

Ontario's New Math Curriculum

Financial Literacy Grades 1 to 8



January 5, 2021
Parent Involvement
Committee



Agenda

This presentation will provide information about the following topics:

- 1) An Introduction to the New Financial Literacy Strand
- 2) Key Changes to the Curriculum
- 3) Why the Curriculum was Updated and What Informed the Updates
- 4) Financial Literacy by Grade with Examples
- 5) Supporting Financial Literacy at Home

Introducing the New Financial Literacy Strand

An Introduction to the New Financial Literacy Strand

A. Social-Emotional Learning (SEL) Skills and Mathematical Processes

B. Number

C. Algebra

D. Data

E. Spatial Sense

F. Financial Literacy

value of money

use of money

impact on personal finances

consumer awareness

civic awareness



Key Changes to the Curriculum

Key Changes

Money Concepts

2005 Curriculum	2020 Curriculum
<ul style="list-style-type: none">● Gr. 1: Identify and recognize coins● Gr. 2: Represent money amounts to 100¢● Gr. 3: Add and subtract money amounts to \$10 for simulated purchases	<ul style="list-style-type: none">● Gr. 1: Identify and recognize coins up to 50¢ and coins and bills up to \$50● Gr. 2: Represent money amounts to 200¢ or \$200● Gr. 3: Estimate and calculate change for simple cash transactions of whole dollar amounts or amounts less than one dollar

Key Changes

Money Concepts Continued

2005 Curriculum	2020 Curriculum
<ul style="list-style-type: none">● Gr. 4: Add and subtract money amounts to \$100	<ul style="list-style-type: none">● Gr. 4: Estimate and calculate change for cash transactions involving more than one item, whole dollar amounts or amounts less than one dollar, identify various methods of payment● Gr. 5-6: Identify and describe various payment methods and ways to transfer money● Gr. 7-8: Identify and compare exchange rates

Key Changes

Financial Management

2005 Curriculum	2020 Curriculum
<ul style="list-style-type: none">● No expectations related to financial management	<ul style="list-style-type: none">● Gr. 4-8: Financial management E.g., earning, spending, saving, donating, investing, credit, debt, setting financial goals and making a basic budget, etc.

Key Changes

Consumer and Civic Awareness

2005 Curriculum	2020 Curriculum
<ul style="list-style-type: none">● No expectations related to consumer and civic awareness	<ul style="list-style-type: none">● Gr. 4-8: Consumer and civic awareness E.g., best buys, interest rates, taxes, loyalty programs, etc.

Why the Curriculum Was Updated and What informed the Update

Why was the curriculum updated?

- Ontario's Four-Year Math Strategy
 - Improve student performance in math
 - Help students solve everyday math problem
 - Increase students' employability for the jobs of tomorrow
- To ensure students have the skills required to succeed
- Recent research and practice have provided a clearer understanding of how students learn
- Ontario's elementary math curriculum was last updated in 2005

What informed updates to the new math curriculum?

- Ontario's 2018 public consultation with parents, educators and stakeholders
- Trends in high-achieving regions and best practices in math education
- Math education subject associations, researchers, academics, and industry leaders
- Extensive research, led by Dr. Christine Suurtamm



Financial Literacy Learning by Grade with Examples



Grade 1

Students learn to recognize Canadian coins and bills, and compare their values.

Examples: Grade 1



1¢



5¢



10¢



25¢



100¢



200¢

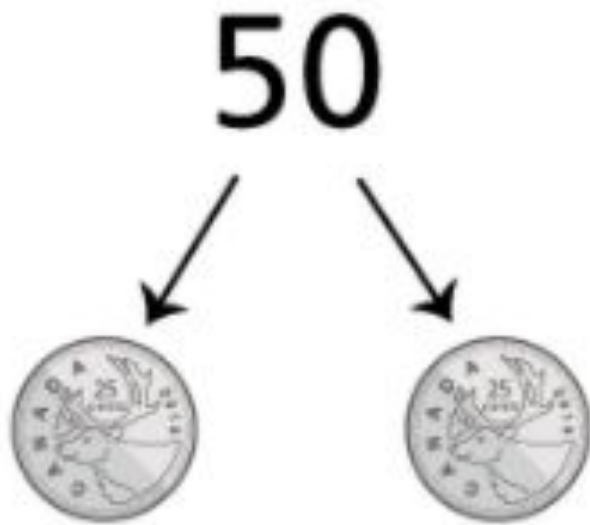
Notice: colour, size, images, texture, values

Image from MathUP

Grade 2

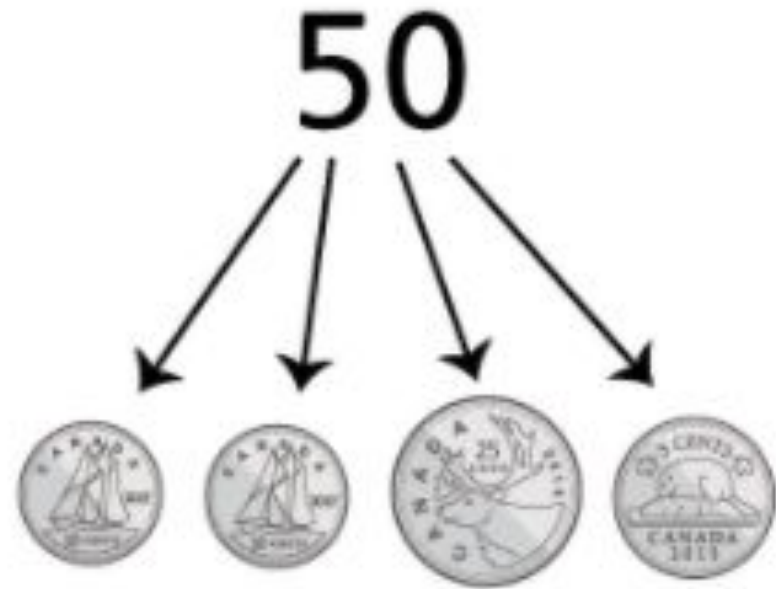
Students build on their understanding that money has value, and identify different ways to represent the same amount of money. For example, how different combinations of coins can add up to \$1, and how different combinations of loonies, toonies and bills can add up to \$100.

Examples: Grade 2



50 cents can be represented
using 2 quarters

$$50¢ = 25¢ + 25¢$$



50 cents can be represented
using 2 dimes, 1 quarter, and
1 nickel

$$50¢ = 10¢ + 10¢ + 25¢ + 5¢$$

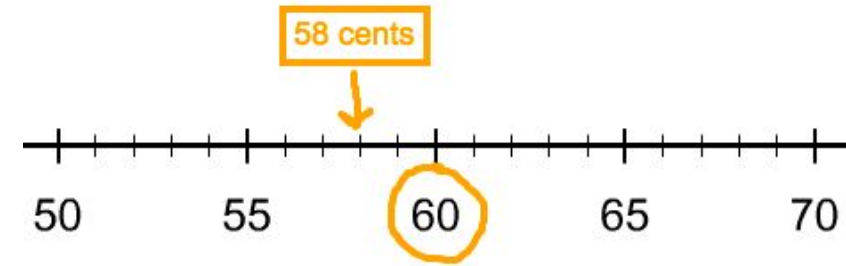
Images from MathUP

Grade 3

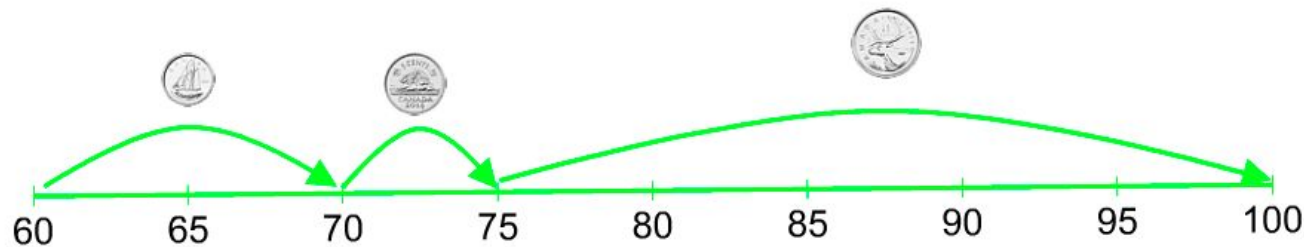
Students continue to develop their understanding of money by calculating the change required for simple transactions involving whole-dollar amounts.

Examples: Grade 3

Item	Item Price	Price Paid (round to the nearest 5)	Change From a Loonie
Example: cupcakes	58 ¢	60 ¢	40 ¢



Cupcake costs: 58 cents which rounds to 60 cents



If a person purchases one cupcake with a loonie, they get 40 cents change.

Chart from ontariomath.supportmathies.ca virtual number line tool

Grade 4

Students learn that there are different ways to pay for goods and services. Students also learn how consumers determine whether an item is good value for the price.

Examples: Grade 4



\$3.99 Expires in 1 week



\$5.99 Expires in 4 days

Round each number to the nearest whole dollar amount.

Which one would you buy and why ?



\$4.60



\$29.95

Round each number to the nearest whole dollar amount.

Image and lesson from ontariomath.support

Grade 5

Students learn about different ways to transfer money between people and organizations, such as e-transfers and cheques. They calculate the total cost and change required for cash transactions involving items priced in dollars and cents, using mental math and other strategies.

Students learn how to determine the best value for an item – for example, five apples for \$1.00 versus three apples for 75 cents. Students prepare basic budgets and learn about the concepts of credit and debt.

Examples: Grade 5

<div> fx 100% £ % .0 .00 123 Default (Ari... </div>				
	A	B	C	D
1		September		
2		budget	actual	difference
3				
4	Income			
5	chores	35.00	30.00	-5.00
6	other (gifts etc)	0.00		0.00
7				
8	Total Income	\$35.00	\$30.00	-\$5.00
9				
10				
11				
12	Expenses			
13	clothes	20.00	22.59	
14	movies	7.99		
15	Other (popcorn?)	6.00		
16				
17	Total expenses	\$33.99	\$7.41	
18				

Exploring the Use of
Spreadsheets for Budgets

Image from ontariomath.support

Grade 6

The advantages and disadvantages of using different methods of payment for goods and services are explored. Students investigate different types of financial goals, identify and describe factors that could affect these goals, and outline steps to achieve them.

Students explain the concept of interest rates and identify interest rates and fees offered by banks and other financial institutions. They also learn how trading, lending, borrowing and donating are different ways to distribute resources.

Examples: Grade 6

The TV can be bought the following ways. Which option would suit Dakota's needs best?

Types of Payment	Description of the type of payment	Interest Rate and Type	Amount of time to pay it completely	Total Amount Paid With Tax and Interest
Rent to own	The buyer pays a cost of \$19.00/week for a set number of weeks. Item only belongs to the purchaser after it has been paid in full.	Calculated into the cost	156 weeks	\$2964.00
Credit Card 1	Low-interest credit card; the item belongs to the purchaser immediately after the payment	12.99% annually for purchases	156 weeks	\$1216.70
Credit Card 2	High-interest credit card; the item belongs to the purchaser immediately after the payment	19.95% annually for purchases	156 weeks	\$1638.24
Cash	Coins and bills; the item belongs to the purchaser immediately after the payment	No interest rate	However long it would take Dakota's brother to save this money in order to pay for the television outright.	\$845.24

Image from ontariomath.support

Grade 7

Students begin to learn that international currencies have different values compared to Canadian dollars and understand how exchange rates work. They develop an awareness of how to plan for and reach financial goals. Students build their knowledge of how interest rates can affect savings and investments. They also learn about the cost of borrowing and compare interest rates and fees for different types of accounts and loans to become more informed consumers.

Examples: Grade 7

The teacher shares the following scenario with students:

You make a new friend who is a newcomer to the country. They have asked for your help to figure out a phone plan, including the different ways a young student could make money (e.g., shovelling snow in the fall/winter and cutting grass in the spring/summer) and save money to pay for it.

Grade 8

Students learn to create a plan to reach financial goals and identify ways to maintain balanced budgets.

Students compare different ways that consumers can get value for their money when spending, such as using reward programs or taking advantage of sales.

Students investigate the concepts of simple and compound interest using technology, (for example, a spreadsheet program) and explain how interest affects long-term financial planning.

Examples: Grade 8

My Credit Card Choice

Name of the credit card	
Features (e.g. annual interest rate, annual fees, benefits, etc.)	
Reasons why I picked this credit card.	

Supporting Financial Literacy at Home

Supporting Financial Literacy at Home

- **When shopping:**

- Let your child identify the coins you are using.
- Ask them to tell you about each coin, including its name and its value
- You could go shopping together and ask your child to estimate the amount of a purchase, calculate tax and check their change.
- Compare the prices of an item at different stores and consider what would be the best deal
- Have discussions about making good choices while grocery shopping based on prices and sales

- **Dramatic play:**

- Provide opportunities for your child to play with real or pretend money. For example, you could make up a play store where prices are 20¢ or less and invite your child to go shopping. Only one item can be purchased at a time, and your child has to show the correct amount in coins to buy an item.

Supporting Financial Literacy at Home

- **Coin collections:**
 - Collect some coins in a jar.
 - Empty the jar and let your child handle the coins.
 - Ask about physical features of the coins or point out some features.
 - Include pennies in your money jar. Even though the penny is not currently in circulation, children will benefit from knowing what we mean by 1 cent, that is, the value of a penny. The values of the nickel, dime, and quarter are all indicated in cents.
 - Create two piles of coins, and have your child count the number of coins and then count the amount of money. Repeat with different combinations of coins to ensure that your child realizes that just because there are more coins, the value of the coins may not be greater.

Supporting Financial Literacy at Home

- **Budgets and planning:**
 - Have a discussion about wants and needs
 - Create a budget together
 - Help your child manage money by encouraging them to save to make a special purchase
 - If your child wants to save up money from doing chores, babysitting, or birthday money to purchase something they have been saving up for, take this opportunity to determine how much has been saved and how much more needs to be saved to make the purchase. This can be done several times in the saving period as money is added or subtracted.
 - If you are comfortable doing so, have discussions about common household expenses and budgeting for these



Questions





Sources

2020 Ontario Mathematics Curriculum

<https://www.dcp.edu.gov.on.ca/en/curriculum/elementary-mathematics>

OAME/AFEMO Elementary Math Curriculum Resource Project

<https://ontariomath.support/?pg=home&lang=EN>

MathUP by Marian Small (Rubicon Publishing)

F. FINANCIAL LITERACY

By the end of each grade, students will:

Ontario Mathematics Curriculum Expectations, Grades 1 to 8, 2020

OVERALL EXPECTATION F1. *Grades 1 and 2: demonstrate an understanding of the value of Canadian currency*
Grade 3: demonstrate an understanding of the value and use of Canadian currency

SPECIFIC EXPECTATIONS

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Money Concepts							
F1.1 identify the various Canadian coins up to 50¢ and coins and bills up to \$50, and compare their values	F1.1 identify different ways of representing the same amount of money up to Canadian 200¢ using various combinations of coins, and up to \$200 using various combinations of \$1 and \$2 coins and \$5, \$10, \$20, \$50, and \$100 bills	F1.1 estimate and calculate the change required for various simple cash transactions involving whole-dollar amounts and amounts of less than one dollar					

OVERALL EXPECTATION F1. Grades 4 to 8: demonstrate the knowledge and skills needed to make informed financial decisions

SPECIFIC EXPECTATIONS

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
Money Concepts							
			F1.1 identify various methods of payment that can be used to purchase goods and services	F1.1 describe several ways money can be transferred among individuals, organizations, and businesses	F1.1 describe the advantages and disadvantages of various methods of payment that can be used to purchase goods and services	F1.1 identify and compare exchange rates, and convert foreign currencies to Canadian dollars and vice versa	F1.1 describe some advantages and disadvantages of various methods of payment that can be used when dealing with multiple currencies and exchange rates
			F1.2 estimate and calculate the cost of transactions involving multiple items priced in whole-dollar amounts, not including sales tax, and the amount of change needed when payment is made in cash, using mental math	F1.2 estimate and calculate the cost of transactions involving multiple items priced in dollars and cents, including sales tax, using various strategies			

OVERALL EXPECTATION F1. Grades 4 to 8: demonstrate the knowledge and skills needed to make informed financial decisions

SPECIFIC EXPECTATIONS

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
			Financial Management				
			F1.3 explain the concepts of spending, saving, earning, investing, and donating, and identify key factors to consider when making basic decisions related to each	F1.3 design sample basic budgets to manage finances for various earning and spending scenarios	F1.2 identify different types of financial goals, including earning and saving goals, and outline some key steps in achieving them	F1.2 identify and describe various reliable sources of information that can help with planning for and reaching a financial goal	F1.2 create a financial plan to reach a long-term financial goal, accounting for income, expenses, and tax implications
			F1.4 explain the relationship between spending and saving, and describe how spending and saving behaviours may differ from one person to another	F1.4 explain the concepts of credit and debt, and describe how financial decisions may be impacted by each	F1.3 identify and describe various factors that may help or interfere with reaching financial goals	F1.3 create, track, and adjust sample budgets designed to meet longer-term financial goals for various scenarios	F1.3 identify different ways to maintain a balanced budget, and use appropriate tools to track all income and spending, for several different scenarios
						F1.4 identify various societal and personal factors that may influence financial decision making, and describe the effects that each might have	F1.4 determine the growth of simple and compound interest at various rates using digital tools, and explain the impact interest has on long-term financial planning

OVERALL EXPECTATION F1. Grades 4 to 8: demonstrate the knowledge and skills needed to make informed financial decisions

SPECIFIC EXPECTATIONS

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
			Consumer and Civic Awareness				
			F1.5 describe some ways of determining whether something is reasonably priced and therefore a good purchase	F1.5 calculate unit rates for various goods and services, and identify which rates offer the best value	F1.4 explain the concept of interest rates, and identify types of interest rates and fees associated with different accounts and loans offered by various banks and other financial institutions	F1.5 explain how interest rates can impact savings, investments, and the cost of borrowing to pay for goods and services over time	F1.5 compare various ways for consumers to get more value for their money when spending, including taking advantage of sales and customer loyalty and incentive programs, and determine the best choice for different scenarios
				F1.6 describe the types of taxes that are collected by the different levels of government in Canada, and explain how tax revenue is used to provide services in the community	F1.5 describe trading, lending, borrowing, and donating as different ways to distribute financial and other resources among individuals and organizations	F1.6 compare interest rates and fees for different accounts and loans offered by various financial institutions, and determine the best option for different scenarios	F1.6 compare interest rates, annual fees, and rewards and other incentives offered by various credit card companies and consumer contracts to determine the best value and the best choice for different scenarios