Strand: ____Financial Literacy / SEL__

Expectations:

- **F1. Money and Finances:** demonstrate an understanding of the value and use of Canadian currency
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- **F1.1:** estimate and <u>calculate the change required for various simple cash transactions involving whole-dollar amounts</u> and amounts of less than one dollar
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- **A6. SEL Skills:** thinking critically and creatively
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- **Mathematical Processes:** *problem solving:* develop, select, and apply problem-solving strategies

Learning Goals (*student-friendly language that can be shared with students*):
- I will calculate/identify how much money I have left over.
- I will identify how many times I can purchase something with the money I have.
- I will think carefully and creatively when solving problems.
- I will apply different mathematical strategies when solving a problem.

Materials and/or Resources:
- story book Bunny Money by Rosemary Wells
- fake money
- chart paper
- markers
- word problem on SMART board
- Exit ticket word problem

Important Terminology / Word Wall:
- left over, maximum number of times

MINDS ON/ GETTING STARTED! Elicit and engage – *activate prior knowledge and 'set the stage' - game, whole class or small group activity, read aloud, simpler/section of problem…*

Read aloud the story "Bunny Money" by Rosemary Wells   10 - 15 minutes
https://www.youtube.com/watch?v=NLCUmQMLqr8

During read aloud stop on some pages and ask questions:

- How much money has Ruby saved up?
- How much money does Ruby have left over after paying for the _____ (bus ride, vampire teeth, after going to the laundromat, after buying lunch)?
- Was it a good idea for Max to buy the vampire teeth?
- What is the change that Ruby got after buying the earrings?
- What do you think Ruby and Max should do with their $1 change?
- Why couldn't Ruby and Max get back home by taking the bus?
- How could Ruby and Max make better decisions about spending their money?

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WORKING ON IT! The PROBLEM/ACTIVITY *that students work on – partner, small group or individual)*

Activity: 20 - 25 minutes

- Students will get into their groups and work together on the problem
- They will need to write their answers and outline their strategies on chart paper
- They can use the fake money to assist them in solving the problem

Problem:

Part 1: You have $17, every time you take the bus it costs $2. You need to take the bus 6 times a week.

- How much money do you have left over after taking the bus 6 times?
- Can you take the bus 9 times a week? Why or why not?
- What is the maximum number of times you can take a bus in a week with $17? Will you have any money left over?

Part 2: Taking a taxi costs $4.

- If you take a taxi instead of a bus what is the maximum number of rides you can take in a week?
- Which transportation method allows you to take more trips or rides?

+ Key Questions *(that you might ask as the students work):*
Enabling Prompts/Questions:

- What information do you have/is given by the problem?
- What information do you need to find?
- How can you find this information? So, what strategies can you use to find this information?
- Can you use multiplication to help find the answer more efficiently?
- How can you find out how much it costs to take a bus or a taxi in a week?
- How can you find the maximum number of times using division?
- Why is it good to know the maximum number of times we can take the bus or taxi?
- How can you use fake money to help you solve this problem?

Extending Prompts/Questions:
- Which transportation (a bus or a taxi) might you choose to take? Why?
- If you only take the bus 4 times a week, how much money do you have left over?
- What can you do with the money left over?
- Can you take a bus and a taxi in the same week? How many times would you take the bus and how many times would you take the taxi in the same week?

ANTICIPATE STUDENT RESPONSES/STRATEGIES:

- Students might be successful:
  - By using different operations or strategies to solve the problem, eg. using multiplication to find the total cost of taking a bus/taxi a certain number of times, then subtracting that amount from the amount of money they have. Or using division to find the maximum number of times they can take a specific transportation with the amount of money they have.

- Using subtraction repeatedly to find how many times they can take a certain transportation and then adding the number of times they have subtracted.
- By coming to the realization that because the bus is cheaper, then you can take more trips.
- By using the fake money to find out how much money they have left over.

- Students might struggle:
  - By not realizing that they can use multiplication, and instead using repetitive subtraction. This still works, just not the most efficient.
  - By Multiplying or subtracting their numbers incorrectly
  - With the idea that after they multiply, they will need to subtract to find how much money they have left over.
  - By not realizing that the remainder after dividing is how much money they have left over

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CONSOLIDATION/REFLECT AND CONNECT: Students Share Solutions and Teacher Annotates (*reflecting, presenting, sharing, growing, adapting*)

FORMAT FOR SHARING: 15 - 20 minutes

- Anchor chart: Come together as a whole group and discuss/chart the different strategies that different groups used.

KEY POINTS TO ADDRESS (math, strategy(ies),…) through Anchor Charts, Word Wall, Strategies Wall, Success Criteria,…
- What strategies were used to find how much it costs to take a bus or a taxi a specific number of times? {eg. repeated addition, multiplication}
- How did you find how much money you had left over? {eg, using repeated subtraction, subtracting the product from the amount of money you have}
- Did anyone use the fake money to help you solve the different questions in this problem?
- How did you find the maximum number of times you can take a bus or a taxi? {eg. using division, using addition, using subtraction and then addition}
- If you used division, what was your remainder? What does the remainder represent?
- Why is there a maximum number for how many times we can take a bus or a taxi? {because we only have a certain amount of money to begin with}
- Which transportation might you take? Why?
- Why might you want to take a taxi instead of a bus and vice versa?
- What can you do with the money that is left over?

Terminology to highlight/document:
- left over: What does it mean to have money left over?
- maximum number of times: What does it mean to have the "maximum number of times" of something?
- remainder: When it comes to dividing money out, what does the remainder represent?

Highlight:
- That multiplication can help us find how much it costs to take a certain transportation over and over again.
- Subtracting the product from the amount of money we initially have helps us find out how much money we have left over.
- Maximum number of times helps us find out how many times we can do something with the amount of money we have. Since we can't buy items or do something that costs more than the amount of money we have.

- If we are dealing with money, then division helps us find the maximum number of times and the remainder tells us how much money we have left over.

INDEPENDENT PRACTICE: Students work independently on similar task to consolidate learning and practice application of new skills

Exit ticket: 5 - 10 minutes

- Students will be asked to solve the following problem and show their work.
  - You are a character in a board game, you have $9. For every space you move on the board game you need to pay $3.
  - How much money do you have left over after taking 2 steps?
  - Can you take 5 steps with the money you have? Explain.
  - What is the maximum number of steps you can take with $9?
    - Will you have any money left over?

- Students will keep their answers on their desks, and the teacher will collect them as students move on to the next task of the day.