

**SAMPLE  
MATERIAL  
INSIDE**

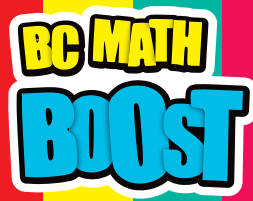
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**BC**



**MATH**

**BOOST**

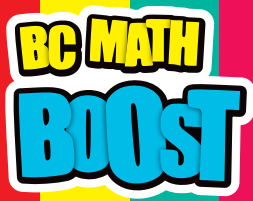


# About BC Math Boost

*BC Math Boost* are supplemental materials that support your current math resources and ensure complete coverage of the redesigned BC mathematics curriculum. Students will continue to learn and develop Core and Curricular Competencies in mathematics through new, customized lessons developed to fill the gaps in existing resources. Nelson developed these materials to ensure seamless integration by providing teachers with detailed direction and guidance on to how use *BC Math Boost* in combination with current resources, lessons, and classroom teaching plans.

### Key Features

- Includes all the lessons, masters, and teaching notes you need to fill the gaps in your current math resources
- Includes a *Summary Chart* showing where these new lessons fit with current math resources and what lessons from current resources can be omitted
- Identifies the *Learning Standards* addressed for each lesson, including the Curricular Competencies and Content
- Financial literacy and First Peoples perspectives and knowledge are embedded throughout the series



# Resource Component Overview

### For Students

Kindergarten–Grade 2	Grades 3–7
<b>Activity Blackline Masters</b> <ul style="list-style-type: none"><li>■ Activity Blackline Masters included in the Teacher’s Resource</li></ul>	<b>Student Resource</b> <ul style="list-style-type: none"><li>■ 1 Student Resource per grade</li><li>■ Each lesson includes worked examples and solutions; as well as reflecting, checking, and practising questions</li></ul>

### For Teachers

Kindergarten–Grade 2	Grades 3–7
<b>Teacher’s Resource</b> <ul style="list-style-type: none"><li>■ Summary Charts:<ul style="list-style-type: none"><li>○ <i>Summary Charts</i> show where <i>BC Math Boost</i> lessons integrate with <i>Math Focus</i> and <i>Math Makes Sense</i><ul style="list-style-type: none"><li>– Identifies where new lessons fit</li><li>– Identifies when an existing lesson can be omitted</li><li>– Identifies Core Competencies, Curricular Competencies, and Content <i>Learning Standards</i> addressed by each chapter and lesson</li></ul></li></ul></li><li>■ Assessment includes <i>What to Look For</i> and <i>What to Do</i> charts with each lesson</li></ul> <b>Online Teacher’s Resource</b> <ul style="list-style-type: none"><li>■ Online access to the Teacher’s Resource and Activity Blackline Masters</li><li>■ <i>Summary Charts</i> correlate to <i>Nelson Math Focus</i> and <i>Math Makes Sense</i></li><li>■ Math activities related to First Peoples Principles of Learning, including background information</li></ul>	<b>Teacher’s Resource</b> <ul style="list-style-type: none"><li>■ Summary Charts:<ul style="list-style-type: none"><li>○ <i>Summary Charts</i> show where <i>BC Math Boost</i> lessons integrate with <i>Math Focus</i> and <i>Math Makes Sense</i><ul style="list-style-type: none"><li>– Identifies where new lessons fit</li><li>– Identifies when an existing lesson can be omitted</li><li>– Identifies Core Competencies, Curricular Competencies, and Content <i>Learning Standards</i> addressed by each chapter and lesson</li></ul></li></ul></li><li>■ <i>Assessment for Learning</i> chart includes misconceptions and differentiated instruction suggestions</li><li>■ <i>Preparation and Planning</i> charts and <i>Math Background</i></li></ul> <b>Online Teacher’s Resource</b> <ul style="list-style-type: none"><li>■ Online access to the Teacher’s Resource and Student Module for Grades 3–7</li><li>■ <i>Summary Charts</i> correlate to <i>Nelson Math Focus</i> and <i>Math Makes Sense</i></li><li>■ Math activities related to First Peoples Principles of Learning, including background information</li></ul>

# Teacher's Resource

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# Teacher's Resource

## Summary Chart

### Chapter 4: Data Relationships

#### Summary Chart for Using Math Boost 3 and Math Focus 3

#### Core Competencies

- ▲ Students have opportunities for **communication** as they work with a partner to carry out probability experiments using a variety of materials, such as coins, dice, spinners, and objects drawn from bags. As they **collaborate to plan, carry out, and review constructions and actions**, students learn to work together. They also have opportunities to use technology to simulate probability experiments.
- ▲ Students expand their **critical thinking** abilities as they work with data. They **develop and design** ways of collecting and recording data from classmates and then **analyze and critique** the data to draw conclusions.
- ▲ Students develop a sense of **social responsibility** as they solve problems in a variety of contexts. Students learn about a trip to the Xat'sull Heritage Village and how classes collect data to make group decisions. They also collect data from their own classmates and explore fair ways of deciding who goes first in a game. Through experiences such as these, they are exposed to ideas about **valuing diversity** and **building relationships**.
- **Big Idea:** The likelihood of possible outcomes can be examined, compared, and interpreted.

The probability lessons could be completed after a later chapter.

Resources	Learning Standards	
Math Focus 3 Math Boost 3	Curricular Competencies Focus	Content
<b>Chapter Opener:</b> Math Focus Student Book, pages 84–85, Math Focus Teacher's Resource, Chapter 4, page 8	<b>Communicating and representing:</b> Use mathematical vocabulary and language to contribute to mathematical discussions	
<b>Getting Started:</b> Choosing Favourite Colours, Math Focus Student Book, pages 86–87, Math Focus Teacher's Resource, Chapter 4, pages 9–12	<b>Communicating and representing:</b> Represent mathematical ideas in concrete, pictorial, and symbolic forms	Since pictographs are not part of the British Columbia Grade 2 Learning Standards Content, the pictograph about hat colours and What Do You Think? Question 3 could be discussed after Math Boost Lesson L.
<b>4.1:</b> Using Charts and Lists, Math Focus Student Book, pages 88–89, Math Focus Activity Book, pages 72–73, Math Focus Teacher's Resource, Chapter 4, pages 13–16	<b>Communicating and representing:</b> Communicate mathematical thinking in many ways	• one-to-one correspondence with bar graphs, pictographs, charts, and tables
<b>4.2:</b> Collecting Data, Math Focus Student Book, pages 90–91, Math Focus Activity Book, page 74, Math Focus Teacher's Resource, Chapter 4, pages 17–20	<b>Reasoning and analyzing:</b> Model mathematics in contextualized experiences	• one-to-one correspondence with bar graphs, pictographs, charts, and tables
<b>4.3:</b> Using Line Plots, Math Focus Student Book, pages 92–93, Math Focus Activity Book, pages 75–76, Math Focus Teacher's Resource, Chapter 4, pages 21–25		This lesson does not address the British Columbia Grade 3 Learning Standards Content.
<b>4.4:</b> Making Line Plots, Math Focus Student Book, pages 94–95, Math Focus Activity Book, pages 77–78, Math Focus Teacher's Resource, Chapter 4, pages 26–30		This lesson does not address the British Columbia Grade 3 Learning Standards Content.
<b>Mid-Chapter Review:</b> Math Focus Student Book, page 96, Math Focus Activity Book, pages 79–80, Math Focus Teacher's Resource, Chapter 4, pages 31–33	<b>Connecting and reflecting:</b> Reflect on mathematical thinking	Frequently Asked Question 2 does not address the British Columbia Grade 3 Learning Standards Content.  Math Focus Activity Book Questions 2 and 3 do not address the British Columbia 3 Learning Standards Content.

Summary Charts show how BC Math Boost lessons can be integrated with existing resources to ensure 100% alignment to the new BC curriculum

Identifies Core Competencies, Big Ideas, Curricular Competencies, and Content Learning Standards

Identifies when to use lessons from existing resources and when to use BC Math Boost lessons

Identifies lessons in existing resources that no longer address Learning Standards and can be omitted

Sample Lesson included in this sampler

Sample Blackline Master included in this sampler

Sample Activity included in this sampler

# Teacher's Resource

## Lesson D: Paying with Bills and Coins

Financial literacy focus

Identifies the *Learning Standards* addressed for each lesson, including the Curricular Competencies and Content

Math Background provides background information on the topic to support teachers

Preparation and Planning charts provide an at-a-glance overview of the lesson for teachers

### Lesson D Paying with Bills and Coins

STUDENT RESOURCE PAGES 8–9

#### LEARNING GOAL

Count bills and coins, and show different ways to pay the same amount.

#### PREREQUISITE SKILLS/CONCEPTS

- Count combinations of coins to 100 cents.
- Add 2-digit numbers.

#### LEARNING STANDARDS

##### Curricular Competencies

**Reasoning and analyzing:** Develop mental math strategies and abilities to make sense of quantities

- I can count bills and coins by grouping them to make them easier to add.

**Understanding and solving:** Develop, demonstrate, and apply mathematical understanding through inquiry, and problem solving

- I can use play money to solve problems about money.

**Understanding and solving:** Engage in problem-solving experiences that are connected to place, story, and cultural practices and perspectives relevant to local First Peoples communities, the local community, and other cultures

- I can use my experience with money to help me solve problems about money.

**Connecting and reflecting:** Connect mathematical concepts to each other and to other areas and personal interests

- I can count out the bills and coins I need to pay.

##### Content

- addition and subtraction to 1000
- financial literacy—fluency with coins and bills to 100 dollars, and earning and payment

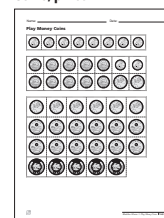
#### Math Background

This lesson is about counting coins and bills, and modelling money amounts. Because students are not yet using decimals, dollars and cents are represented separately, using words or symbols (e.g., \$37 and 75¢, not \$37.75). Modelling the same money amount in different ways can help students develop their number sense. Students may find it useful to group same-denomination bills and coins, and count in order from highest to lowest value.

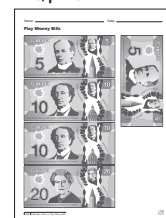
#### Preparation and Planning

<b>Pacing</b>	10–15 min Introduction 15–20 min Teaching and Learning 20–25 min Consolidation
<b>Materials</b>	• play money
<b>Masters</b>	• Manipulatives Substitute: Blackline Master 1: Play Money Coins p. 169 • Manipulatives Substitute: Blackline Master 2: Play Money Bills p. 170
<b>Recommended Consolidation Activities</b>	Questions 1, 4 p. 126 • Key Question: 4

Manipulatives  
Substitute: Blackline  
Master 1: Play Money  
Coins, p. 169



Manipulatives  
Substitute: Blackline  
Master 2: Play Money  
Bills, p. 170



# Teacher's Resource

## Lesson D: Paying with Bills and Coins

**Lesson D Paying with Bills and Coins**

**You will need**  
• play money

**LEARNING GOAL**  
Count bills and coins, and show different ways to pay the same amount.

Lin wants to buy a dragon kite to fly at the Pacific Rim Kite Festival. The kite costs 37 dollars and 75 cents.

**How can Lin use bills and coins to pay for the kite? First, use play money to show this.**

**Lin's Solution**

I used play money to solve the problem. First, I figured out how to pay 37 dollars.

$\$20 + \$10 + \$5 + \$2 = \$37$

Then I figured out how to pay 75 cents.

$25¢ + 25¢ + 25¢ = 75¢$

I used coins that are less than 1 dollar, because 1 dollar equals 100 cents.

**A.** What is another way to pay 37 dollars? Compare your bills and coins with a classmate's.

**B.** What is another way to pay 75 cents? Compare your bills and coins with a classmate's.

**C.** The tax is 4 dollars and 55 cents. Add the tax to the price of the kite. What is the total cost?

**Reflecting**

**D.** How did knowing that 100¢ is equal to \$1 help you figure out the cost with the tax?

**E.** What are other ways Lin could pay?

**Use It!**

**1.** How much money is this?

**2.** Patrick bought leather shoes to take to a youth camp. He paid \$50 and 90¢. What are 2 different ways to pay \$50 and 90¢? Use play money to show your partner.

### 1 Introduction (Whole Class/Pairs) 10–15 min

Provide play money. Say coin names (e.g., *nickel*). Ask students to show the coin and say the value. Review the meaning of the \$ and ¢ symbols as you review the values of the coins. Note that many of the pictures on coins and bills connect to First Peoples cultures: beaver (nickel), caribou (quarter), loon (dollar coin), and polar bear (two dollar coin).

Present each addition below. Invite pairs to show each addition with play money and then add to get the total. If students struggle with the \$ and ¢ symbols, use words.

$10¢ + 10¢ + 5¢ + 5¢ + 5¢ = 35¢$      $25¢ + 10¢ + 5¢ = 40¢$

$25¢ + 25¢ + 10¢ + 10¢ + 5¢ = 75¢$      $25¢ + 25¢ + 25¢ + 5¢ = 100¢$

#### Sample Discourse

- “How did you add  $10¢ + 10¢ + 5¢ + 5¢ + 5¢$ ?”
- 10 + 10 equals 20, and 20 plus 15 equals 35.*
  - We counted 10, 20, 25, 30, 35.*
  - We put 2 nickels together, so it was 10 + 10 + 10 + 5 = 35.*
- “How did you add  $25¢ + 25¢ + 10¢ + 10¢ + 5¢$ ?”
- We added 25 + 25 = 50, 50 + 10 = 60, 60 + 10 = 70, and 70 + 5 = 75.*
  - We noticed 10 + 10 + 5 = 25, so 25 + 25 + 25 = 75.*

### 2 Teaching and Learning (Whole Class/Pairs) 15–20 min

Together, read about Lin's kite on Student Resource page 8. Discuss Lin's Solution. Have students complete Prompts A and B individually and then compare answers with a partner. Take up Prompts A and B before discussing Prompt C as a class. To connect to needs and wants, ask students whether a kite is a need or a want.

#### Sample Discourse

- “Why might Lin have decided to start with a \$20 bill?”
- She knew 37 was more than 20.*
- “What do the symbols mean in Lin's additions?”
- The \$ symbol tells us she added dollars. The ¢ symbol tells us she added cents.*
- “Why didn't Lin use loonies or toonies to make 75¢?”
- 75 cents is less than a loonie, which is 100 cents.*
  - Could Lin have used nickels to make 75¢? Why do you think she used quarters instead?*
  - Yes. 10 nickels makes 50 cents, and 5 more makes 75 cents. She might have used quarters because she needs fewer.*

#### Answers to Prompts

- A.** For example, one \$20 bill, three \$5 bills, and one \$2 coin.
- B.** For example, two 25¢ and five 5¢.

Lessons follow a 3-part lesson style: Introduction, Teaching and Learning, Consolidation

Includes discussion questions with possible answers

Includes suggested answers to prompting questions in the Student Resource

Teacher's Resource  
Lesson D: Paying with Bills and Coins

C. For example,  
 $\$37 + \$4 = \$41$   
 $75¢ + 55¢ = 130¢$   
130¢ is the same as \$1 and 30¢.  
 $\$41 + \$1 \text{ and } 30¢ = \$42 \text{ and } 30¢$   
The total cost is \$42 and 30¢.

Reflecting (Whole Class)

Students **reflect** on how they regrouped 130 cents to add the tax and discuss other ways to pay (payment methods) they know. Students can refer to the illustration to help them name other ways to pay, but they are not limited to the ways shown. The picture on the left side of the illustration could be interpreted as either credit card or debit card.

Answers to Reflecting Questions

- D. For example, when I added the total, I got 130 cents. I know 100 cents is 1 dollar, so 130 cents is 1 dollar and 30 cents.
- E. For example, Lin could use a debit card, a credit card or a cheque.

Consolidation 20–25 min

Use It! (Pairs/Individual)

The Use It! questions allow students to demonstrate their understanding of the Learning Goal. Provide play money. For Question 1, if students struggle to identify the blue bill with the hidden number, invite them to compare the hidden bill with the blue bill on page 8. As background for Question 2, tell students that the Shuswap people used leather to make beautifully decorated moccasins and clothing.

Answers to Use It!

1. \$72 and 25¢
2. For example, two \$20 bills, one \$10 bill, nine 10¢ OR one \$20 bill, two \$10 bills, two \$5 bills, three 25¢, one 10¢, and one 5¢

Consolidation Activities (Individual/Pairs)

Provide play money. Watch for students who have trouble distinguishing between dollar and cent coins. For Questions 2 and 4, encourage students to draw circles and rectangles, with the value written inside, to represent coins and bills. For Question 3, some students may be able to justify books, marbles, and pencils as objects they can use to barter for payment. Explain that while you can trade anything with someone who agrees to the trade, the question asks for ways you can pay in a store, such as a grocery store.

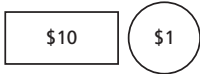
Questions for Consolidation Activities

1. Write the amount of money shown.
- a) \$5 bill, \$5 bill, \$50 bill, \$10 bill, \$2 coin, \$2 coin  
\_\_\_\_\_ dollars

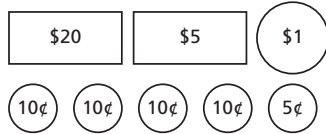
- b) 25¢ coin, \$2 coin, 25¢ coin, 10¢ coin, 25¢ coin, 5¢ coin, 25¢ coin  
\$\_\_\_\_\_ and \_\_\_\_\_¢
2. Work with a partner. Use play money to show each amount. Then draw what you did.
- a) 11 dollars  
b) 26 dollars and 45 cents
3. What are different ways to pay for something in a store? Circle all the right answers.  
credit card   play money   cash   marbles  
books   debit card   cheque   pencils
4. Use play money. Show 2 ways to pay 16 dollars and 40 cents. Draw both ways.
5. Choose 1 item to buy. Show a partner the bills and coins you would use to pay.
- Bubble gum: 80¢
  - Toy robot: \$12
  - Teddy bear: \$8 and 50¢

Answers to Consolidation Activities

1. a) 74 dollars  
b) \$3 and 15¢
2. a) For example,



b) For example,

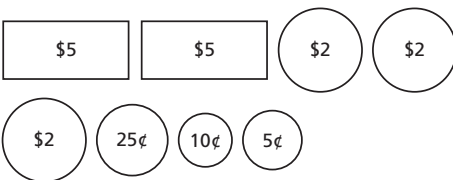


3. credit card, debit card, cash, cheque

4. For example, one \$10 bill, one \$5 bill, one \$1 coin, four 10¢ coins



OR two \$5 bills, three \$2 coins, one 25¢, one 10¢, one 5¢



Teacher's Resource  
Lesson D: Paying with Bills and Coins

5. For example, I would buy the teddy bear. I would pay with one \$5 bill, one \$2 coin, one \$1 coin, and five 10¢ coins.

Closing (Whole Class)

Question 6 allows students to model and draw a set of coins worth \$5. Discuss why many solutions are possible. If students are concerned about what coins would fit in the gumball machine, encourage them to think of a combination of coins that would include every coin.

Closing Question

6. Karen has a 5 dollar bill. She wants to trade her bill for coins so she can use a gumball machine. What coins might Karen get for her 5 dollar bill?

Answer to Closing Question

6. For example, Karen might get two \$2 coins and four 25¢ coins.

Opportunities for Feedback: Assessment for Learning

What you will see students doing

When students understand

- Students count mixed combinations of coins and bills.
- Students show different ways to pay the same amount.

Key Question 4

- Students model and draw 2 ways to pay \$16 and 40¢.

If students misunderstand

- Students may miscount the value of a set of coins, or they may confuse dollars and cents or confuse coin values. (See Extra Support 1 and 2.)
- Students may model amounts of money incorrectly or find it difficult to model more than one way to pay an amount. (See Extra Support 2 and 3.)
- Students may demonstrate one of the misunderstandings above. (See Extra Support 1, 2, and 3.)

Curricular Competencies

When students understand

- Students use strategies that help them count combinations of coins and bills.

If students misunderstand

- Students may struggle to count bills and coins in the order presented, and they may not rearrange the coins or bills to help them count. (See Extra Support 2.)

Differentiating Instruction: How you can respond

EXTRA SUPPORT

1. Make a class display with pictures of bills and coins, as well as the names and values. Show both sides of each bill or coin. Provide practice with counting combinations of dollars and cents separately.
2. Use additions like those in the Introduction to provide counting practice. Present dollar and cent values in random order. Ask students to model each addition with play money and explain how they re-ordered the bills or coins to count more easily. Students could count coins or bills with the highest value first, or group coins or bills and add the groups.
3. Have students use play money to count out 3 quarters and 1 nickel. Ask: "How much money is this? How could you show 80¢ with different coins?" Continue until students have found several ways. Then repeat with other amounts, including dollars.

EXTRA CHALLENGE

- Challenge students to create and solve problems about a specific number of coins and bills. For example, ask: "How can you make \$29 and 35¢ with exactly 14 coins and bills?" ( $2 \times \$10$ ,  $4 \times \$2$ ,  $4 \times 25¢$ ,  $3 \times 10¢$ ,  $1 \times 5¢$ )

SUPPORTING DEVELOPMENTAL DIFFERENCES

- Start by presenting 2 or 3 coins at a time before working up to greater amounts. Some students may need more practice with identifying bill and coin values, skip counting by 5s and 10s, or skip counting to determine the value of a set of matching coins.

SUPPORTING LEARNING STYLE DIFFERENCES

- Some students may find it helpful to role-play transactions with a partner. Provide play money and a price list with dollars and cents listed separately (e.g., \$55 and 40¢). One person chooses an item from the price list and counts out the bills and coins to pay for it. The other person checks to make sure the payment is correct. Then students can switch roles.

Suggested answers to Reflecting Questions, Use It!, and Consolidation Activities are provided

Suggested answers to Closing Questions are provided

Assessment for Learning chart includes misconceptions and differentiated instruction suggestions

# Teacher's Resource

## Lesson D: Paying with Bills and Coins

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Lesson D: Paying with Bills and Coins Page 1

#### LEARNING GOAL

Count bills and coins, and show different ways to pay the same amount.

**You will need**  
• play money

1. Write the amount of money shown.

a) \_\_\_\_\_ dollars



b) \$ \_\_\_\_\_ and \_\_\_\_\_ ¢



2. Work with a partner. Use play money to show each amount. Then draw what you did.

a) 11 dollars

b) 26 dollars and 45 cents

Activity Blackline Masters for every lesson include practice questions with space for students to write answers



# Teacher's Resource

## Lesson D: Paying with Bills and Coins

Name: \_\_\_\_\_ Date: \_\_\_\_\_

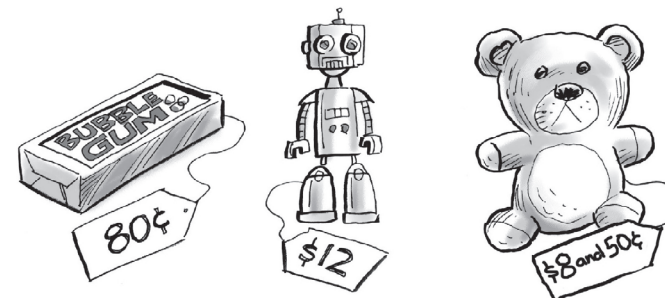
### Lesson D: Paying with Bills and Coins Page 2

3. What are different ways to pay for something in a store?  
Circle all the right answers.

credit card    play money    cash    marbles  
books    debit card    cheque    pencils

4. Use play money. Show 2 ways to pay 16 dollars and 40 cents.  
Draw both ways.

5. Choose 1 item to buy. Show a partner the bills and coins you would use to pay.



6. Karen has a 5 dollar bill. She wants to trade her bill for coins so she can use a gumball machine. What coins might Karen get for her 5 dollar bill?



# Teacher's Resource

## Lesson D: Paying with Bills and Coins

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Play Money Coins



Math Tools support a hands-on approach to learning



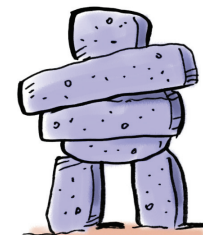
# Student Resource

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Sample Lesson included in this sampler

# Student Resource

## Lesson D: Paying with Bills and Coins

### Lesson D Paying with Bills and Coins

STUDENT RESOURCE PAGES 8–9

#### LEARNING GOAL

Count bills and coins, and show different ways to pay the same amount.

#### PREREQUISITE SKILLS/CONCEPTS

- Count combinations of coins to 100 cents.
- Add 2-digit numbers.

#### LEARNING STANDARDS

##### Curricular Competencies

**Reasoning and analyzing:** Develop mental math strategies and abilities to make sense of quantities

- I can count bills and coins by grouping them to make them easier to add.

**Understanding and solving:** Develop, demonstrate, and apply mathematical understanding through play, inquiry, and

- I can use play money to solve problems about money.

**Understanding and solving:** Engage in problem-solving experiences that are connected to place, story, and cultural practices and perspectives relevant to local First Peoples communities, the local community, and other cultures

- I can use my experience with money to help me solve problems about money.

**Connecting and reflecting:** Connect mathematical concepts to each other and to other areas and personal interests

- I can count out the bills and coins I need to pay.

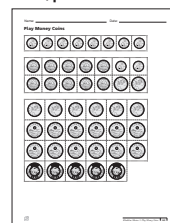
##### Content

- addition and subtraction to 1000
- financial literacy—fluency with coins and bills to 100 dollars, and earning and payment

#### Math Background

This lesson is about counting coins and bills, and **modelling** money amounts. Because students are not yet using decimals, dollars and cents are represented separately, using words or symbols (e.g., \$37 and 75¢, not \$37.75). Modelling the same money amount in different ways can help students **develop** their number sense. Students may find it useful to group same-denomination bills and coins, and count in order from highest to lowest value.

**Manipulatives**  
Substitute: Blackline Master 1: Play Money Coins, p. 169



**Manipulatives**  
Substitute: Blackline Master 2: Play Money Bills, p. 170



#### Preparation and Planning

<b>Pacing</b>	10–15 min Introduction 15–20 min Teaching and Learning 20–25 min Consolidation
<b>Materials</b>	• play money
<b>Masters</b>	• Manipulatives Substitute: Blackline Master 1: Play Money Coins p. 169 • Manipulatives Substitute: Blackline Master 2: Play Money Bills p. 170
<b>Recommended Consolidation Activities</b>	Questions 1, 4 p. 126 • Key Question: 4

The central question introduces the problem being solved in the lesson

Worked examples demonstrate student thinking

# Student Resource

## Lesson D: Paying with Bills and Coins

### Lesson D Paying with Bills and Coins

#### You will need

- play money



#### LEARNING GOAL

Count bills and coins, and show different ways to pay the same amount.

Lin wants to buy a dragon kite to fly at the Pacific Rim Kite Festival. The kite costs 37 dollars and 75 cents.

How can Lin use bills and coins to pay for the kite? First, use play money to show this.



#### Lin's Solution

I used play money to solve the problem. First, I figured out how to pay 37 dollars.



$$\$20 + \$10 + \$5 + \$2 = \$37$$

Then I figured out how to pay 75 cents.



$$25¢ + 25¢ + 25¢ = 75¢$$

I used coins that are less than 1 dollar, because 1 dollar equals 100 cents.

- What is another way to pay 37 dollars? Compare your bills and coins with a classmate's.
- What is another way to pay 75 cents? Compare your bills and coins with a classmate's.
- The tax is 4 dollars and 55 cents. Add the tax to the price of the kite. What is the total cost?

#### Reflecting

- How did knowing that 100¢ is equal to \$1 help you figure out the cost with the tax?
- What are other ways Lin could pay?



#### Use It!

- How much money is this?
- Patrick bought leather pouches to make pouches to take to a Shuswap youth camp. He paid \$50 and 90¢. Use 2 different ways to show \$50 and 90¢. Use play money. Show a partner.

Reflecting and Use It! questions to consolidate learning

### 1 Introduction (Whole Class/Pairs) 10–15 min

Provide play money. Say coin names (e.g., *nickel*). Ask students to show the coin and say the value. Review the meaning of the \$ and ¢ symbols as you review the values of the coins. Note that many of the pictures on coins and bills connect to First Peoples cultures: beaver (nickel), caribou (quarter), loon (dollar coin), and polar bear (two dollar coin).

Present each addition below. Invite pairs to show each addition with play money and then add to get the total. If students struggle with the \$ and ¢ symbols, use words.

$$10¢ + 10¢ + 5¢ + 5¢ + 5¢ \quad 25¢ + 10¢ + 5¢$$

$$25¢ + 25¢ + 10¢ + 10¢ + 5¢ \quad 25¢ + 25¢ + 25¢ + 5¢$$

#### Sample Discourse

“How did you add  $10¢ + 10¢ + 5¢ + 5¢ + 5¢$ ?”

- 10 + 10 equals 20, and 20 plus 15 equals 35.*
- We counted 10, 20, 25, 30, 35.*
- We put 2 nickels together, so it was 10 + 10 + 10 + 5 = 35.*
- “How did you add  $25¢ + 25¢ + 10¢ + 10¢ + 5¢$ ?”
- We added 25 + 25 = 50, 50 + 10 = 60, 60 + 10 = 70, and 70 + 5 = 75.*
- We noticed 10 + 10 + 5 = 25, so 25 + 25 + 25 = 75.*

### 2 Teaching and Learning (Whole Class/Pairs) 15–20 min

Together, read about Lin's kite on Student Resource page 8. Discuss Lin's Solution. Have students complete Prompts A and B individually and then compare answers with a partner. Take up Prompts A and B before discussing Prompt C as a class. To connect to needs and wants, ask students whether a kite is a need or a want.

#### Sample Discourse

“Why might Lin have decided to start with a \$20 bill?”

- She knew 37 was more than 20.*

“What do the symbols mean in Lin's additions?”

- The \$ symbol tells us she added dollars. The ¢ symbol tells us she added cents.*

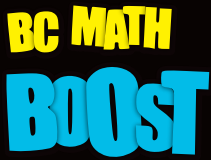
“Why didn't Lin use loonies or toonies to make 75¢?”

- 75 cents is less than a loonie, which is 100 cents.*
- “Could Lin have used nickels to make 75¢? Why do you think she used quarters instead?”
- Yes. 10 nickels makes 50 cents, and 5 more makes 75 cents. She might have used quarters because she needs fewer.*

#### Answers to Prompts

- For example, one \$20 bill, three \$5 bills, and one \$2 coin.
- For example, two 25¢ and five 5¢.

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