module 8: Multiplication and Division Chapters 28 - 30	16 days
April May	Module 9: 3-Digit Addition and Subtraction Chapters 25 and 26	16 days
May June	Module 10: Number Sense and Fractions Chapters 23 and 24	11 days
May June	Module 11: Money and Time Chapters 8 and 10	11 days
June July	Module 12: 3-Digit Addition and Subtraction Chapter 27	10 days
	Days to be used throughout the year (at teacher's discretion) when more time is necessary to make meaning of a concept.	9 days

DAY 1
 UNIT 2: Money and Time
 Chapter 8: Using Money
 LESSON 8.1
 TE, Pg. 111A

LESSON FOCUS:	Make the Same Amounts																																				
CALIFORNIA STANDARD:	Number Sense 5.0 Students model and solve problems by representing, adding, and subtracting amounts of money.																																				
PURPOSE OF LESSON:	To understand that the same amount can be represented with different combinations of coins.																																				
ROUTINE:	Suggestion: Number of the Day Students write equations using money ($\$1.00 + 25\phi + 25\phi = \1.50). Students share coin collections that match equations.																																				
Materials: • <i>Money</i>																																					
LAUNCH:	Review: Money in the Bank																																				
Materials: • <i>Coins</i> • <i>Overhead coins (optional)</i> • <i>Money in the Bank overhead</i>	<ul style="list-style-type: none"> • Divide students into teams. Tell students how much money you have “in the bank” (e.g., 16¢). The goal of the game is to acquire the most points. As teams, students discuss possible coin combinations equal to the amount, using coins at their tables to problem-solve. Their guesses are recorded on a chart. • Points accrue in many ways. If the team guess is not equal to the amount in the bank, the team receives zero points. If the team guess is equal to the amount in the bank but not the actual coins, the team receives one point. If the team guess is equal to the amount in the bank and is also the actual coins, the team receives two points. • Teams continue to play until one team guesses the actual coins. It is possible for a team to acquire the most points and win without guessing the actual coins. Given the amount of 16¢ made with one dime and six pennies, here are some possible guesses and corresponding point values: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="border-bottom: 1px solid black;">Quarters</th> <th style="border-bottom: 1px solid black;">Dimes</th> <th style="border-bottom: 1px solid black;">Nickels</th> <th style="border-bottom: 1px solid black;">Pennies</th> <th style="border-bottom: 1px solid black;">Team 1</th> <th style="border-bottom: 1px solid black;">Team 2</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>16</td> <td>1</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>3</td> <td>1</td> <td>1</td> <td></td> </tr> <tr> <td></td> <td>1</td> <td>1</td> <td>1</td> <td></td> <td>1</td> </tr> <tr> <td></td> <td>1</td> <td></td> <td>6</td> <td>2</td> <td></td> </tr> </tbody> </table>	Quarters	Dimes	Nickels	Pennies	Team 1	Team 2				16	1	0			3						3	1	1			1	1	1		1		1		6	2	
Quarters	Dimes	Nickels	Pennies	Team 1	Team 2																																
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		3																																			
		3	1	1																																	
	1	1	1		1																																
	1		6	2																																	

<p>EXPLORE:</p> <p>Materials:</p> <ul style="list-style-type: none"> • <i>Coins</i> • <i>Brown paper bag</i> • <i>Money in the Bank worksheet</i> 	<p>Money in the Bank</p> <ul style="list-style-type: none"> • Students play the game in teams. One team decides on amount and the actual coins that represent that amount and hides these coins in a brown paper bag. The other team tries to guess the coins in the bank. • Scoring is the same as for the whole class version: one point for coins that equal the amount hidden, two points for naming the actual coins (this can be a collaborative or a competitive game). 				
<p>PRACTICE:</p>	<p>As time allows: P. 111 and/or 112</p>				
<p>SUMMARIZE:</p>	<p>Closure:</p> <ul style="list-style-type: none"> • Revisit purpose of the lesson with students. Are some ways to make amounts more efficient than others? Explain your thinking. 				
<p>HOMEWORK:</p> <p>Materials</p> <ul style="list-style-type: none"> • <i>Coins</i> • <i>Homework: Different Combinations, Equal Amounts worksheet</i> 	<p>Suggestion:</p> <ul style="list-style-type: none"> • Students choose amounts of money between 25¢ and \$1.00. • They record the amount and draw/write different coin combinations equal to the amount: <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 5px;">Amount</th> <th style="text-align: center; padding: 5px;">Coins Used</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">73¢</td> <td style="text-align: center; padding: 5px;">2 quarters, 2 dimes, 3 pennies 7 dimes, 3 pennies</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Students collect food advertisements and food coupons to bring to class. 	Amount	Coins Used	73¢	2 quarters, 2 dimes, 3 pennies 7 dimes, 3 pennies
Amount	Coins Used				
73¢	2 quarters, 2 dimes, 3 pennies 7 dimes, 3 pennies				

Homework: Different Combinations, Equal Amounts

Directions:

Choose amounts of money between 25¢ and \$1.00.

Record the amount.

Draw or write different combinations equal to that amount.

Amount	Combinations Equal to the Amount

DAY 2
 UNIT 2: Money and Time
 Chapter 8: Using Money
 LESSON 8.2
 TE, P. 113A

LESSON FOCUS:	Same Amounts Using Fewest Coins																																				
CALIFORNIA STANDARD:	Number Sense 5.0 Students model and solve problems by representing, adding, and subtracting amounts of money.																																				
PURPOSE OF LESSON:	To understand efficient strategies for combining coins.																																				
ROUTINE:	Suggestion: Number of the Day Students write equations using money ($\$1.00 + 25\text{¢} + 10\text{¢} + 10\text{¢} + 5\text{¢} + 1\text{¢} = \1.51). Students share coin collections that match equations.																																				
Materials: • Coins																																					
LAUNCH:	Review: Money in the Bank with the Fewest Coins																																				
Materials: • Coins • Overhead coins (optional) • Money in the Bank overhead (see Day 1, Lesson 8.1)	<ul style="list-style-type: none"> Divide students into teams. Tell students how much money you have “in the bank” (e.g., 16¢). As teams, students discuss possible coin combinations equal to the amount, using coins at their tables to problem-solve. Their guesses are recorded on a chart. If the team guess is not equal to the amount in the bank, the team receives zero points. If the team guess is equal to the amount in the bank but not the actual coins, the team receives one point. If the team guess is equal to the amount in the bank and is also the actual coins, the team receives two points. Play until the actual coins are guessed. It is possible for a team to win without guessing the actual coins. For example, given the amount of 16¢ made with one dime and six pennies, here are some possible guesses and corresponding point values: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="border-bottom: 1px solid black;">Quarters</th> <th style="border-bottom: 1px solid black;">Dimes</th> <th style="border-bottom: 1px solid black;">Nickels</th> <th style="border-bottom: 1px solid black;">Pennies</th> <th style="border-bottom: 1px solid black;">Team 1</th> <th style="border-bottom: 1px solid black;">Team 2</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>16</td> <td>1</td> <td>0</td> </tr> <tr> <td></td> <td></td> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>3</td> <td>1</td> <td>1</td> <td></td> </tr> <tr> <td></td> <td>1</td> <td>1</td> <td>1</td> <td></td> <td>1</td> </tr> <tr> <td></td> <td>1</td> <td></td> <td>6</td> <td>2</td> <td></td> </tr> </tbody> </table> <ul style="list-style-type: none"> At the end of the game, discuss which combinations were equal, and which combinations used the fewest number of coins. 	Quarters	Dimes	Nickels	Pennies	Team 1	Team 2				16	1	0			3						3	1	1			1	1	1		1		1		6	2	
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<p>EXPLORE:</p> <p>Materials:</p> <ul style="list-style-type: none"> • Coins • Brown paper bag • Money in the Bank worksheet (see Day 1, Lesson 8.1) 	<p>Money in the Bank</p> <ul style="list-style-type: none"> • Students play the game in teams. One team decides on amount and the actual coins that represent that amount and hides these coins in a brown paper bag. The other team tries to guess the coins in the bank. • Scoring is the same as for the whole class version: one point for coins that equal the amount hidden, two points for naming the actual coins (this can be a collaborative or a competitive game). • At the end of each game, students discuss which combinations were equal, and which combinations used the fewest number of coins.
<p>PRACTICE:</p>	<p>As time allows: P. 113 and/or 114</p>
<p>SUMMARIZE:</p>	<p>Closure: Revisit purpose of the lesson with students. Why is it helpful to know the fewest number of coins for an amount?</p>
<p>HOMEWORK:</p> <p>Materials:</p> <ul style="list-style-type: none"> • Coins • Money in the Bank worksheet (see Day 1, Lesson 8.1) 	<p>Suggestion:</p> <ul style="list-style-type: none"> • Students play Money in the Bank with an adult. Students collect food advertisements and food coupons to bring to class.

DAY 3
 UNIT 2: Money and Time
 Chapter 8: Using Money
 LESSON 8.3
 TE, P. 115A

LESSON FOCUS:	Compare Amounts to Prices				
CALIFORNIA STANDARD:	Mathematical Reasoning 1.0 Students make decisions about how to set up a problem.				
PURPOSE OF LESSON:	Understand how to combine coins to pay for items.				
ROUTINE: Materials: • <i>Coins</i>	Suggestion: Number of the Day Students write equations using money ($25\text{¢} + 25\text{¢} + 25\text{¢} + 25\text{¢} + 25\text{¢} + 1\text{¢} + 1\text{¢} = \1.52). Students share coin collections that match equations.				
LAUNCH: Materials: • <i>Coins</i> • <i>Advertisements and food coupons from homework, Days 1 and 2, Lessons 8.1 and 8.2</i> • <i>Count and Compare overhead</i>	Introduce: Count and Compare See “Getting Started Options” on TE Pg 115A.				
EXPLORE: Materials: • <i>Coins</i> • <i>Advertisements and food coupons from homework, Days 1 and 2, Lessons 8.1 and 8.2</i> • <i>Count and Compare worksheet</i>	Count and Compare <ul style="list-style-type: none"> • Students work in pairs. They choose advertisements/coupons, cut them out and clue them down. • Students make coin collections equal to the price in the advertisement/on the coupon. Students record the price and two or three collections equal to the price: <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-bottom: 1px solid black;">Price</th> <th style="text-align: center; border-bottom: 1px solid black;">Coins Used</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">86¢</td> <td style="text-align: center; padding: 5px;">3 quarters, 1 dime, 1 penny 8 dimes, 1 nickel, 1 penny</td> </tr> </tbody> </table>	Price	Coins Used	86¢	3 quarters, 1 dime, 1 penny 8 dimes, 1 nickel, 1 penny
Price	Coins Used				
86¢	3 quarters, 1 dime, 1 penny 8 dimes, 1 nickel, 1 penny				
PRACTICE:	As time allows: P. 115 and/or 116				
SUMMARIZE:	Closure: Revisit purpose of the lesson with students.				
HOMEWORK: Materials: • <i>Pg FA 28.</i>	Suggestion: Family Involvement Activity Pg FA 28.				

Count and Compare

Price	Coins Used

DAY 4
 UNIT 2: Money and Time
 Chapter 8: Using Money
 LESSON 8.4
 TE, Pg. 117A

LESSON FOCUS:	Make Change						
CALIFORNIA STANDARD:	Number Sense 5.0 Students model and solve problems by representing, adding, and subtracting amounts of money.						
PURPOSE OF LESSON:	To understand strategies for determining change.						
ROUTINE: Materials: • Coins	Suggestion: Number of the Day Students write equations using money ($50¢ + 25¢ + 25¢ + 25¢ + 25¢ + 1¢ + 1¢ + 1¢ = \1.53). Students share coin collections that match equations. Suggestion: Review Quarters and Half-Dollars <ul style="list-style-type: none"> List the numbers 50, 25, 10, 5 and 1 on the board, in descending order. Choose two or three adjacent numbers (e.g., 50/25, 25/10/5). Point to the larger of the two/three and have students count aloud. Raise your hand to signal a transition and point to the smaller number. Students continue to count on from where they left off, now counting on by the smaller quantity. Repeat. Discuss: what does this type of counting have to do with money? <i>Why did we always start counting by the larger number?</i> 						
LAUNCH: Materials: • Advertisements and food coupons from homework, Days 1 and 2, Lessons 8.1 and 8.2 • Coins • Making Change overhead	Introduce: Making Change (see “Getting Started Options,” TE P. 117A) <ul style="list-style-type: none"> Choose an advertisement/coupon with a price less than 50¢. Tell students you have 50¢ and you are going to buy the item. Ask students to assist in acting out the situation with coins. Ask them how to find out the change you have due. Students will discuss different ways to count on from the price and back from 50¢. Repeat with other amounts and prices. Demonstrate how to record on a chart: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">I have...</th> <th style="text-align: center;">I spent</th> <th style="text-align: center;">Change I get....</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">50¢</td> <td style="text-align: center;">23¢</td> <td style="text-align: center;">2 dimes, 1 nickel, 2 pennies 1 quarter, 2 pennies</td> </tr> </tbody> </table>	I have...	I spent	Change I get....	50¢	23¢	2 dimes, 1 nickel, 2 pennies 1 quarter, 2 pennies
I have...	I spent	Change I get....					
50¢	23¢	2 dimes, 1 nickel, 2 pennies 1 quarter, 2 pennies					

<p>EXPLORE:</p> <p>Materials:</p> <ul style="list-style-type: none"> • <i>Coins</i> • <i>Advertisements and food coupons from homework, Days 1 and 2, Lessons 8.1 and 8.2</i> <ul style="list-style-type: none"> • <i>Making Change</i> 	<p>Making Change</p> <ul style="list-style-type: none"> • Students work in pairs. They choose advertisements/coupons and an amount between 50¢ and 1 dollar to “have.” • Students “act out” the situation, beginning with the amount they have, spending the amount in the advertisement/on the coupon, and counting the change. Students record the transaction on individual charts like the one modeled in the Launch portion of the lesson. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="padding: 5px;">I have..</th> <th style="padding: 5px;">I spent</th> <th style="padding: 5px;">Change I get....</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px; text-align: center;">50¢</td> <td style="padding: 5px; text-align: center;">23¢</td> <td style="padding: 5px;">2 dimes, 1 nickel, 2 pennies 1 quarter, 2 pennies</td> </tr> </tbody> </table>	I have..	I spent	Change I get....	50¢	23¢	2 dimes, 1 nickel, 2 pennies 1 quarter, 2 pennies
I have..	I spent	Change I get....					
50¢	23¢	2 dimes, 1 nickel, 2 pennies 1 quarter, 2 pennies					
<p>PRACTICE:</p>	<p>As time allows: P. 117 and/or 118.</p>						
<p>SUMMARIZE:</p>	<p>Closure: Revisit purpose of the lesson with students. <i>What strategies did you use to make change?</i></p>						
<p>HOMEWORK:</p> <p>Materials:</p> <ul style="list-style-type: none"> • P. FA 32. 	<p>Suggestion: Family Involvement Activity Pg FA 32.</p>						

DAY 5
 UNIT 2: Money and Time
 Chapter 8: Using Money
 LESSON 8.5
 TE, P. 119A

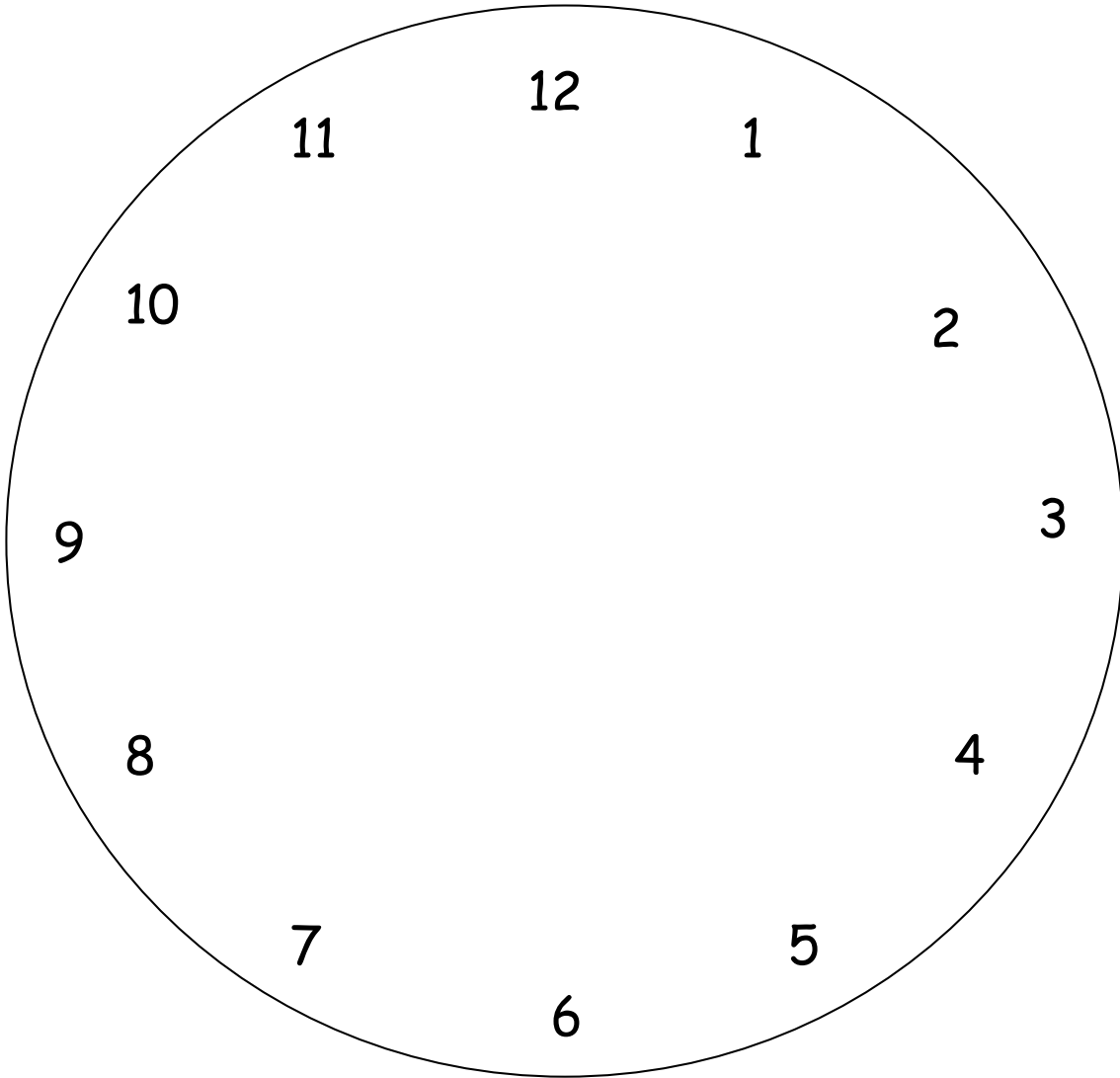
LESSON FOCUS:	Problem Solving
CALIFORNIA STANDARD:	Number Sense 5.0 Students model and solve problems by representing, adding, and subtracting amounts of money.
PURPOSE OF LESSON:	To understand counting on strategies and coin equivalencies.
ROUTINE: Materials: • <i>Coins</i>	Suggestion: Number of the Day <ul style="list-style-type: none"> • Students write equations using money ($50\text{¢} + 50\text{¢} + 25\text{¢} + 10\text{¢} + 10\text{¢} + 5\text{¢} + 1\text{¢} + 1\text{¢} + 1\text{¢} + 1\text{¢} = \\1.54). Students share coin collections that match equations. Suggestion: Review Quarters and Half-Dollars <ul style="list-style-type: none"> • List the numbers 50, 25 and 10, 5 and 1 on the board, in descending order. Choose two or three adjacent numbers (e.g., 50/25, 25/10/5). • Point to the larger of the two/three and have students count aloud. • Raise your hand to signal a transition and point to the smaller number. Students continue to count on from where they left off, now counting on by the smaller quantity. Repeat. • Discuss: <i>What does this type of counting have to do with money? Why did we always start counting by the larger number?</i>
LAUNCH: Materials: • <i>Coins</i> • <i>2 dice per small group (or a six-section spinner, labeled 1 - 6; P TR 107)</i>	Introduce: Race for a Dollar <ul style="list-style-type: none"> • Demonstrate how to play Race for a Dollar. Students play in pairs/small groups, taking turns. On each turn, a student rolls two dice (spins two times), taking coins equal to the sum amount in cents. • Before passing the dice (spinner), the student trades coins for a coin of equal value (e.g., 5 pennies for a nickel, 10 pennies/2 nickels/5 pennies and 1 nickel for a dime). The first to trade for a dollar is the winner of the game.
EXPLORE: Materials: • <i>Coins</i> • <i>2 dice (or a six-section spinner, labeled 1 - 6; P TR 107)</i>	Race for a Dollar <ul style="list-style-type: none"> • Students play the game in small groups.
PRACTICE	As time allows: P. 119 and/or 120. <i>How did you know when to made money trades?</i>

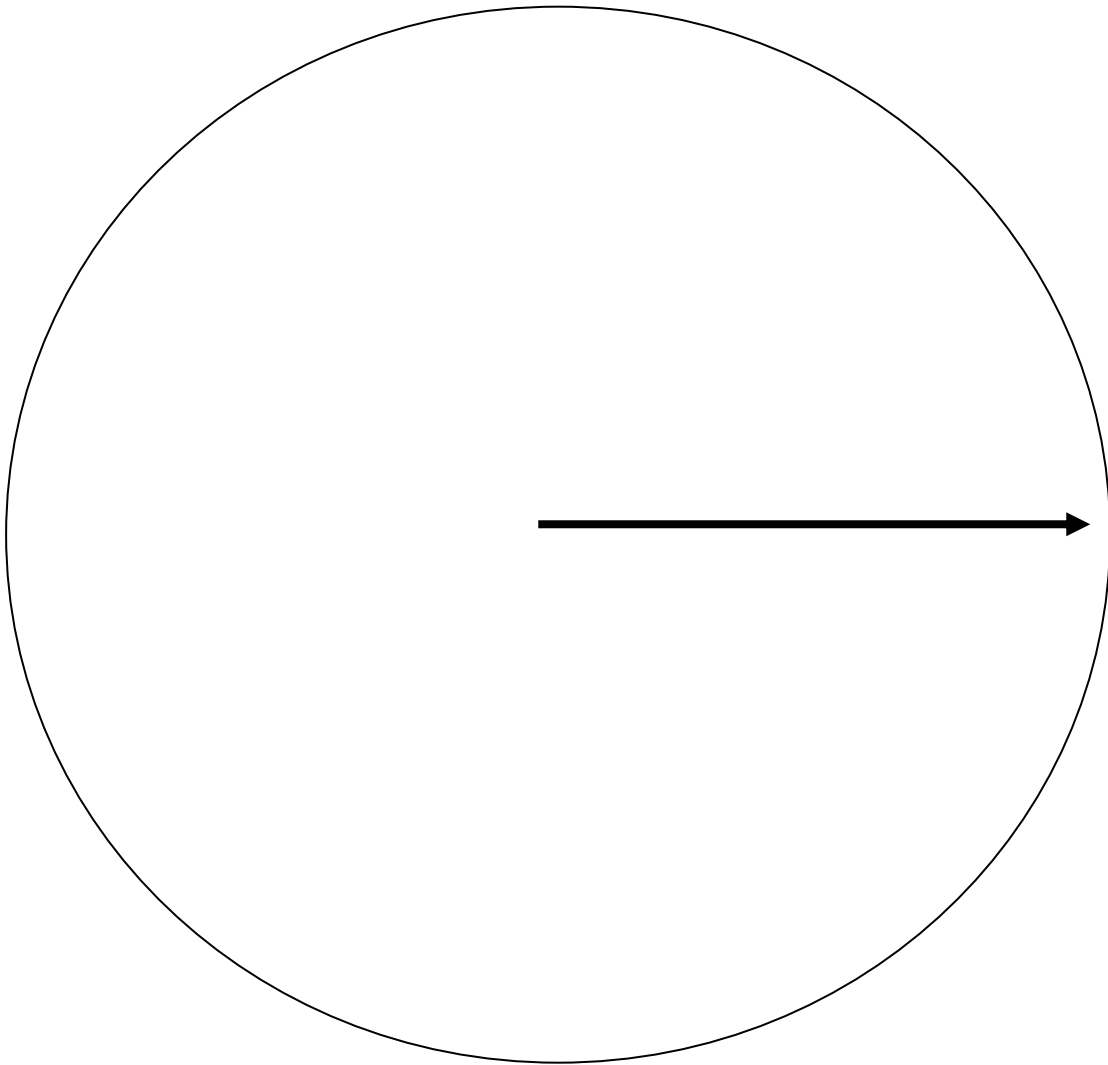
SUMMARIZE:	<i>How did you know when to make money trades.</i>
HOMEWORK:	Suggestion: Family Involvement Activity Pg FA 33.
Materials: • P FA 33.	

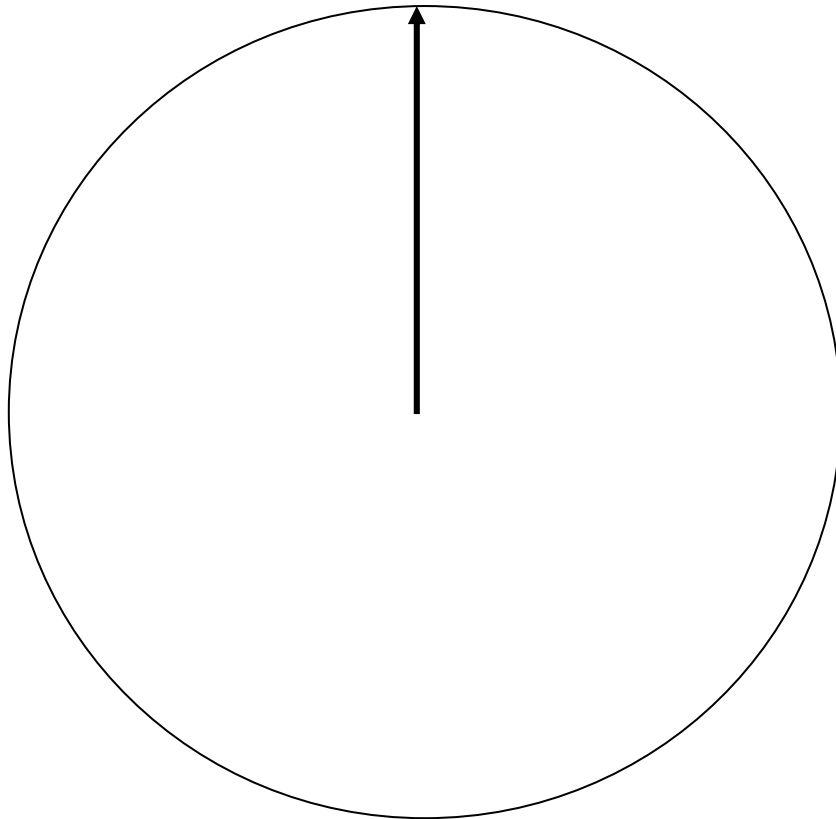
DAY 6
 UNIT 2: Money and Time
 Chapter 10: Understanding Time
 LESSON 10.1
 TE, P. 137A

LESSON FOCUS:	Daily Events
CALIFORNIA STANDARD:	Measurement and Geometry 1.4 Tell time to the nearest quarter hour and know relationships of time.
PURPOSE OF LESSON:	To understand reading the face of a clock.
ROUTINE:	Suggestion: Number of the Day Students write equations using money ($50\text{¢} + 50\text{¢} + 25\text{¢} + 10\text{¢} + 5\text{¢} + 5\text{¢} + 5\text{¢} + 5\text{¢} = \1.55). Students share coin collections that match equations.
Materials: • Coins	
LAUNCH:	Reviewing Time
Materials: • 3 sheets of acetate • Brad	<ul style="list-style-type: none"> • Make an overhead clock, using three sheets of acetate. Draw a clock face on one, without hands. Cut out two circles from the other sheets, each with a radius equal to the length of the two clock hands; draw a clock hand on each, extending from the center to the outside edge of the circle. Cut small holes in the center of each. For this lesson, place the smaller circle over the overhead clock and fasten with a brad. • Approximate time to the hour by using the one-handed clock. Move the circle to show times such as the following: “about 4 o’clock”, “halfway between 1 and 2 o’clock”, “a little past 8 o’clock.” Use approximate language. • Using the same model, place the larger circle on first (making a clock with two hands) or another type of “teaching clock”, talk about what happens to the big hand as the little hand moves from hour to hour. • Focus the discussion on what happens when the hour hand is halfway between hours. Discuss where the minute hand would be if the hour hand is a little before or past (approximately 15 minutes) an hour. Discuss where the minute hand would be if the hour hand is a little before or past (approximately 15 minutes) an hour. • Do Counting by Five Minute Intervals, TE, P. 125A. Rather than focusing on the minute hand pointing on the 7, encourage students to express that it is about 35 minute after the hour. • Suggest that students always look at the hour hand to learn the approximate time, and then focus on the minute hand.

<p>EXPLORE:</p> <p>Materials:</p> <ul style="list-style-type: none"> • <i>P. TR 105, one copy per student</i> • <i>one brad per student</i> • <i>P. TR 77, one copy per student</i> 	<p>Model Clock Practice</p> <ul style="list-style-type: none"> • Students construct a clock with the teacher’s assistance, using the spinner faces on P. TR 105. Begin by labeling the clock face 12, 6, 1, and 3; continue until all numbers have been written. • Give students times to both model on their clocks and record on Pg TR 77. Students choose a time to show on their clocks; partners “read” the time and record the digital and analog times. <p>Model a Time See TE, P. 137A.</p>
<p>PRACTICE:</p>	<p>As time allows: P. 137 and/or 138.</p>
<p>SUMMARIZE:</p>	<p>Closure: Revisit purpose of the lesson with students.</p>
<p>HOMEWORK:</p> <p>Materials:</p> <ul style="list-style-type: none"> • <i>Homework: A Typical Day worksheet</i> 	<p>Suggestion: Students list important events in a typical day, the times these events occur and whether they occur in the a.m. or p.m.</p>







Homework: A Typical Day

Directions:

List important events in a typical day.

Record the times when these events occur.

Record whether these events occur in the a.m. or p.m.

Important Events	Time	A.M. or P.M.

DAY 7
 Chapter 10: Understanding Time
 LESSON 10.2
 TE, P. 139A

LESSON FOCUS:	Problem Solving
CALIFORNIA STANDARD:	Measurement and Geometry 1.5 Determine the duration of time in hours.
PURPOSE OF LESSON:	Understand how to determine how much time has passed between events.
ROUTINE: Materials: • <i>Model clocks from Day 6, Lesson 10.1</i>	Suggestion: Story Problems <ul style="list-style-type: none"> • Read a story problem for students: <i>One day I visited a pet store. I got there at 4:00. I spent 30 minutes with the puppies. I spent 20 minutes with the cats. I spent 10 minutes with the fish. What time did I leave?</i> • Ask students to use their model clocks to illustrate the events and explain their answer to their classmates.
LAUNCH: Materials: • <i>Model clocks from Day 6, Lesson 10.1</i>	Model an Hour See TE, P. 139A.
EXPLORE: Materials: • <i>Teacher Resource Book, page TR 77 (optional)</i>	<ul style="list-style-type: none"> • Students choose 2 – 4 problems from P. 139. They find the answer to the problems chosen and explain their thinking on a separate sheet of paper. • Students may use P. TR 77 to record the two times in each problem.
PRACTICE:	As time allows: P. 140.
SUMMARIZE:	Ask students to share their written explanations from Explore. Closure: Revisit purpose of the lesson with students.
HOMEWORK: Materials: • <i>P. FA 41.</i>	Suggestion: Family Involvement Activity P. FA 41.

DAY 8
 UNIT 2: Money and Time
 Chapter 10: Understanding Time
 LESSON 10.3
 TE, P. 141A

LESSON FOCUS:	Time Stories								
CALIFORNIA STANDARD:	Measurement and Geometry 1.4 Tell time to the nearest quarter hour and know the relationships of time.								
PURPOSE OF LESSON:	Understand how to determine how much time has passed between events.								
ROUTINE: Materials: • Model clocks from Day 6, Lesson 10.1	Suggestion: Story Problems <ul style="list-style-type: none"> Read a story problem for students: <i>I got home from my friend’s house at 5:00. I spent 20 minutes cleaning up my room. I spent 15 minutes helping with dinner. I spent 20 minutes eating dinner. What time was it when dinner was over?</i> Ask students to use their model clocks to illustrate the events and explain their answer to their classmates. 								
LAUNCH: Materials: • Model clocks from Day 6, Lesson 10.1	Model Writing Story Problems <ul style="list-style-type: none"> Ask students to assist in writing a story problem similar to the Routine. Students solve the problem using their individual clocks. 								
EXPLORE: Materials: • P. TR 77 (optional)	Writing Story Problems <ul style="list-style-type: none"> Students practice writing story problems for their classmates to solve. 								
PRACTICE:	As time allows: Students solve story problems written by their classmates.								
SUMMARIZE:	<ul style="list-style-type: none"> Ask students to discuss solving story problems written by their classmates. Closure: Revisit purpose of the lesson with students.								
HOMEWORK: Materials: • P. TR 77 • Homework: <i>How Long Does It Take?</i> worksheet	Suggestion: <ul style="list-style-type: none"> Students keep track of the length of time it takes to do routine tasks at home (e.g., brushing teeth, clearing the dinner table, making a bed). Students make a chart, recording the task, the start time, the ending time and the amount of time that elapsed while doing the task. Clock faces from P.TR 77 can be used to illustrate beginning and ending times. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Task</th> <th style="width: 25%;">Beginning Time</th> <th style="width: 25%;">Ending Time</th> <th style="width: 25%;">Elapsed Time</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">making bed</td> <td style="text-align: center;">4:00</td> <td></td> <td></td> </tr> </tbody> </table>	Task	Beginning Time	Ending Time	Elapsed Time	making bed	4:00		
Task	Beginning Time	Ending Time	Elapsed Time						
making bed	4:00								

Homework: How Long Does It Take?

Directions:

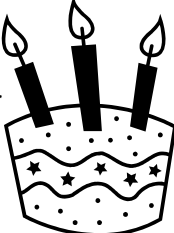
1. Keep track of the length of time it takes to do routine tasks at home (e.g., brushing teeth, clearing the dinner table, making a bed).
2. Make a chart. Record the
 - Task
 - Start time
 - End time
 - Amount of time that elapsed
3. Use the clock faces (P.TR 77) if you want.

Task	Beginning Time	Ending Time	Elapsed Time

DAY 9
 UNIT 2: Money and Time
 Chapter 10: Understanding Time
 LESSON 10.4
 TE, P. 143A

LESSON FOCUS:	Estimate Time																				
CALIFORNIA STANDARD:	Number Sense 6.1 Recognize when an estimate is reasonable.																				
PURPOSE OF LESSON:	To develop a sense of durations of time.																				
ROUTINE: Materials: • Model clocks from Day 6, Lesson 10.1	<ul style="list-style-type: none"> • Suggestion: Story Problems • Read a story problem for students: <i>I got up on Saturday at 8:00. I spent 15 minutes eating breakfast. I spent 30 minutes reading. I spent 30 minutes helping with housework. What time was it then?</i> • Ask students to use their model clocks to illustrate the events and explain their answer to their classmates. 																				
LAUNCH: Materials: • Model clocks from Day 6, Lesson 10.1	Model A Period of Time <ul style="list-style-type: none"> • Discuss the length of specific events. Ask students to name several events, such as eating breakfast, playing a baseball game, washing hands, and brushing teeth. • Have students compare two of the events, telling which takes longer to complete, and explain their thinking. Repeat. 																				
EXPLORE: Materials: • Teacher Resource Book, page TR 77 (optional) • Estimating Time worksheet	Estimating Time <ul style="list-style-type: none"> • Have students think of tasks. They estimate the amount of time it would take to do a task, complete the task, and compare the estimate to the actual amount of time. • Students make a chart to record their work: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Task</th> <th style="text-align: left;">Estimate</th> <th style="text-align: left;">Actual</th> <th style="text-align: left;">Difference</th> </tr> </thead> <tbody> <tr> <td>Write #s from 1–100</td> <td>5 minutes</td> <td>3 minutes</td> <td>2 minutes</td> </tr> <tr> <td>Write classmates names</td> <td>20 minutes</td> <td>15 minutes</td> <td>5 minutes</td> </tr> <tr> <td>Write a letter</td> <td>15 minutes</td> <td>8 minutes</td> <td>7 minutes</td> </tr> <tr> <td>Write the alphabet</td> <td>4 minutes</td> <td>3 minutes</td> <td>1 minute</td> </tr> </tbody> </table>	Task	Estimate	Actual	Difference	Write #s from 1–100	5 minutes	3 minutes	2 minutes	Write classmates names	20 minutes	15 minutes	5 minutes	Write a letter	15 minutes	8 minutes	7 minutes	Write the alphabet	4 minutes	3 minutes	1 minute
Task	Estimate	Actual	Difference																		
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Write a letter	15 minutes	8 minutes	7 minutes																		
Write the alphabet	4 minutes	3 minutes	1 minute																		
PRACTICE:	As time allows: P. 143 and/or 144.																				
SUMMARIZE:	Ask students to share their work from Explore Closure: Revisit purpose of the lesson with students.																				
HOMEWORK: Materials: • P. TR 77.	Suggestion: Students repeat Explore activity, using tasks they do at home.																				

DAY 10
 UNIT 2: Money and Time
 Chapter 10: Understanding Time
 LESSON 10.5
 TE, P. 143A

LESSON FOCUS:	Time Relationships
CALIFORNIA STANDARD:	Measurement and Geometry 1.4 Tell time to the nearest quarter hour and know relationships of time.
PURPOSE OF LESSON:	Understand time relationships and estimate the length of activities.
ROUTINE: Materials: • Model clocks from Day 6, Lesson 10.1	Suggestion: Story Problems <ul style="list-style-type: none"> • Read a story problem for students: <i>I got up in the morning. I spent 10 minutes getting dressed. I spent 10 minutes eating breakfast. It took me 15 minutes to get to school. It was 8:30. What time did I get up?</i> • Ask students to use their model clocks to illustrate the events and explain their answer to their classmates.
LAUNCH: Materials: • Model clocks from Day 6, Lesson 10.1 • Calendar	Model Time Relationships <ul style="list-style-type: none"> • Discuss the length of specific units of time and how periods of time are made up of a number of time units. Discuss: <ul style="list-style-type: none"> • 365 days in a year • 12 months in a year • 4 weeks in a month • 7 days in a week • 24 hours in a day • 60 minutes in an hour • 60 seconds in a minute • Ask students to illustrate relationships using clocks and the calendar.
EXPLORE: Materials: • Teacher Resource Book, page TR 7 (optional)	Writing a Time Relationships Book <ul style="list-style-type: none"> • Students write a book. On each page, they record a period of time, the number of time units in that period, and an event that lasts that length of time. • Students illustrate each page. <p>Example:</p> <p>1 year is 365 days. My age lasts one year from birthday to birthday.</p> <div style="text-align: right;">  </div>

PRACTICE:	As time allows: P. 145 and/or 146.
SUMMARIZE:	<ul style="list-style-type: none">• Ask students to share their work from Explore Closure: revisit purpose of the lesson with students.
HOMEWORK:	Suggestion: Students add to Explore activity at home.

UNIT 2: Money and Time
 Chapter 10: Understanding Time
 DAY 11: Assessment
 TE, Pg. 143A

LESSON FOCUS:	Assessment
CALIFORNIA STANDARD:	Measurement and Geometry 1.4 Tell time to the nearest quarter hour and know relationships of time. Number Sense 5.0 Students model and solve problems by representing, adding and subtracting amounts of money.
PURPOSE OF LESSON:	Check understanding of concepts, skills and problem solving presented in Chapters 8 and 10.
ROUTINE: Materials: • <i>Model clocks from Day 6, Lesson 10.1</i>	Suggestion: Story Problems <ul style="list-style-type: none"> • Read a story problem for students: <i>I left school. I spent 20 minutes at the store. I spent 10 getting home from the store. I did my homework for 30 minutes. It was 5:30. What time was it when I left school?</i> • Ask students to use their model clocks to illustrate the events and explain their answer to their classmates.
LAUNCH:	Review <ul style="list-style-type: none"> • Discuss the models and format used on Pp. 121, 122, 147 and 148.
EXPLORE: Materials: • <i>Coins</i> • <i>Model clocks from Day 6, Lesson 10.1</i>	Sample Problems <ul style="list-style-type: none"> • Give students sample problems similar to those on pages 121, 122, 147 and 148. • Let students use familiar materials to model solutions to the problems. Provide students opportunities to share solution strategies with their classmates. <p style="text-align: center;">OR</p> <p>Assessment Guide, P. 52 – 54 Assessment Guide, P. 61, 62</p>
PRACTICE:	As time allows: Pp. 121, 122, 147 and 148.
HOMEWORK:	Suggestion: Pp. 149 and 150.