



San Diego Unified School District

Instructional Module to Enhance the Teaching of

H A R C O U R T

Math

California Edition

Grade 1

Module 6–Revised

Counting Pennies, Nickels and Dimes
Using Money

–WORK IN PROGRESS –

MODULE 6 – COUNTING PENNIES, NICKELS, AND DIMES USING MONEY
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 be provided opportunities to:

- Develop understanding of numbers and the number system and use their understanding to solve problems and recognize reasonable results.
- Use mathematical reasoning to solve problems.
- Develop understanding of and fluency in basic computation and procedural skills.
- Use equations and to express generalizations of patterns and relationships.
- Communicate their mathematical thinking by using words, numbers, symbols, graphs and charts., and describe different representations
- Express generalizations of patterns and relationships.
- 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 can identify, describe, and group various coins.*
- *Students know the value of coins and show different combinations of coins that equal the same value.*
- *Students recognize that the relationship between the coin values and their physical sizes is non-proportional.*

*Essential learnings listed above will be developed by students over the course of the year

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

- How do I tell the difference between pennies, nickels **, dimes, quarters and dollar bills and remember their value?
- How can I show a specific amount in two ways?
- How many different ways can I make a dollar using various denominations of coins?
- How different ways can I make amounts less than a dollar using various denominations of coins?

**Previously presented in kindergarten

Resources: Van de Walle, Chapter 12, p. 194

Module 6
Counting Pennies, Nickels, and Dimes
Using Money

11 Days

Key Mathematical Concepts:

- Identify pennies, nickels, dimes, quarters, one dollar and their values
- Count groups of pennies, nickels, and dimes
- Identify equivalent values of coins
- Solve problems by using an appropriate strategy

Unit 4, Chapter 16: Counting Pennies, Nickels, and Dimes			Unit 4, Chapter 17: Using Money		
<u>DAY</u>			<u>DAY</u>		
1	16.1	Pennies and Nickels	6	17.1	Trade Pennies, Nickels, Dimes
2	16.2	Pennies and Dimes	7	17.2	Equal Amounts
3	16.3	Count Groups of Coins	8	17.3	Quarters
4	16.4	Problem Solving	9	17.4	One Dollar
5		Assessment	10	17.5	Problem Solving
			11		Assessment

Day 1 Unit 4 Lesson 16.1 Pennies and Nickels	Day 2 Unit 4 Lesson 16.2 Pennies and Dimes	Day 3 Unit 4 Lesson 16.3 Count Groups of Coins	Day 4 Unit 4 Lesson 16.4 Problem Solving	Day 5 Unit 4 Assessment
Day 6 Unit 4 Lesson 17.1 Trade Pennies, Nickels, Dimes	Day 7 Unit 4 Lesson 17.2 Equal Amounts	Day 8 Unit 4 Lesson 17.3 Quarters	Day 9 Unit 4 Lesson 17.4 One Dollar	Day 10 Unit 4 Lesson 17.5 Problem Solving
Day 11 Unit 4 Assessment				

Teaching Notes

Chapter Sixteen
Module 6

- The following MONEY EXPLORATION ACTIVITIES are taken from *Harcourt Math* and are to be used as Independent Learning Stations.
- Below you will find complete instructions and a list of the materials needed for the Independent Learning Stations. You will also find the page in the Harcourt materials where the activity is found.
- Almost all of the stations require coins for students to manipulate. The following is a list of the coins needed to satisfy all of the stations (if they are limited to 4 students per station).

Pennies	–	100	(\$1.00)
Nickels	–	100	(\$5.00)
Dimes	–	55	(\$5.50)
Quarters	–	20	(\$5.00)

- Harcourt provides a blackline master of the coins if you choose to run them off and cut them out (See **Teacher's Resource Book** pg. TR64).

Every lesson in Module 6 incorporates one or more of the following Independent Learning Stations as the Explore task. Please refer to the following pages when introducing a new station in your lesson.

Remember that the standards are what a first grader needs to know and be able to do by the end of the first grade. Some students will need continuous practice past a lesson to develop proficiency. The work that students do at learning stations provides these opportunities.

Math Background:

Money is a type of measurement. Any measurement situation requires understanding the unit and counting to determine how many of this unit are present.

Common Errors with Children:

- Children may confuse the size of a coin with its value
- Children may count a nickel or a dime as one cent

COIN SORT

Intervention Strategies and Activities p. IS206

Key Mathematical Concept:

- Identify pennies, nickels, dimes, quarters

Materials:

For each pair of students at the station:

- clear cups labeled "penny," "nickel," "dime," and "quarter" in words and with pictures of the coins,
- plastic bag containing 10 pennies, 10 nickels, 10 dimes and 4 quarters.

Instructions:

- Have children in partners.
- The first child reaches into the bag, pulls out a coin, and identifies it.
- Then he or she hands the coin to the partner.
- The partner describes one thing about the coin ("It is silver." Or, "Abraham Lincoln is on one side." etc.) then places it in the correct cup.
- Children change roles.
- After all coins are sorted, children should check to be sure there are 4 quarters and 10 of each of the other coins.

Scaffolding Note:

You may introduce this station with only pennies and nickels and add more coins as students gain proficiency. Another idea is to use heterogeneous pairs of students at the station.

COIN SCOOP

TE p. 211F

Key Mathematical Concepts:

- Identify the values of pennies, nickels, dimes, and quarters
- Count groups of pennies, nickels and dimes

Materials:

For each pair at the station:

- 10 pennies and 5 nickels
- Paper bag
- Tablespoon
- Scratch paper.

Instructions:

- Mix the coins in the bag.
- Partner 1 uses the tablespoon to scoop out a spoonful of coins without looking.
- S/He places the coins on the table and sorts them by type.
- Partners decide on the correct amount and partner 1 writes it down.
- Children change roles.
- Partners decide who scooped the greater amount.
- Put all coins back into the bag and play again.

(See picture on page 211f for example of this activity)

Scaffolding Note:

You may provide students with a graphic organizer such as a grid that pictures each coin and its value at the top of a column. (or you can modify **TR69**)

Students then place their coins in the correct column. The child may choose to write the value of each coin in each square of the grid before counting. This may help students to see that even though they have 3 nickels and 3 pennies, the nickels are worth more.

For students yet unable to count the combination of pennies and nickels, remove the nickels and add more pennies. Then give them a bag containing only nickels, only dimes and so on.

As students gain proficiency, add dimes then quarters to the bag. Provide either a larger spoon or ask them to scoop a handful.

SHOW THE PRICE

TE p. 211G

Key Mathematical Concept:

- Count groups of pennies, nickels, dimes and quarters

Materials:

For each pair at the station:

- Pictures of toys from the Teacher's Resource Book p. TR71 (Cut them out, write an amount in each price tag from 1 cent to 49 cents, then glue them to index cards.)
- 10 pennies, 10 nickels, 4 dimes, 1 quarter

Instructions:

- Place cards in a pile face down on the table.
- Partner A selects a card and places it face up.
- Partner A uses the coins to show one combination that equals the price shown on the price tag.
- Partner B checks the answer.
- Challenge Option: Partner B shows the same amount using a different combination of coins. Partner A checks the answer.
- Partners trade roles and repeat the activity.

Scaffolding Note:

For different ability levels, vary the amounts you write on the price tag. For example, those students still needing practice with the values of coins will only draw cards that are 1 to 4 cents, 5 cents, 10 cents, and 25 cents. You may choose to provide only nickels and pennies or only dimes and pennies.

As students gain proficiency, increase the prices and number of coins.

SHOW THE PRICE MATCHING GAME

TE p. 234A

Key Mathematical Concept:

Count groups of pennies, nickels, dimes and quarters

Materials:

- Use the cards from **Show the Price** (the game above).
- Create a "coin card" that matches the price for each toy card.
- You may cut out the pictures of coins (Teacher's Resource Book p. TR64) and glue them to the cards or glue actual coins onto the index cards.

Instructions:

- Partners place all cards face up on the table and work together to match the toy cards with the money cards.
- For more of a challenge, place cards face down and play the matching game like "Concentration."

Scaffolding Notes:

For different ability levels, vary the amounts you write on the price tag. For example, those students still needing practice with the values of coins will only draw cards that are 1 to 4 cents, 5 cents, 10 cents, and 25 cents. You may choose to provide only nickels and pennies or only dimes and pennies.

As students gain proficiency, increase the prices and number of coins.

WAYS TO MAKE 50 CENTS

TE p. 244A

Key Mathematical Concept:

Count groups of pennies, nickels, dimes and quarters

Materials:

For each group of 4 at a station:

- 10 pennies, 10 nickels, 5 dimes and 2 quarters

Instructions:

- One child hides coins equaling 50 cents in his or her hands and tells the group members the number of coins.
- The rest of the group asks the child yes-or-no questions to determine the combination of coins.
- Each member gets a turn hiding coins.

Scaffolding Note:

You may provide additional coins so that the group members can manipulate coins as they try to solve the problem.

COIN EXCHANGE

TE p. 228A

Key Mathematical Concept:

- Identify equivalent values of coins

Materials:

For each pair at the station:

- 10 pennies, 20 nickels
- 1 die

The die may be substituted with one of the following:

- A blank cube with the numbers 1 – 6 written on each side
- Pull all 1-6 cards from a standard deck of cards. Children shuffle and draw cards to determine what coins to take
- Create your own playing cards, 4 sets of the numbers 1 – 6 (Teacher's Resource Book, TR36)

Instructions:

- All coins are placed on the table between the children. This is the "bank."
- Partners take turns rolling the die (or drawing cards) and taking that many pennies.
- When a partner accumulates 5 pennies, he or she shouts "Exchange!" and returns the 5 pennies to the bank in exchange for a nickel.
- Children can exchange pennies for nickels only during their turn.
- When all nickels are taken from the bank, children count to see who has the most money.

Scaffolding Note:

You may provide children a graphic organizer such as Workmat 2 in the Teacher's Resource Book pg. TR114 so they may keep pennies on one side and nickels on the other. It may be even more helpful to some students to have a half of a ten-frame or 5 squares to put their pennies in so that they are more aware of when to exchange (TR 119)

This game can be played with a variety of different coin combinations depending on the needs of your students:

Pennies and Dimes

Pennies and Quarters

Pennies, Nickels and Dimes

Pennies, Nickels, Dimes and Quarters

Pennies, Dimes and Dollar Bills (Dollar Bills are in Teacher's Resource Book p. TR65)

Pennies, Quarters, Dollar Bills

DAY 1

Chapter 16: Counting Pennies, Nickels, and Dimes
LESSON 16.1, TE pg. 227A

LESSON FOCUS:	Pennies and Nickels
CALIFORNIA STANDARD:	Number Sense 1.5 Identify and know the value of coins and show different combinations of coins that equal the same value.
PURPOSE OF LESSON:	To identify the penny and nickel and their values; to count groups of pennies and nickels.
ROUTINE: Chart Paper TE pg. 227A <u>For the teacher</u> <ul style="list-style-type: none"> Vocabulary Cards (pp.TR161-162) <u>For each child</u> <ul style="list-style-type: none"> penny and nickel TE pg.217A <ul style="list-style-type: none"> Self Stick Notes 	Suggestion: Brainstorming Session: <ul style="list-style-type: none"> Ask, "What do you know about coins?" Write student responses on chart paper. Other possible questions to stimulate discussion: "What are the names of some coins? What do they look like? What do we use them for? Etc." Or Getting Started: Vocabulary Development: TE, pg. 227A Or Daily Routine TE pg. 217A "Cast Your Vote"
LAUNCH: Materials: See Module pages 154 - 155) for material list and instructions for Learning Stations.	Discuss rules and guidelines for Independent Learning Stations. Introduce Explore: <ul style="list-style-type: none"> Demonstrate instructions for Coin Sort and Coin Scoop (Module pages 154-155). You may decide either to introduce both stations at the beginning of the period Or, you may "launch" one station, allow time for student exploration and summarization and then start the process again with the second station.
EXPLORE:	Independent Learning Stations <ul style="list-style-type: none"> Coin Sort Coin Scoop Observe and assist students as necessary. Ask students to explain their thinking as they work. Confer, question, assess, adjust. (Watch for children who count nickels by ones.)
PRACTICE: TE and Workbook pg. 227-228	As time allows: TE and Workbook pg. 227-228 Pg. 228: It is not necessary for students to write numbers under each coin. The total amount is sufficient.
SUMMARIZE:	Revisit with students the lesson's objective by connecting the following discussion to the purpose of the lesson. Discuss: Ask students to reflect on the Math they practiced. "What did you learn about money today?"
HOMEWORK:	Suggestion: Family Involvement Activities pg. FA71

DAY 2

Chapter 16: Counting Pennies, Nickels, and Dimes

LESSON 16.2, TE pg. 229A

LESSON FOCUS:	Pennies and Dimes
CALIFORNIA STANDARD:	Number Sense 1.5 Identify and know the value of coins and show different combinations of coins that equal the same value.
PURPOSE OF LESSON:	To identify the penny and nickel and their values; to count groups of pennies and nickels only
ROUTINE: <u>For the teacher</u> <ul style="list-style-type: none"> 4 pieces of construction paper <u>For each small group</u> <ul style="list-style-type: none"> penny, nickel, dime, quarter <u>For the Teacher</u> <ul style="list-style-type: none"> Pennies or other counters a cup <u>For the students</u> <ul style="list-style-type: none"> scratch paper 	Suggestion: Brainstorming Session: <ul style="list-style-type: none"> Post 4 pieces of construction paper on the wall. On one, write "penny," on one write, "nickel," on the next write "dime," and on the last write "quarter." Place students in small groups. Give each group a penny, nickel, dime, and quarter. Remind students of the definition of a "characteristic" (a way to describe something). Ask students to describe some characteristics of each coin. You write their observations on the construction paper. <p>Or</p> Count and Tally Practice with Coin Connection: <ul style="list-style-type: none"> Ask students to count aloud as you drop pennies or some other counter into a cup. For example, drop 20 pennies one at a time while students count. Then write the number 20 on the board. Ask students to write the number 20 on scratch paper. Dump the 20 pennies back into your hand. Drop them again one at a time into the cup asking students to tally each time you drop a penny. Review what to do for the fifth tally mark. Continue with varying numbers. Make the connection between a group of five and a nickel. Circle 2 groups of five as the value of a dime and so on. You may exchange the pennies in the cup for the same value using nickels and/or dimes. The next time you drop coins, drop nickels and ask students to count by fives.
LAUNCH: For materials and instructions see Module, pages 154 – 155.	Revisit your rules and guidelines for Independent Learning Stations. Introduce Explore: Review instructions for "Coin Sort" ISO206 and "Coin Scoop" TE 211F (Module pages 154-155)

EXPLORE:	<p>Independent Learning Stations</p> <ul style="list-style-type: none"> ▪ Coin Sort ▪ Coin Scoop <p>Observe and assist students as necessary. Ask students to explain their thinking as they work. Confer, question, assess, and adjust. (Things to note: Do students count quickly and confidently? At what number do they lose confidence? Do they know when they have made a mistake? Are they counting by rote or have they attached a meaning to unit that they are counting? The answers to these questions will help you adjust the numbers that student work with in at stations.</p>
PRACTICE: TE and Workbook pg. 229-230	<p>As time allows: TE and Workbook pg. 229</p> <p>Page 230: It is not necessary for students to write numbers under each coin. The total amount is sufficient.</p>
SUMMARIZE:	<p>Revisit with students the lesson's objective by connecting the following discussion to the purpose of the lesson.</p> <p>Discuss: Ask students to reflect on:</p> <ul style="list-style-type: none"> • <i>What did you learn about money today?</i>
HOMEWORK:	<p>Suggestion: TE Workbook 230 or Family Involvement Activities pg. FA72</p>

DAY 3
Chapter 16: Counting Pennies, Nickels, and Dimes
LESSON 16.3, TE pg. 231A

LESSON FOCUS:	Count Groups of Coins
CALIFORNIA STANDARD:	Number Sense 1.5 Identify and know the value of coins and show different combinations of coins that equal the same value.
PURPOSE OF LESSON:	To count groups of pennies, nickels, and dimes
<p>ROUTINE:</p> <p><u>For the Teacher</u></p> <ul style="list-style-type: none"> • Pennies or other counters • a cup <p><u>For the students</u></p> <ul style="list-style-type: none"> • scratch paper <p>TE pg.231A</p>	<p>Suggestion:</p> <p>Count and Tally Practice with Coin Connection:</p> <ul style="list-style-type: none"> ▪ Ask students to count aloud as you drop pennies or some other counter into a cup. ▪ For example, drop 20 pennies one at a time while students count. Then write the number 20 on the board. ▪ Ask students to write the number 20 on scratch paper. ▪ Dump the 20 pennies back into your hand. ▪ Drop them again one at a time into the cup asking students to tally each time you drop a penny. ▪ Review what to do for the fifth tally mark. ▪ Continue with varying numbers. ▪ Make the connection between a group of five and a nickel. ▪ Circle 2 groups of five as the value of a dime and so on. ▪ You may exchange the pennies in the cup for the same value using nickels and/or dimes. ▪ The next time you drop coins, drop nickels and ask students to count by fives. <p>Or</p> <p>Daily Routine: Calendar, TE pg. 231A</p> <p>Or</p> <p>Problem of the Day, TE pg. 231A Continue using questioning strategies to promote math thinking and reasoning skills in students.</p>
<p>LAUNCH:</p> <p>For materials and instructions see Module, pages 154 - 157</p>	<p>Revisit your rules and guidelines for Independent Learning Stations. There will be three stations available today. Decide whether to allow students to choose their station or whether you will assign a rotation.</p> <p>Introduce Explore: Review instructions for “Coin Sort” ISO206 and “Coin Scoop” TE211F (Module, pages 154-155) Demonstrate instructions for “Show the Price Matching Game” TE 2116 (Module page 157)</p>

<p>EXPLORE:</p>	<p>Independent Learning Stations:</p> <ul style="list-style-type: none"> ▪ Coin Sort ▪ Coin Scoop ▪ Show the Price Matching Game <p>Observe and assist students as necessary.</p> <ul style="list-style-type: none"> ▪ Ask students to explain their thinking as they work. ▪ Confer, question, assess, adjust. <p>Things to note:</p> <ul style="list-style-type: none"> ▪ <i>Do students count quickly and confidently?</i> ▪ <i>At what number do they lose confidence?</i> ▪ <i>Is that number different when counting nickels?</i> ▪ <i>Do they know when they have made a mistake?</i> ▪ <i>Are they counting by rote or have they attached a meaning to the unit that they are counting?</i> ▪ <i>Do they understand the value of having 2 nickels is more than 3 pennies? The answers to these questions will help you adjust the numbers that student work with in centers)</i>
<p>PRACTICE:</p> <p>TE and Workbook pg. 231-232</p>	<p>As time allows, TE and Workbook pg. 231</p> <p>It is not necessary for students to write numbers under each coin. The total amount is sufficient.</p>
<p>SUMMARIZE:</p>	<p>Revisit with students the lesson's objective by connecting the following discussion to the purpose of the lesson.</p> <p>Discuss and Write:</p> <ul style="list-style-type: none"> ▪ <i>A toy car costs 12 cents. What coins will you use to pay for it?</i> ▪ <i>What other ways are there to combine coins to make 12 cents?</i> ▪ <i>Draw some coins. Use at least two different kinds. Write down the total amount. Discuss your work with a partner.</i>
<p>HOMEWORK:</p>	<p>Suggestion: Family Involvement Activities pg. FA73 or Workbook page 232</p>

