Grade 3 Planning Session 2
Provincial Cohort

October 19, 2022

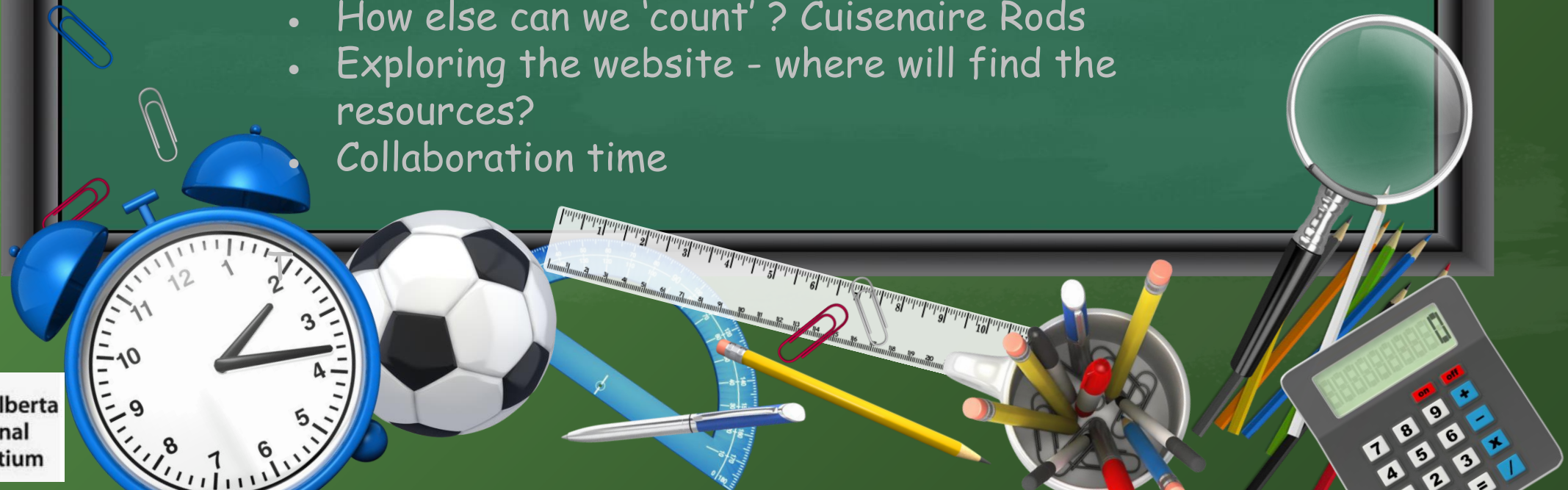
Chris Zarski

Central Alberta Regional Consortium


First Nations,
Métis, & Inuit
EDUCATION
We acknowledge that we are on Treaty 6 territory, a traditional meeting grounds, gathering place, and travelling route to the Cree, Saulteaux, Blackfoot, Métis, Dene and Nakota Sioux.
We acknowledge all the many First Nations, Métis, and Inuit whose footsteps have marked these lands for centuries.

Welcome back!
Agenda:

- Review of where we are - Looking at September - November
- Outcomes and Concepts - what does it mean?
- How do the Concepts link to assessment?
- Money and how we might leverage it for our journey to '100 +'
- Activities to engage and reinforce learning
- How else can we 'count' ? Cuisenaire Rods
- Exploring the website - where will find the resources?
- Collaboration time



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Success Criteria

This session will be successful if, at the end, you will ...

1

Confidence

... feel confident in navigating the new Math curriculum and its associated resources.

2

Direction

... have a sense of direction in moving forward with implementing the new curriculum.

3

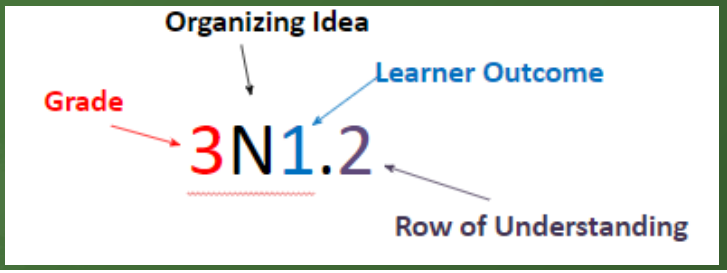
Efficacy

... have a sense of efficacy that you have the skillset and resources to make the implementation work.

Organizing Idea

- statement of the learning
- spans all or most grades
- main concepts

Link



	Grade 3			Grade 4	
Organizing Idea	Number: Quantity is measured with numbers that enable counting, labelling, comparing, and operating.				
Guiding Question	How can place value support organization of number?			How can place value facilitate interpretation of number?	
Learning Outcome	3N1 Students interpret place value within 100 000.			4N1 Students apply place value to decimal numbers.	
	Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding
	For numbers in base-10, each place has 10 times the value of the place to its right. The digits 0 to 9 indicate the number of groups in each place in a number. The value of each place in a number is the product of the digit and its place value. Numbers can be composed in various ways using place value. Numbers can be rounded in contexts where an exact count is not needed.	Place value is the basis for the base-10 system. Place value determines the value of a digit based on its place in a number relative to the one's place. Place value is used to read, write, and compare numbers.	Identify the place value of each digit in a natural number. Relate the values of adjacent places. Determine the value of each digit in a natural number. Express natural numbers using words and numerals. Express various compositions of a natural number using place value. Round natural numbers to various places.	For numbers in base-10, each place has one-tenth the value of the place to its left. Multiplying or dividing a number by 10 corresponds to shifting place value one position to the left or right, respectively. The decimal separator is a point in English and a comma in French. Numbers, including decimal numbers, can be composed in various ways using place value. A zero placed to the right of the last digit in a decimal number	Decimal numbers are numbers between natural numbers. Decimal numbers are fractions with denominators of 10, 100, etc. The separation between wholes and parts, including dollars and cents, can be represented using decimal notation. Patterns in place value are used to read and write numbers, including wholes and parts.

A Note on Wording

3N 3.2 Multiplication strategies include

- **repeated addition**
- **multiplying in parts**
- **compensation**

3N 3.1 The order in which two quantities are multiplied does not affect the product (commutative property).

3N 3.1 Multiplication can be interpreted in various ways according to context, such as

- **equal groups**
- **an array**
- **an area**

All that follows "include" must be taught, but other examples can be added.

Parenthesized words are words students need to know but can be interchanged with the alternate wording during discussions. (Age appropriateness)

What follows "such" are examples and don't have to all be covered or can be replaced with alternatives.

Progressions

Competencies

- Critical Thinking
- Problem Solving
- Research and Managing Information
- Creativity and Innovation
- Communication
- Collaboration
- Citizenship
- Personal Growth and Well-being

Literacy

- Literacy involves acquiring and applying the understanding and skills necessary to decode, evaluate, and logically communicate ideas and build meaning, using oral, written, visual, and multimedia sources.
- Literacy is embedded in learning across all subject areas. It is foundational, allowing students to live, learn, and work as knowledgeable, active participants in a democratic society.
- **The Literacy Progressions** identify knowledge and behaviours that students may demonstrate by the end of each divisional age range.

Numeracy

- Numeracy involves acquiring and applying the mathematical knowledge and skills needed to engage with quantitative and spatial information in a variety of situations.
- Numeracy is embedded in learning experiences across all subject areas
- **The Numeracy Progressions** identify knowledge and behaviours that students may demonstrate by the end of each divisional age range.

Looking at the curriculum through the lens of concepts.

¡Concepts

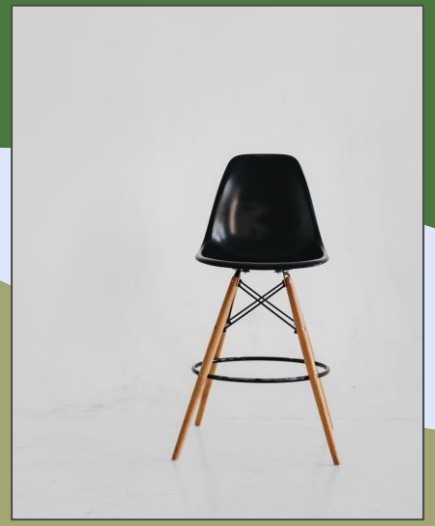
!

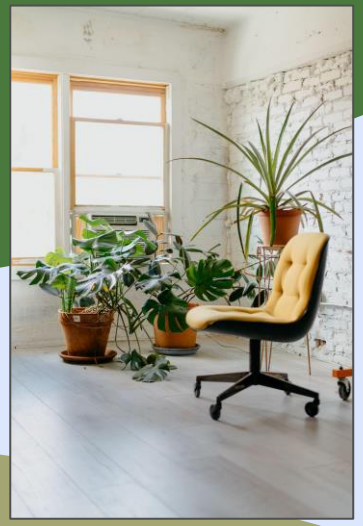
What is a concept?

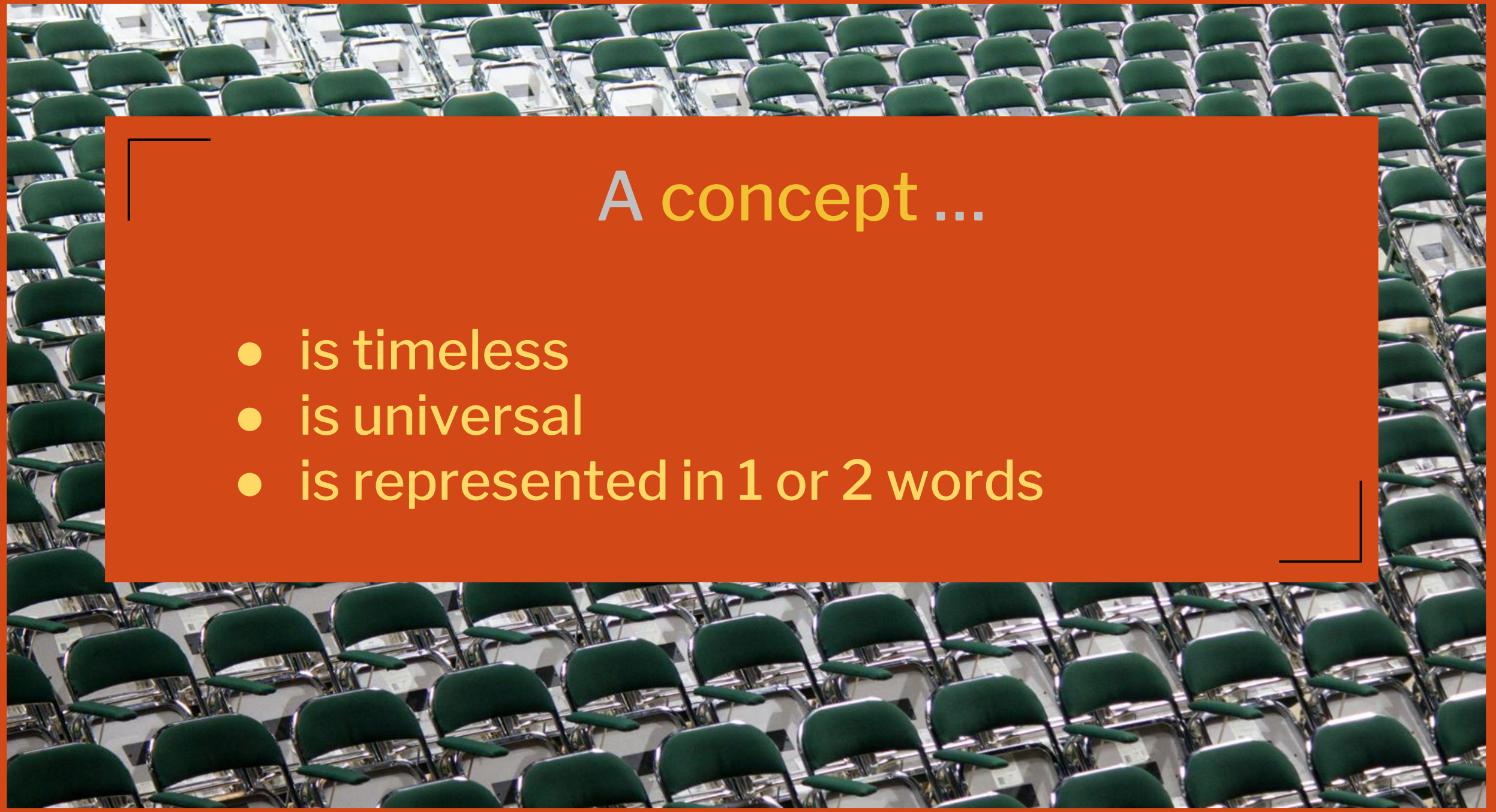
A concept is ...

- organizing idea
- with distinct attributes
- that are shared across multiple examples

Chair is a concept







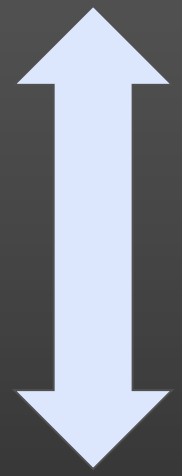
A concept ...

- is timeless
- is universal
- is represented in 1 or 2 words

Levels of **Concepts**

Broad/General Idea
or
Understanding

Furniture



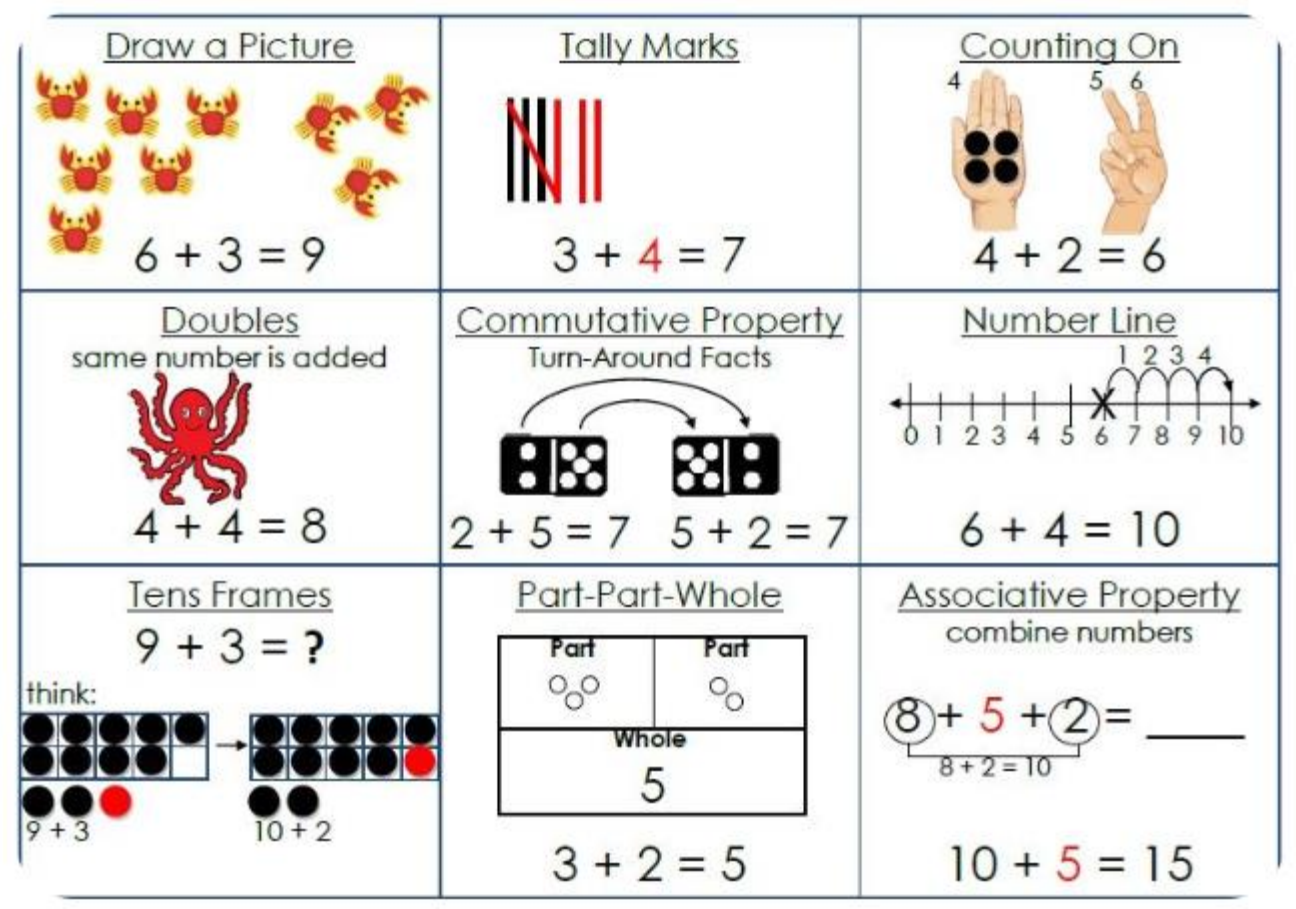
Chair

More Specific Ideas
or
Understandings

Dining Chair


Form
Function
Causation
Change
Change
Connection
Reflection
Responsibility
Perspective

A Conceptual Lens

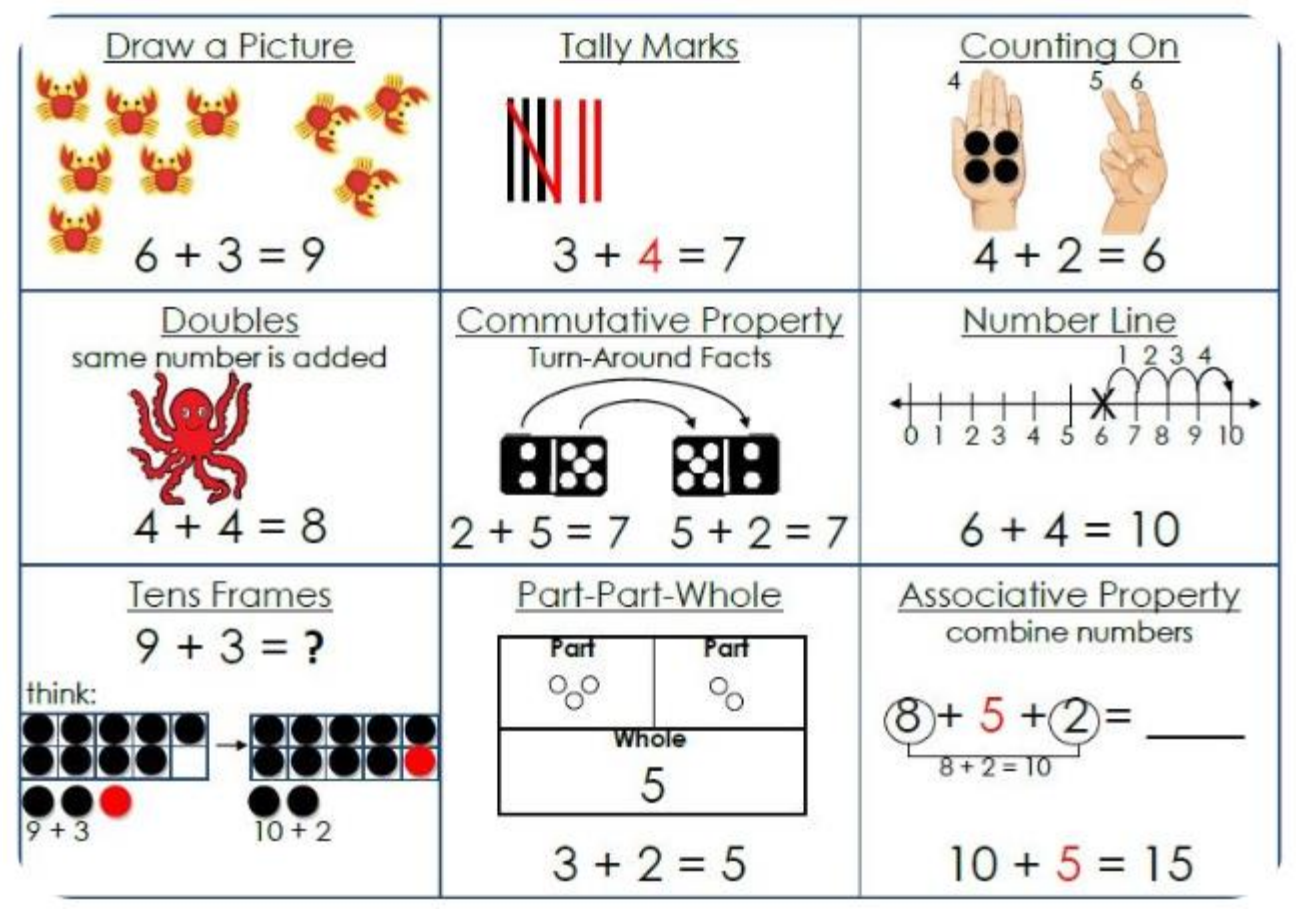


Lens

Math Concepts

- quantity
- addition
- modelling
- representation

A Conceptual Lens



Lens

Competencies

- critical thinking
- design

conceptual lens: concepts

3N 2 Learner Outcome: Students apply strategies for addition and subtraction within 1000. (100)

Knowledge	Understanding	Skills and Procedures
Any number of objects in a set can be represented by a natural number. The values of the places in a four-digit natural number are thousands, hundreds, tens, and ones.	There are infinitely many natural numbers. Every digit in a natural number has a value based on its place. Each natural number is associated with exactly one point on the number line.	Represent quantities using words and natural numbers. Identify the digits representing thousands, hundreds, tens, and ones based on place in a natural number.
Places that have no value within a given number use zero as a placeholder.		Relate a number, including zero, to its position on the number line.
The number line is a spatial representation of quantity.		

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conceptual lens: concepts ‘of content’

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conceptual lens: concepts ‘of skill & process’

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Skills & Procedures

Grade 3 Math September - December

- **Model** regrouping by place value for addition and subtraction.
- **Visualize** and **Model** products and quotients as arrays.
- **Compare** and **order** natural numbers.
- **Relate** the values of adjacent places of digits in a number.
- **Count** and represent the value of a collection of nickels, dimes, and quarters as cents..... a collection of loonies, toonies, and bills as dollars.
- **Determine** the value of each digit in a natural number.
- **Describe** time of day as a.m. or p.m. relative to 12-hour cycles of day and night.
- **Demonstrate** conservation of number when sharing or grouping.
- **Identify** the place value of each digit in a natural number.
- **Partition** a set of objects by sharing or grouping, with or without remainders.
- **Estimate** sums and differences.
- **Investigate** relationships between seconds, minutes and hours using an analog clock.
- **Express** the relationship between two numbers using <, >, or =.
- **Differentiate** between finite and infinite sequences.
- **Recognize** French and English symbolic representations of monetary values.
- **Explain** the standard algorithm for addition and subtraction of natural numbers.
- **Estimate** sums and differences.
- **Solve** problems using addition and subtraction.
- **Compose** a product using equal groups of objects.

Skills & Procedures

Grade 3 Math September - December

- **Model** regrouping by place value for addition and subtraction. **Is able to model regrouping by place value for addition and subtraction to ____.**
- **Visualize** and **Model** products and quotients as arrays. **Is able to visualize and model products and quotients as arrays to ____.**
- **Compare** and **order** natural numbers. **Is able to compare and order natural numbers to ____.**
- **Relate** the values of adjacent places of digits in a number.
- **Count** and represent the value of a collection of nickels, dimes, and quarters as cents..... a collection of loonies, toonies, and bills as dollars.
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- **Identify** the place value of each digit in a natural number.
- **Partition** a set of objects by sharing or grouping, with or without remainders.
- **Estimate** sums and differences. **Is able to estimate sums and difference to___.**
- **Investigate** relationships between seconds, minutes and hours using an analog clock.
- **Express** the relationship between two numbers using <, >, or =.
- **Differentiate** between finite and infinite sequences.

September	October	November
Number: Quantity is measured with numbers that enable counting, labelling, comparing and operating.		
3N1. Students interpret place value within 100 000.(100) • Place value is the basis for the base-10 system. (bridging into 100 with Money) • Place value determines the value of a digit based on its place in a number, relative to the one's place. • Place value is used to read, write, and compare numbers. 3N2. Students apply addition and subtraction within 1000.(100) • Addition and subtraction strategies can be chosen based on the nature of the numbers. • Standard algorithms are universal tools for addition and subtraction and may be used for any natural numbers independently of their nature.	3N1. Students interpret place value within 100 000. (100-1000) • Place value is the basis for the base-10 system. • Place value determines the value of a digit based on its place in a number, relative to the one's place. • Place value is used to read, write, and compare numbers. 3N2. Students apply addition and subtraction within 1000.(100-1000) • Addition and subtraction strategies can be chosen based on the nature of the numbers. • Standard algorithms are universal tools for addition and subtraction and may be used for any natural numbers independently of their nature.	3N1. Students interpret place value within 100 000. (1000 - 100 000) • Place value is the basis for the base-10 system. • Place value determines the value of a digit based on its place in a number, relative to the one's place. • Place value is used to read, write, and compare numbers. 3N2. Students apply addition and subtraction within 1000.(100-1000) • Addition and subtraction strategies can be chosen based on the nature of the numbers. • Standard algorithms are universal tools for addition and subtraction and may be used for any natural numbers independently of their nature.
Algebra: Equations express relationships between quantities.		
3A1.1 Students illustrate equality with equations. • Two expressions are equal if they represent the same number. (20-100 with money)	3A1.1 Students illustrate equality with equations. • Two expressions are equal if they represent the same number. (20-100 with money)	3A1.1 Students illustrate equality with equations. • Two expressions are equal if they represent the same number.(20-100 with money)

September	October	November
ongoing	ongoing	ongoing
Patterns: Awareness of patterns supports problem solving in various situations.		
3P1.1 Students analyze patterns in numerical sequences. • A sequence is a list of terms arranged in a certain order. • Sequences may be finite or infinite 3P1.2 Students analyze patterns in numerical sequences. • A sequence can progress according to a pattern. Ongoing - begin with money	3P1.1 Students analyze patterns in numerical sequences. • A sequence is a list of terms arranged in a certain order. • Sequences may be finite or infinite 3P1.2 Students analyze patterns in numerical sequences. • A sequence can progress according to a pattern. Ongoing - begin with money	3P1.1 Students analyze patterns in numerical sequences. • A sequence is a list of terms arranged in a certain order. • Sequences may be finite or infinite 3P1.2 Students analyze patterns in numerical sequences. • A sequence can progress according to a pattern. Ongoing - begin with money
Time: Duration is described and quantified with time.		
3T1. Students tell time using clocks. • Clocks are standard measuring tools used to communicate time. Ongoing - use for number (skip counting, link to unit fractions, link to angles)	3T1. Students tell time using clocks. • Clocks are standard measuring tools used to communicate time. Ongoing - use for number (skip counting, link to unit fractions, link to angles)	3T1. Students tell time using clocks. • Clocks are standard measuring tools used to communicate time. Ongoing - use for number (skip counting, link to unit fractions, link to angles)
Statistics: The science of collecting, analyzing, visualizing and interpreting data can inform understanding and decision making.		
3ST1.1 Students interpret and explain representations of data.. • Representation connects data to a statistical question. 3ST1. 2 Students interpret and explain representation. • Representation expresses data specific to a unique	3ST1.1 Students interpret and explain representations of data.. • Representation connects data to a statistical question. 3ST1. 2 Students interpret and explain representation. • Representation expresses data specific to a unique	3ST1.1 Students interpret and explain representations of data.. • Representation connects data to a statistical question. 3ST1. 2 Students interpret and explain representation. • Representation expresses data specific to a

December

3N2. Students apply addition and subtraction within 1000.(100-1000)

- Addition and subtraction strategies can be chosen based on the nature of the numbers.
- Standard algorithms are universal tools for addition and subtraction and may be used for any natural numbers independently of their nature.

3N3.1 Students analyze and apply strategies for multiplication and division within 100. (25)

- Quantities can be composed and decomposed through multiplication and division. (5x5)

3N3.2 Students analyze and apply strategies for multiplication and division within 100.

- Sharing and grouping situations can be interpreted as multiplication or division.(5x5)
- Multiplication and division strategies can be supported by addition and subtraction.

December

Patterns: Awareness of patterns supports problem solvin

3P1.1 Students analyze patterns in numerical sequences.

- A sequence is a list of terms arranged in a certain order.
- Sequences may be finite or infinite

3P1.2 Students analyze patterns in numerical sequences.

- A sequence can progress according to a pattern.

Ongoing - begin with money

Measurement: Attributes such as length, area, volume a

Time: Duration is described and quantified with time.

December

3T1. Students tell time using clocks.

- Clocks are standard measuring tools used to communicate time.
  Ongoing - use for number (skip counting, link to unit fractions, link to angles)

Statistics: The science of collecting, analyzing, visualizi

3ST1.1 Students interpret and explain representations of data..

- Representation connects data to a statistical question.

3ST1. 2 Students interpret and explain representation.

- Representation expresses data specific to a unique time and place.
- Representation tells a story about data.

Could be addressed throughout the year in science as well.

Algebra: Equations express relationships between quan

3A1.2 Students illustrate equality with equations.

- Equations can include unknown values.

Assessment

We have Number, Time, Algebra and Patterns running at entry levels for September - November.

Given the look at "concepts" form a skill level along with the concept of quantity,

- what does success 'sound' like
- 'look' like

Identify achievement 'indicators' for the three months.

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Notes: How do you leverage money?

- Work within 100
- Learn money and values
- Put together 2 digit whole number dollar amounts
- Count out bills to end in a 2-digit whole dollar amount
- Make change to a dollar, $5.00, $10.00, change for $100.00
- Addition and subtraction by counting back change
- Compare money amounts
- Describe a 2 digit/3 digit dollar amount in place value terms
- Practice reading and writing 3 digit numbers - relate to $100/$10/loonies
- Regroup money - use mats *** must be comfortable and fluent in money
- we will work on cents in November

3N2

Guiding Question	How can processes be established for addition and subtraction?		
Learning Outcome	**3N2 Students apply strategies for addition and subtraction within 1000.**		
	Knowledge	Understanding	Skills & Procedures
	Recall of addition and subtraction number facts facilitates addition and subtraction strategies. Standard algorithms for addition and subtraction are conventional procedures based on place value. Estimation can be used to support addition and subtraction in everyday situations, including ◦ when an exact sum or ◦ difference is not needed to check if an answer is reasonable	Addition and subtraction strategies can be chosen based on the nature of the numbers. Standard algorithms for addition and subtraction may be used for any natural numbers.	Relate strategies for the addition and subtraction of two-digit numbers to strategies for the addition and subtraction of three-digit numbers. Model regrouping by place value for addition and subtraction. Explain the standard algorithms for addition and subtraction of natural numbers. Add and subtract natural numbers using standard algorithms. Estimate sums and differences. Solve problems using addition and subtraction.

3N2

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Notes: How do you leverage money?

- Estimation with money - about how much?
- Domino addition and missing dots - express the dots as money
- Same with money - dots are dollars (write units in answer)

Algebra: Equations express relationships between quantities.	
3A1.1 Students illustrate equality with equations. • Two expressions are equal if they represent the same number. (20-100 with money) ongoing	3A1.1 Students illustrate equality with equations. • Two expressions are equal if they represent the same number. (20-100 with money) ongoing

Guiding Question	How can equality facilitate agility with number?		
Learning Outcome	3A1.1 Students illustrate equality with equations.		
	Knowledge	Understanding	Skills & Procedures
	An equation uses the equal sign to indicate equality between two expressions. The left and right sides of an equation are interchangeable.	Two expressions are equal if they represent the same number.	Write equations that represent equality between a number and an expression or between two different expressions of the same number.

Notes:

- Expressions are not equations
- Have students generate different compositions of the same amount of money to start (expressions)
- $4 + $6 = $5 + $5
- Show me 126 cents

September	October
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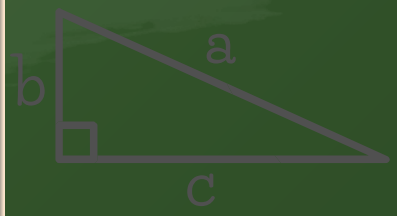
3ST1.1 Students interpret and explain representations of data.. • Representation connects data to a statistical question. 3ST1. 2 Students interpret and explain representation. • Representation expresses data specific to a unique time and place. • Representation tells a story about data. Could be addressed throughout the year in science as well.	3ST1.1 Students interpret and explain representations of data.. • Representation connects data to a statistical question. 3ST1. 2 Students interpret and explain representation. • Representation expresses data specific to a unique time and place. • Representation tells a story about data. Could be addressed throughout the year in science as well.

Consider ST all year or to be integrated in other subjects.



Patterns: Awareness of patterns supports problem solving in various situations.

How can diverse representations of patterns contribute to interpretation of change?

3P1.1 Students analyze patterns in numerical sequences.

Knowledge	Understanding	Skills & Procedures
Ordinal numbers can indicate position in a sequence. Finite sequences, such as a countdown, have a definite end. Infinite sequences, such as the natural numbers, never end.	A sequence is a list of terms arranged in a certain order. Sequences may be finite or infinite.	Recognize familiar numerical sequences, including the sequence of even or odd numbers. Describe position in a sequence using ordinal numbers. Differentiate between finite and infinite sequences.

3P1.2 Students analyze patterns in numerical sequences.

Knowledge	Understanding	Skills & Procedures
Numerical sequences can be constructed using addition, subtraction, multiplication, or division.	A sequence can progress according to a pattern.	Recognize skip-counting sequences in various representations, including rows or columns of a multiplication table. Determine any missing term in a skip-counting sequence using multiplication. Describe the change from term to term in a numerical sequence using mathematical operations.

Notes:

- Sequence of $5,10,15,20 etc. What is the rule (link to skip counting on a clock as well) Where do they see skip counting of any value around them? In the school? On the highway...
- Have students make their own - partner guesses - ALL with money

Time: Duration is described and quantified by time.

How can duration be communicated?

3T1 Students tell time using clocks.

Knowledge	Understanding	Skills & Procedures
Clocks relate seconds to minutes and hours according to a base-60 system. The basic unit of time is the second. One second is $\frac{1}{60}$ of a minute. One minute is $\frac{1}{60}$ of an hour. Analog and digital clocks represent time of day. Time of day can be expressed as a duration relative to 12:00 in two 12-hour cycles. Time of day can be expressed as a duration relative to 0:00 in one 24-hour cycle in some contexts, including French-language contexts	Clocks are standard measuring tools used to communicate time.	Investigate relationships between seconds, minutes, and hours using an analog clock. Relate minutes past the hour to minutes until the next hour. Describe time of day as a.m. or p.m. relative to 12-hour cycles of day and night. Tell time using analog and digital clocks. Express time of day in relation to one 24-hour cycle.

Notes:

Financial Literacy: Informed financial decision making contributes to the well-being of individuals, groups, and communities.					
What is money?			In what ways can money be used?		
Children explore money.			Students explore money and how it is used for everyday living.		
Knowledge	Understanding	Skills & Procedures	Knowledge	Understanding	Skills & Procedures
Canadian money comes in many forms, such as • coins • bills Canadian coins and bills come in different denominations, such as • loonies • toonies • $5 • $10 Canadian coins and bills have different features, such as • colour • number • images • size	Money has unique features to represent its value.	Explore the value of Canadian coins and bills. Identify features of Canadian coins and bills.	Canadian money comes in many forms, such as • coins • bills • debit cards • credit cards Canadian coins and bills come in different denominations, such as • nickels • dimes • quarters • loonies • toonies • $5 • $10 • $20 • $50 • $100 Images on Canadian coins and bills include • wildlife • sports • boats • emblems • historic figures Money can be • shared • earned • saved • spent • borrowed Goods are things that	Money can be used to exchange for goods and services. Money has value and purpose in everyday living. Money has unique features to represent its value.	Explore the value of Canadian coins and bills. Sort Canadian coins and bills. Identify goods and services that can be exchanged for money.

Counter first

Skip counting by 2, 5, 10, 20, 50, …

Arrays for addition/subtraction equal, not equal

Financial Literacy will start when money is well understood. “spending, saving, earning, wants and needs”

Guiding Question	What is money?		
Learning Outcome	Children explore money.		
	Knowledge	Understanding	Skills & Procedures
They begin as our "counters" Shapes Colour - comparative language Canadian Living Things - animals	Canadian money comes in many forms, such as • coins • bills Canadian coins and bills come in different denominations, such as • loonies • toonies • $5 • $10 Canadian coins and bills have different features, such as • colour • number • images • size	Money has unique features to represent its value. Money APP	Explore the value of Canadian coins and bills. Identify features of Canadian coins and bills.

In what ways can money be used?		
Students explore money and how it is used for everyday living.		
Knowledge	**Understanding**	**Skills & Procedures**
Canadian money comes in many forms, such as • coins • bills • debit cards • credit cards Canadian coins and bills come in different denominations, such as • nickels • dimes • quarters • loonies • toonies • $5 • $10 • $20 • $50 • $100 Images on Canadian coins and bills include • wildlife • sports • boats • emblems • historic figures Money can be • shared • earned • saved • spent • borrowed Goods are things that are made and produced and can be touched, such as	Money can be used to exchange for goods and services. Money has value and purpose in everyday living. Money has unique features to represent its value.	Explore the value of Canadian coins and bills. Sort Canadian coins and bills. Identify goods and services that can be exchanged for money.

How would you model, exemplify or teach the following using money?

Kindergarten:

- Quantities using objects, words, pictures, numbers
- Counting objects
- Subitize to 5/10
- “like/unlike/more/less/same”/enough/too many/too few
- Compose quantities within 10 in various ways
- “Share” - this is the beginning of fractions
- Describe a shape using words such as flat, curved, straight, or round.
- Sort shapes according to one attribute and describe the sorting rule.
- Measurable attributes can include • length • area • capacity • mass
- “longer • taller • shorter • heavier • lighter • bigger • smaller • big enough • too big • too small”
- Describe the size of an object in relation to another object, using comparative language. Describe the size of an object in relation to a purpose or need, using comparative language.
- Identify the pattern core, up to three elements, in a repeating pattern.
- Predict the next elements in a repeating pattern. Create a repeating pattern with a pattern core of up to three elements.

How would you model, exemplify or teach the following using money?

Grade 1

No quantity represented by 0
Know all coins and bills including 100
Know value of each coin and bill
Skip count to 100 by 5, 10; 20 by 2”s
Symbols for equal, not equal
Words greater than, less than, Compose quantities within 20 in various ways
Model transactions with money, limited to dollar values within 20
In a part-part-whole relationship, the sum represents the whole and the difference represents a missing part.
Sharing involves partitioning a quantity into a certain number of groups.
½, one- half of the whole quantity.(not using fraction)
Length may refer to the size of any one dimensional measurable attribute of an object, including: • height • width • depth • diameter
Compare the length, area, mass, or capacity of two objects directly, or indirectly using a third object.
Describe the size of an object in relation to another object, using comparative language.
Pattern core, up to four elements, in a cycle. Identify a missing element in a repeating pattern or cycle. Describe change and constancy in repeating patterns and cycles.
Create different representations of the same repeating pattern or cycle, limited to a pattern core of up to four elements.
Extend a sequence of elements in various ways to create repeating patterns

Grade 2

Decompose into groups of 100

Skip count by 20, 25, 50, (review skip counting by 1’s, 2’s, 5’s,10’s)

Determine the value of bills or coins of the same denomination by skip counting

<,>, =

sum composed in multiple ways

Model transactions with money, limited to dollar values within $100 or 100 cents

½ , ¼ and unit fractions with denominators or 10 or less

Common geometric attributes include. • sides • vertices • faces or surfaces

Length can be measured with nonstandard units or standard units (e.g., centimetres).

Identify referents for a centimetre. Estimate length by visualizing the iteration of a referent for a centimetre.

Change can be an increase or a decrease in the number and size of elements.

Create and express a repeating pattern with a pattern core of up to four elements that change by more than one attribute.

Grade **3**

The dollar sign $ is placed to the left of the dollar value in English and to the right of the dollar value in French.
The cent sign is placed to the right of the cent value in English and in French.
How can work with money support the work for place value?
Count and represent the value of a collection of nickels, dimes, and quarters as cents.
Count and represent the value of a collection of loonies, toonies, and bills as dollars.
Compare French and English symbolic representations of monetary values.
Estimation can be used when an exact sum or difference is not needed and to check if an answer is reasonable.
Model regrouping by place value for addition and subtraction.
Relate multiplication to repeated addition. Relate multiplication to skip counting.
Model a quotient by partitioning a quantity into equal groups with or without remainders. Visualize and model products and quotients as arrays.
Examine patterns in multiplication and division, including patterns in multiplication tables and skip counting.
Recognize families of related multiplication and division number facts. Recall multiplication number facts, with factors to 10, and related division facts. (10 x 10)
Fraction notation (a/b) relates the numerator ‘a’ as a number of equal parts, ‘b’ to the as the total number of equal parts in the whole. (leave until the end)

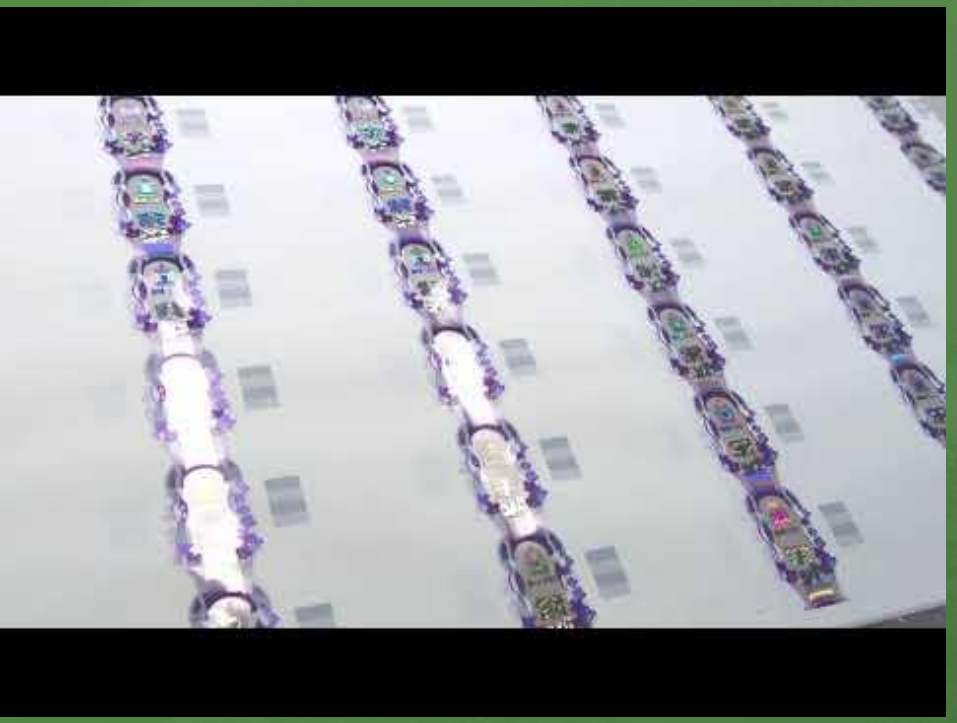
Green shows where money will LEAD the Fraction work

A whole quantity can be a whole set of objects or a whole object that can be partitioned. Each fraction is associated with a point on the number line.
A unit fraction is any one part of a whole divided into equal parts.
Fractions with common denominators are multiples of the same unit fraction
A unit fraction is any one part of a whole divided into equal parts.
Fractions with common denominators are multiples of the same unit fraction
Decompose a fraction into unit fractions.
Express a fraction as repeated addition of a unit fraction. Relate repeated addition of a unit fraction to multiplication of a natural number by a unit fraction.
Add and subtract fractions within one whole, limited to common denominators of 12 or less. Solve problems involving fractions, limited to common denominators of 12 or less.

***Unit Fractions will LEAD the work

Fractions can be compared by considering the number of parts or the size of parts.
Partition a whole into 12 or fewer equal parts.
Describe a whole as a fraction, limited to denominators of 12 or less.
Model fractions of a whole, limited to denominators of 12 or less. Express fractions symbolically. Relate a fraction less than one to its position on the number line, limited to denominators of 12 or less.
Compare fractions to benchmarks 0. ½. and 1.
Recognize the whole to which a fraction refers in various situations.
Compare the same fraction of different-sized wholes.
Compare different fractions with the same denominator.
Compare different fractions with the same numerator.
Write equations that represent equality between a number and an expression or between two different expressions of the same number.

The Making of a Bank Note



Canada's New Banknotes

The Secrets of the Canadian Dollar

What did we see when we emptied our bowl on the table?

Money - Manipulative or Concept?

Money – Manipulative or Concept?

What is a COIN?

Do you have any coins?

The Story of Our Coins

Hi! I'm the Penny

Pennies can help you learn to count!

Queen Elizabeth II on the back of the Penny.

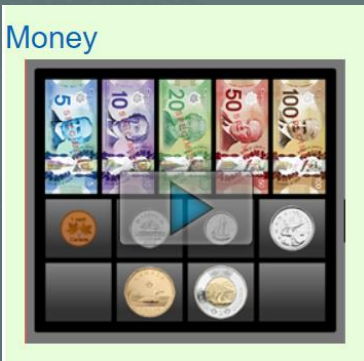
Did you know they do not make me anymore!

Maple leafs: On the front of the Penny

I am worth 1 ¢

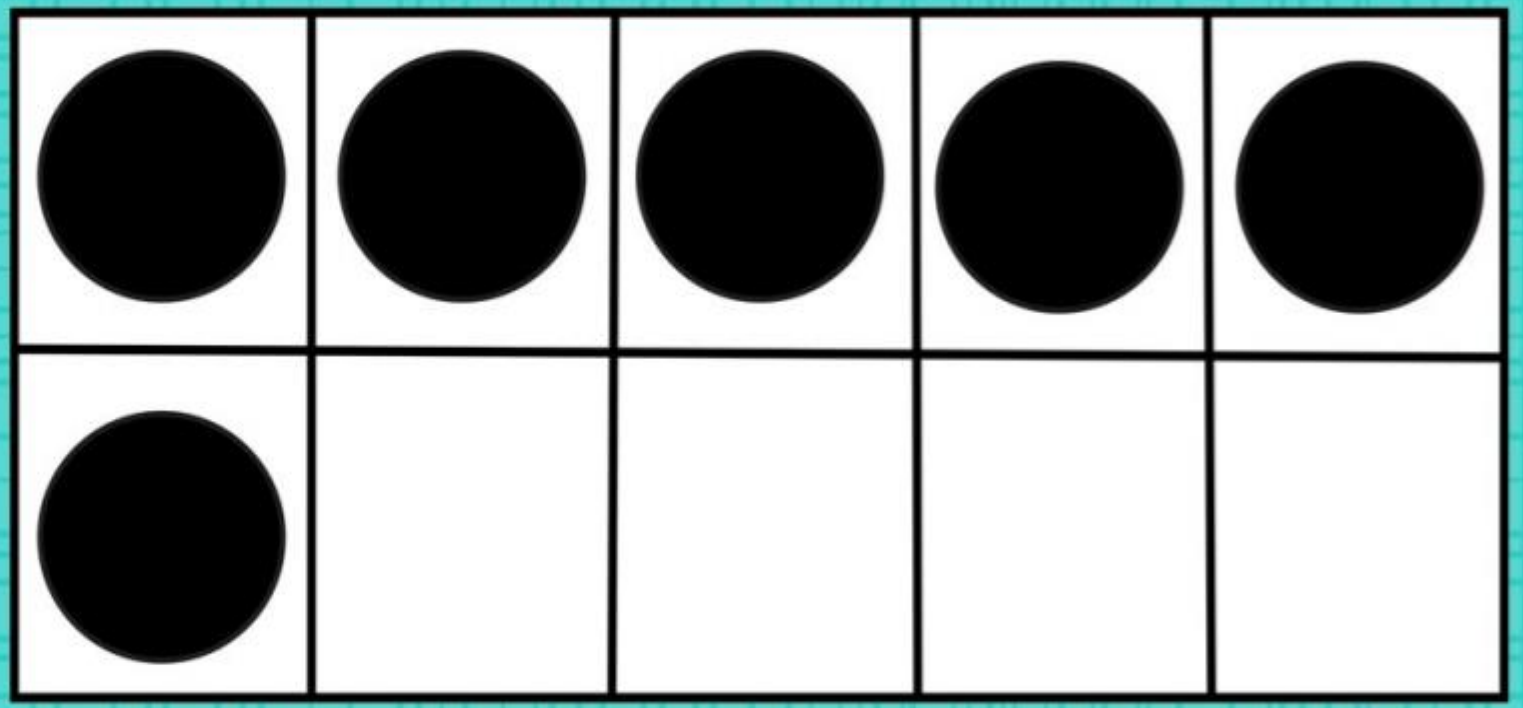
Suggest purchasing this money resource

- Understanding “Money” and its role in many other concepts.
- Understanding how it connects between grades and end goals.
- “Money is a Leader”
- A Physical “tool” - should be related to other “tools”
- Culturally Common - Common Context regardless of language
- Note: Canadian Money has colour as part of its identification - try to use stay away from black/white unless there are no other options and then ensure the coins are *realistic!*



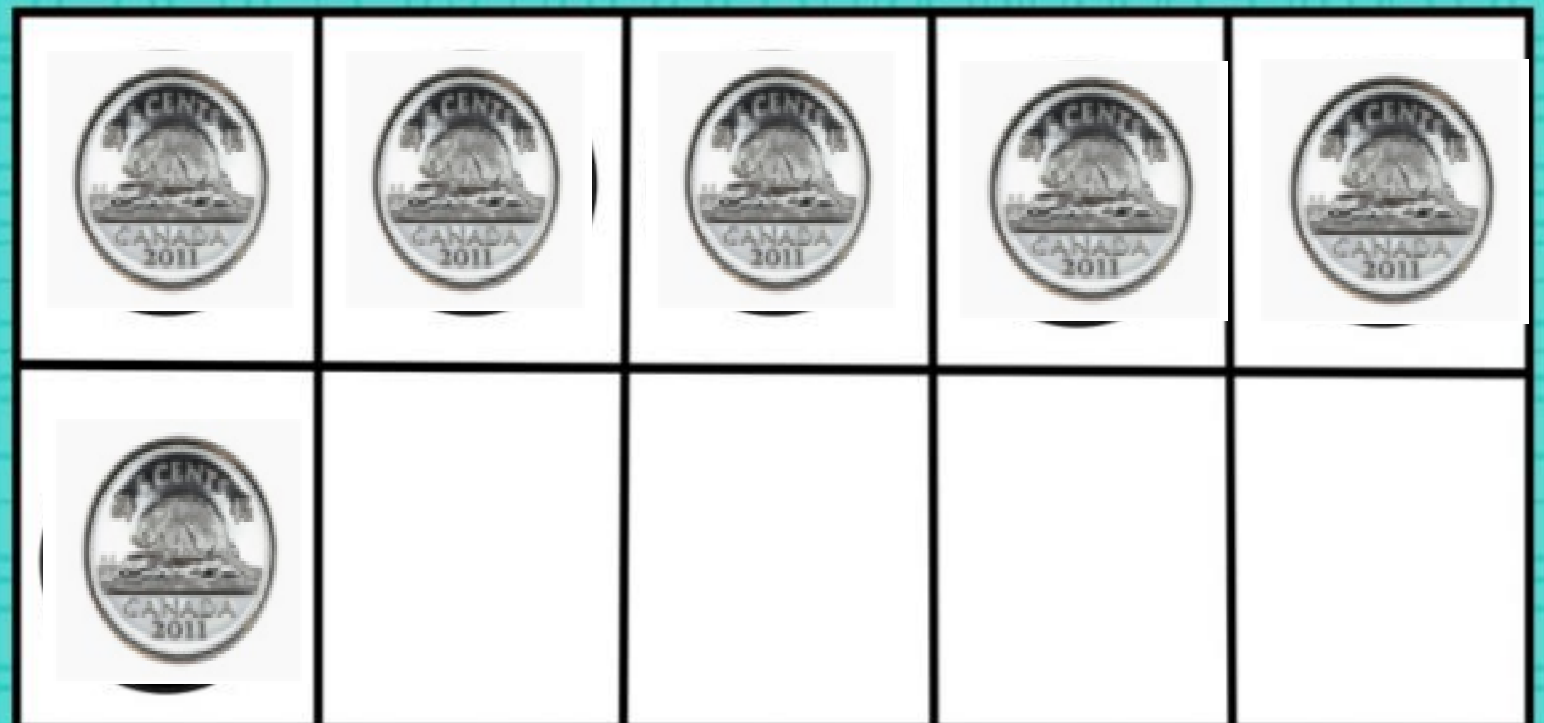
What number is this?

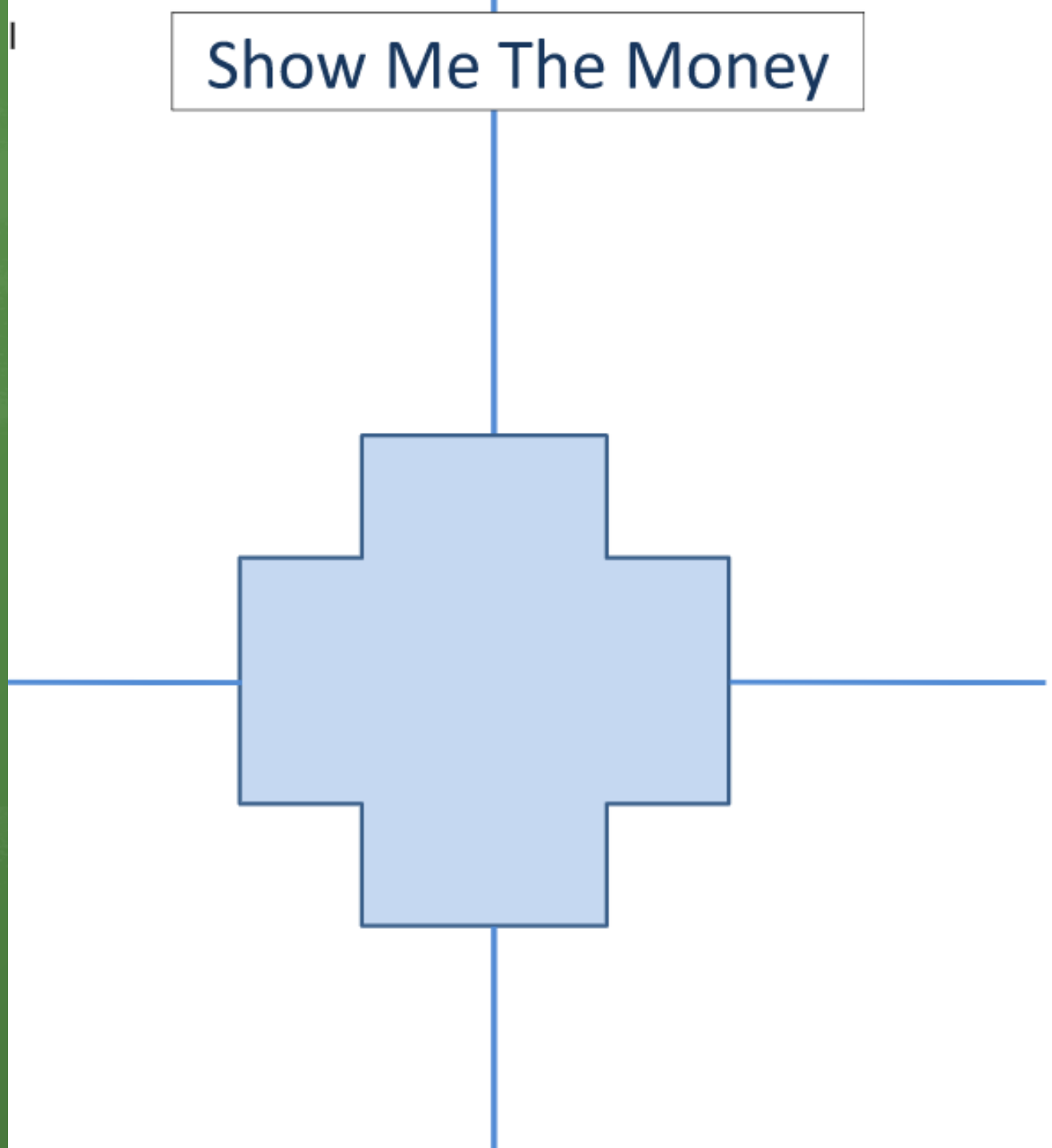
Drag and drop the number here



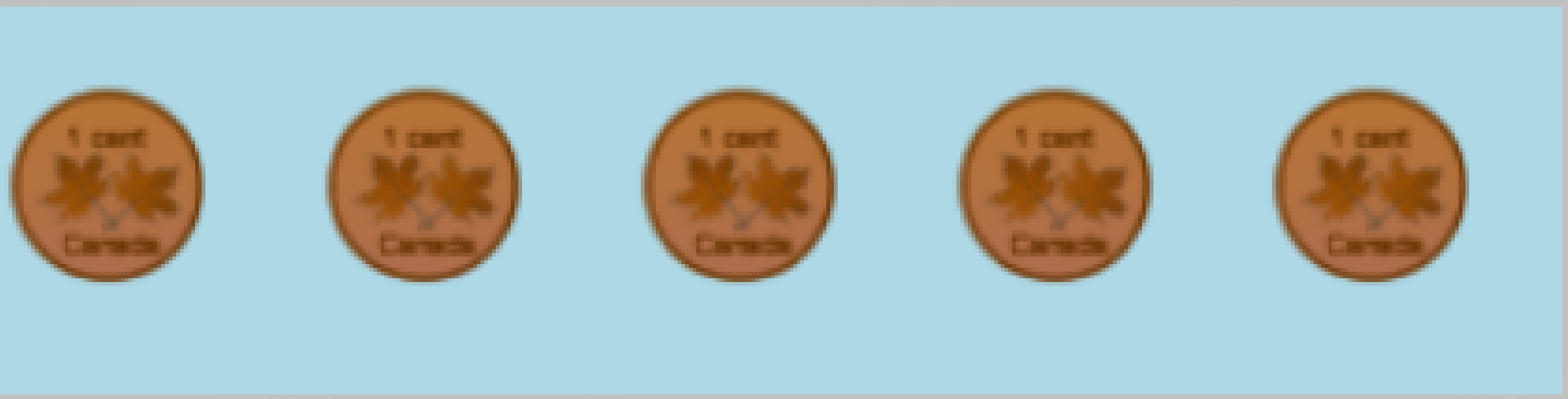
What number is this?

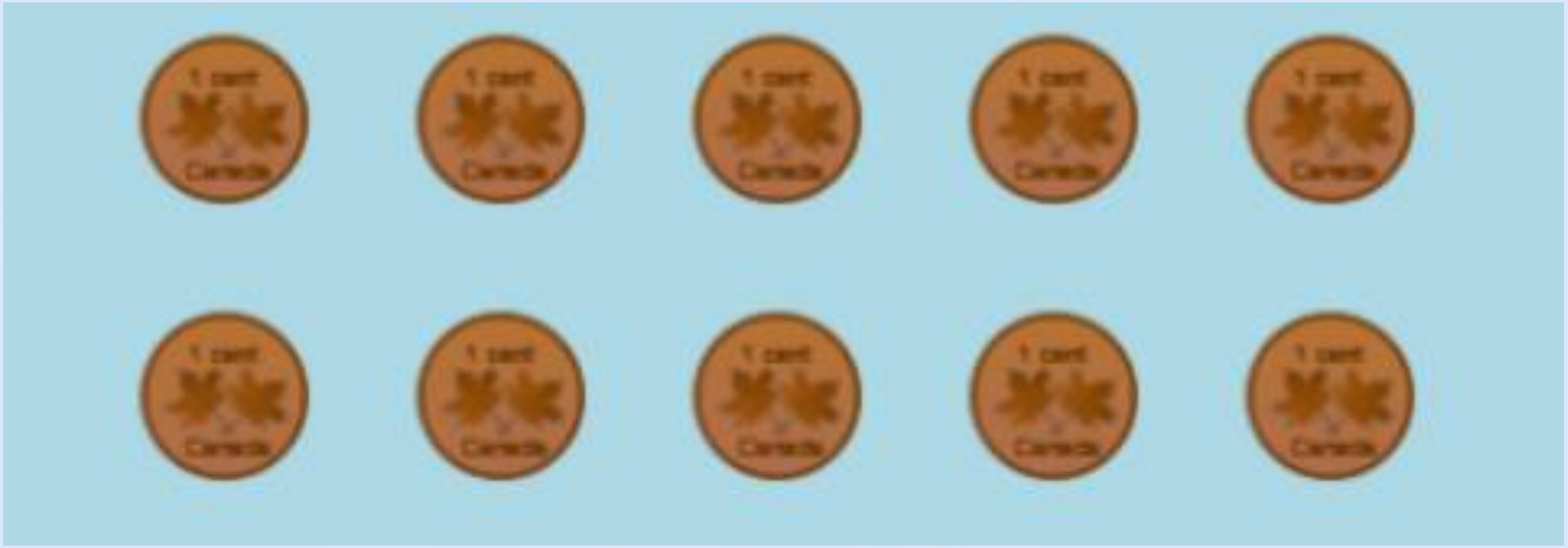
Drag and drop the number here

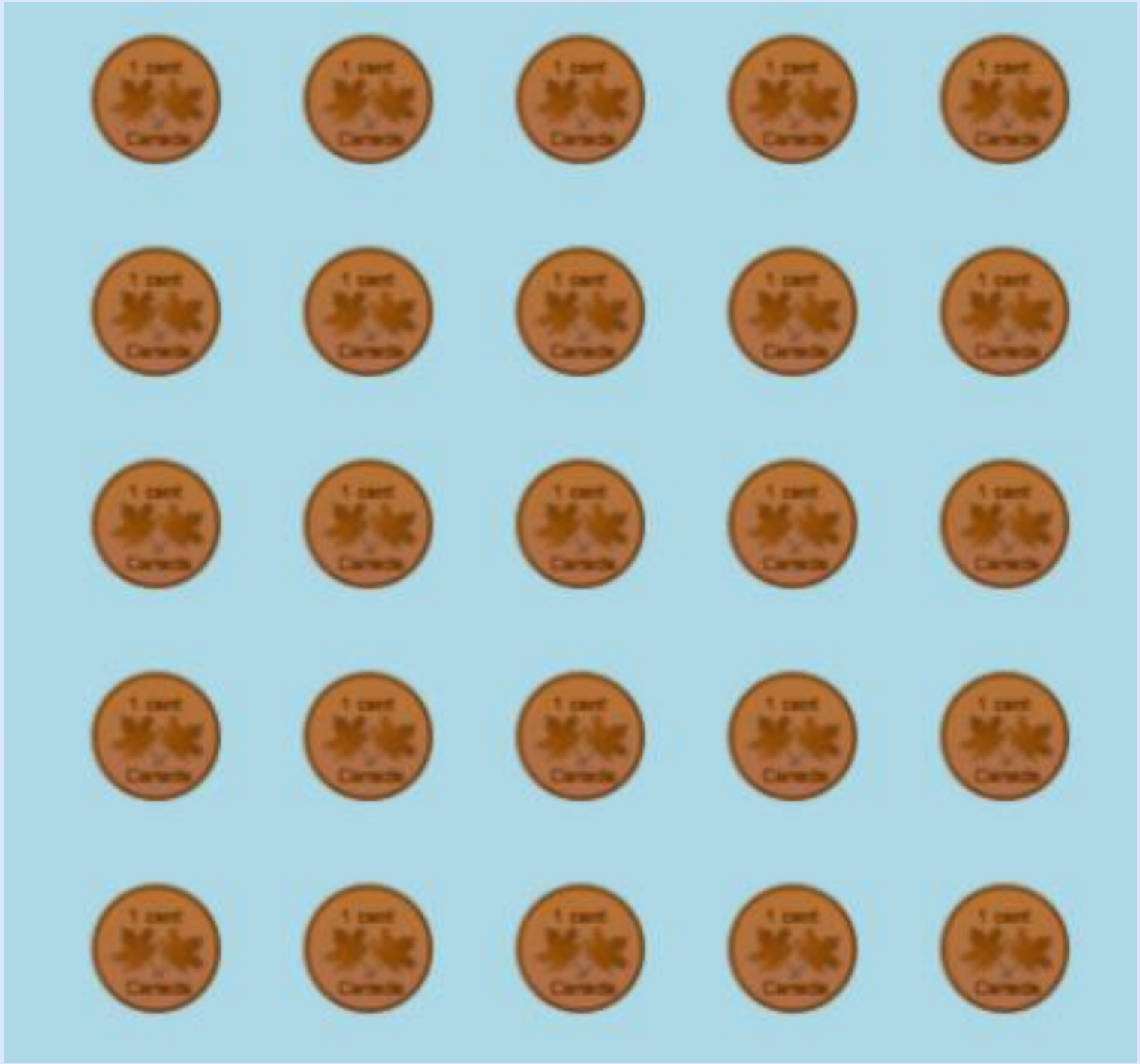


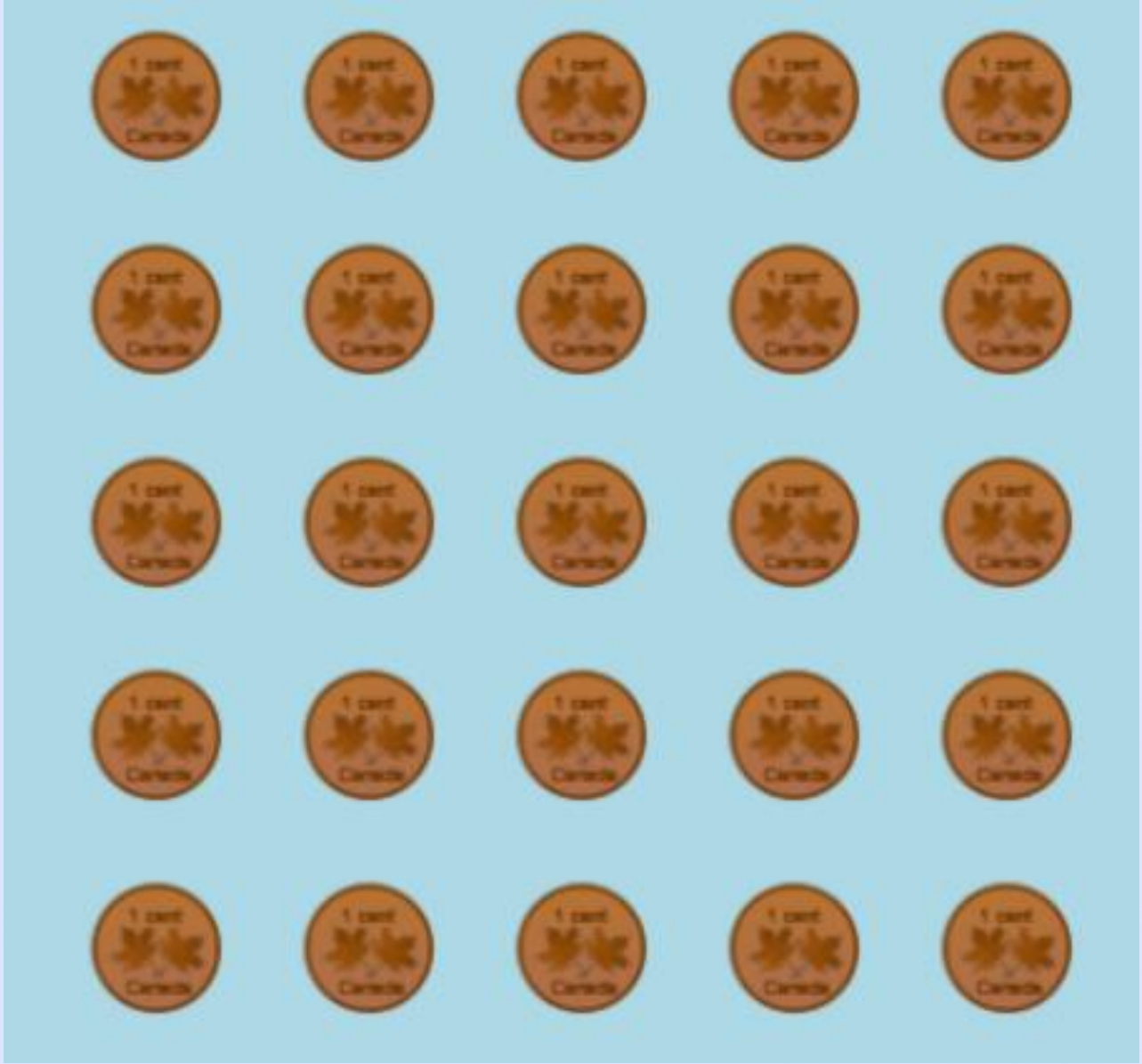

Show Me The Money

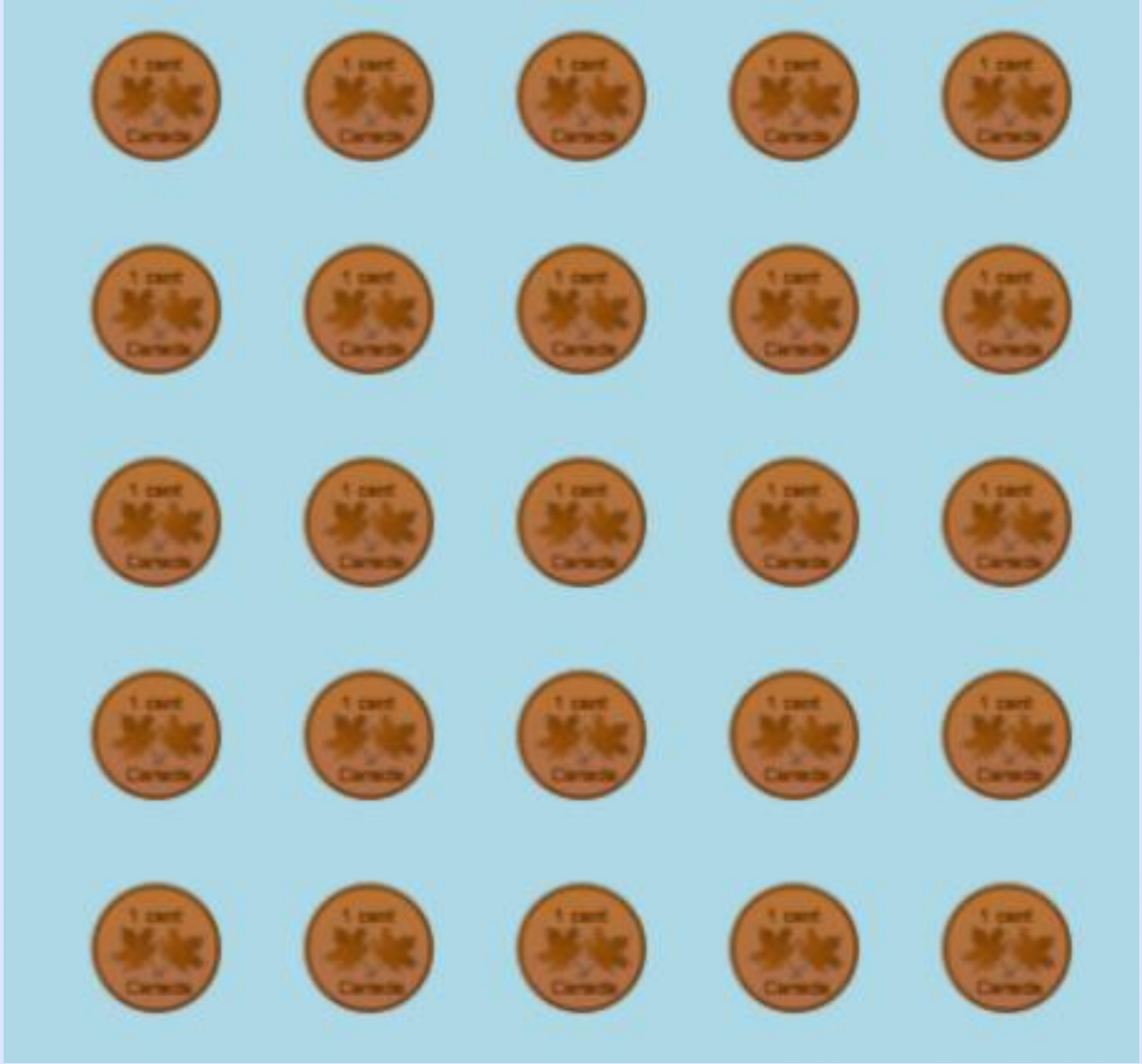
Understanding Place value


1 cent
Canada

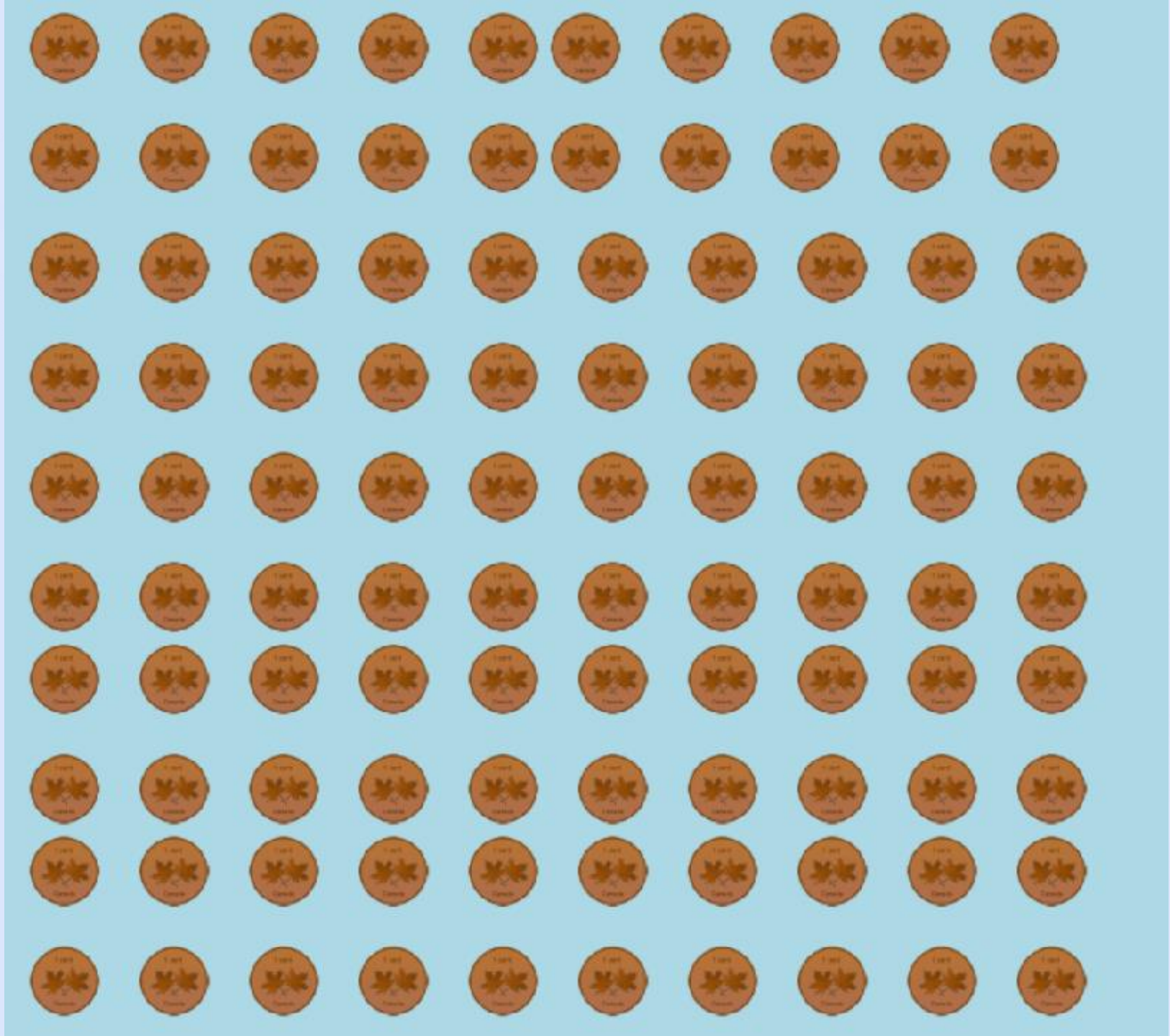

1 cent
Canada

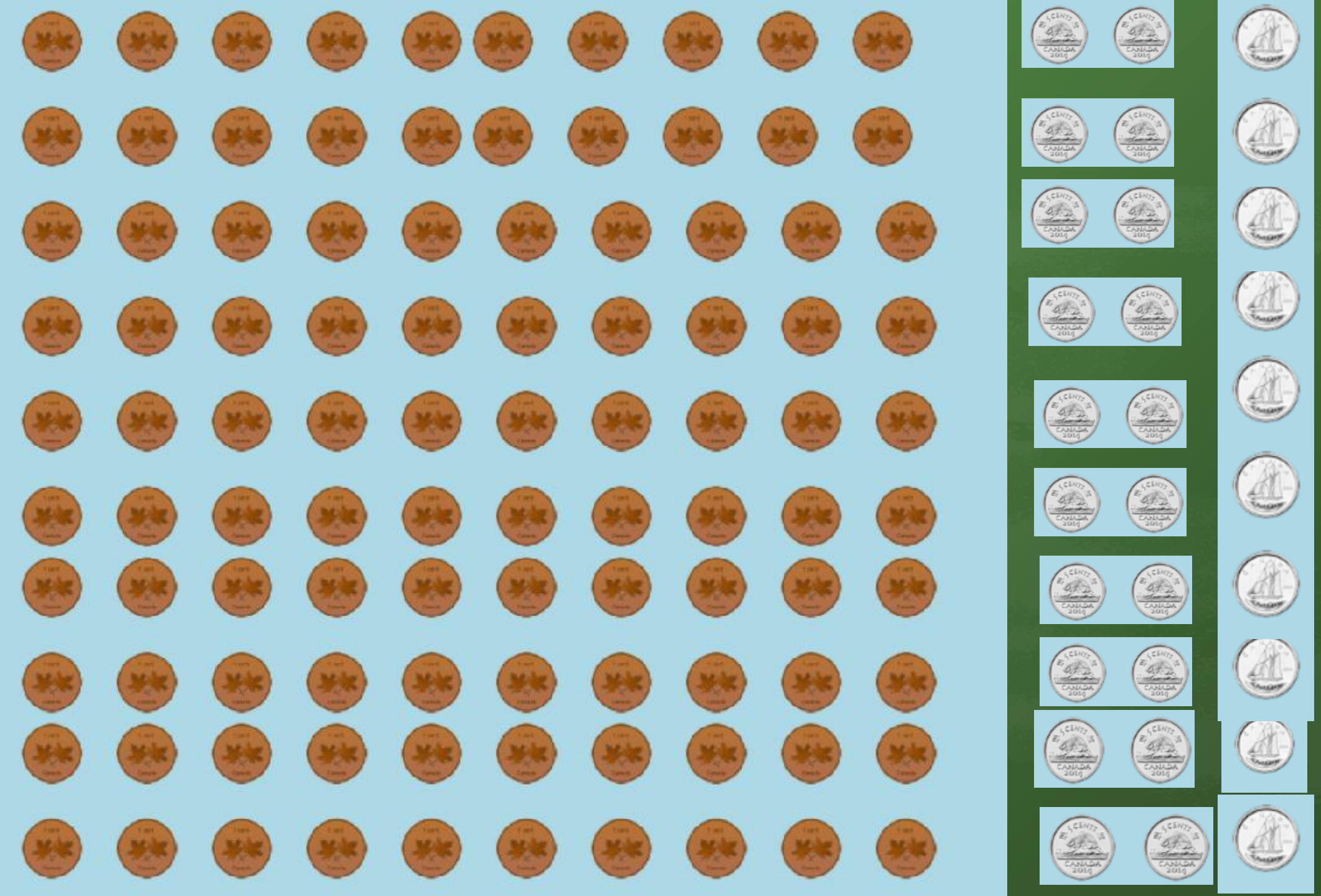

1 cent
Canada



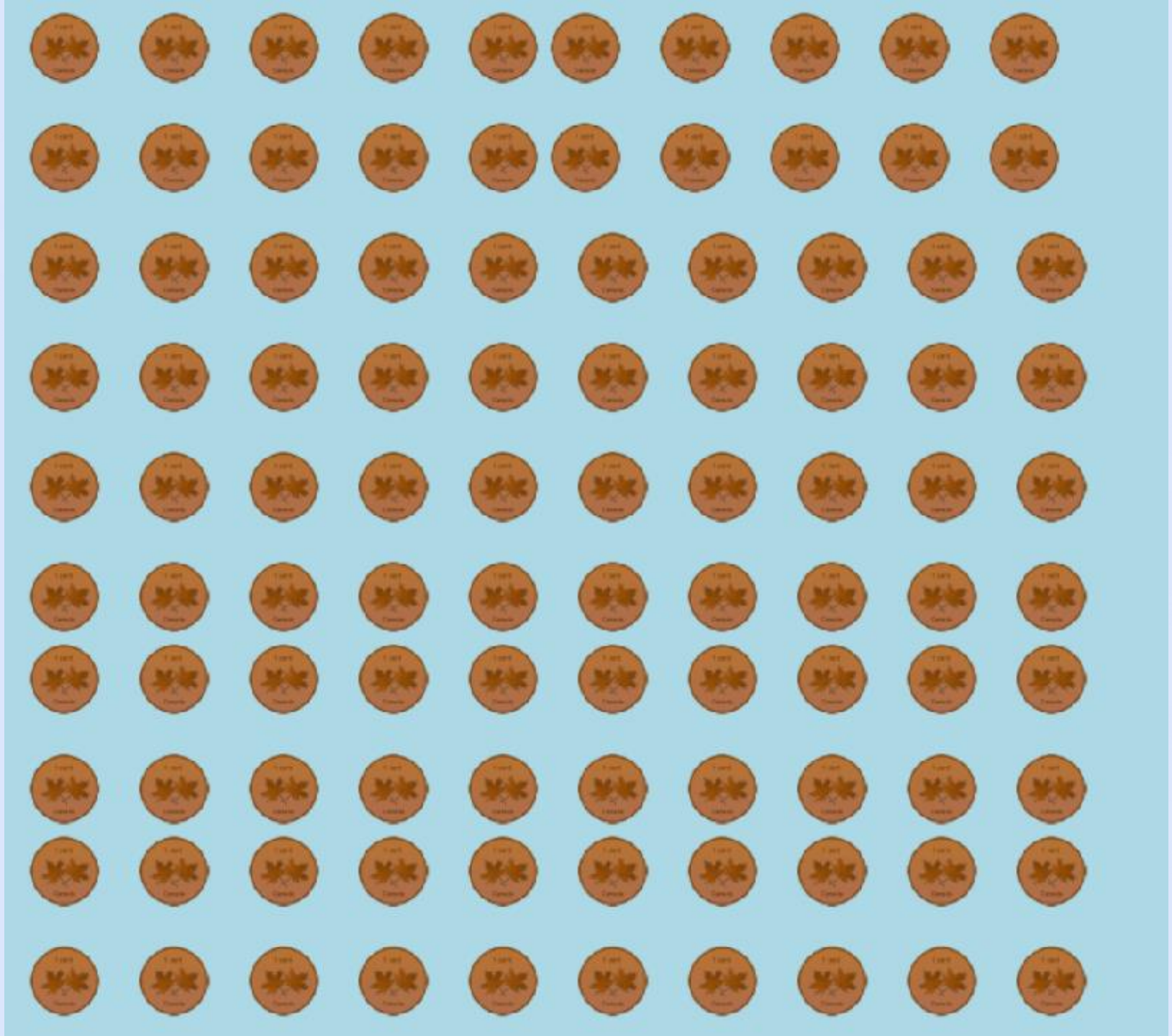

1 cent
Canada


CANADA
2019





Arrays galore!!!



Build your math facts here.
All they need is a copy of any money you are studying, use pencil crayons or markers to identify all possible arrays.
Write them out.

Close to 100

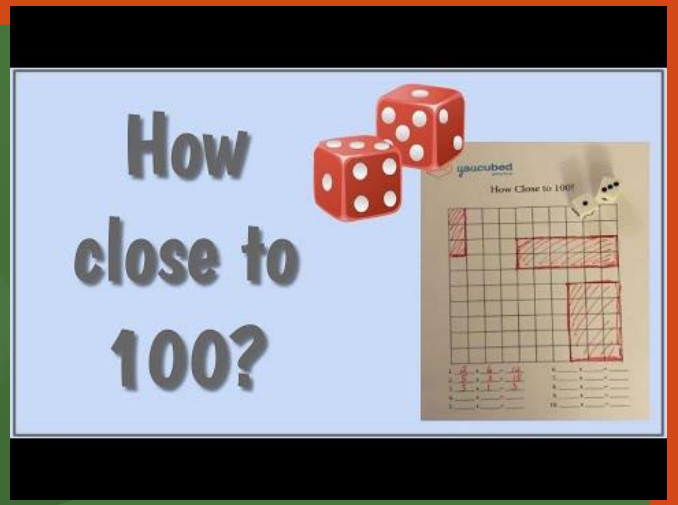
Tens	Ones

Each player rules up a column for “tens” and a column for “ones”. The aim of the game is to get a total as close to 100 as possible. The student tosses a dice and decides whether the number will be put in the ones or the tens place. For example, if a four is thrown, it could either be 40 or four. The dice is rolled a total of seven times. All seven numbers must be used. The total of all the columned numbers may exceed 100, but the students will need to decide which player has got closer to 100.

Extension Activity

Use larger numbers and decimals for the target numbers. Vary the number of throws and what the thrown number can represent, such as:
Closest to 1 000: 10 throws of hundreds, tens, or ones.
Closest to 10: 10 throws of ones, tenths, or hundredths.
Closest to 1: 10 throws of tenths, hundredths, or thousandths

Don’t wait until I have learned my facts to play, let me learn them while I play!



Close to 100 Using grids and Multiplication Facts

Greatest total area covered wins!

Making Money Many Ways

11¢

Link

Group

Impress me! Money - Assessment

Select numbers to best show your understanding of Money.

Name/Record	Count	Make/Represent
1. Write a dollar amount greater than $22.00 2. Write your dollar amount in words. 3. Round your dollar amount to the nearest ten. 4. What is the value of each digit in your dollar amount?	1. Write the number **after your dollar amount.** 2. Write the number **before your dollar amount.** 3. What is ten more than your dollar amount? 4. What is ten less than your dollar amount? 5. What is one hundred more? 6. What is one hundred less? 7. Include your number in a counting pattern- include bridging.	1. Draw a number using "Show Me the Money" Mat (Can you show the number in four different ways? (one should be efficiently)
Compare/Order	**Rename**	**Calculate**
1. What number is ten times larger? 2. What number is ten times smaller? 3. Put 5 two digit dollar amounts in order from smallest to largest 4. Place your original dollar amount on a number line 5. Select two dollar amounts your number is between.	1. Rename dollar amount in as many ways as you can. Can you show 10 different ways?	1. Your dollar amount x 10 2. Your dollar amount ÷10 3. Add $19.00 to your number 4. Subtract $18.00 from your number

Numeracy Teachers Academy

Adapted with permission from Dr. Angela Rogers, Numeracy Academy, https://www.numeracyteachersacademy.com/

Name_____ Impress Me!

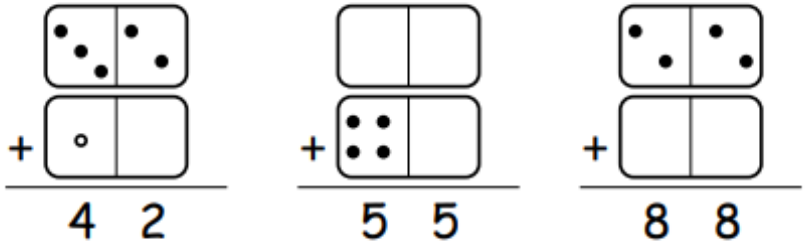
Date:_____

Name/Record	Count	Make/Represent
Compare/Order	**Rename**	**Calculate**

Before ←	Number	After →

Missing Domino-Double Digit Addition

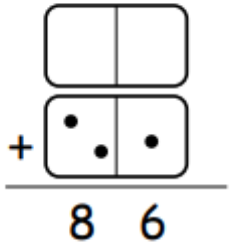
Directions: Fill in the missing dots on the domino.



4 2

5 5

8 8



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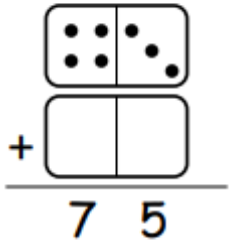
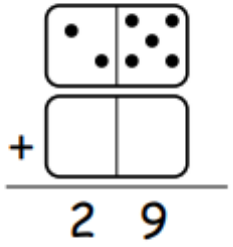


7 5



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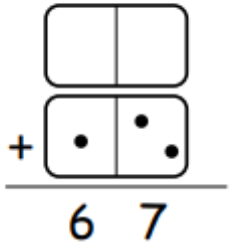

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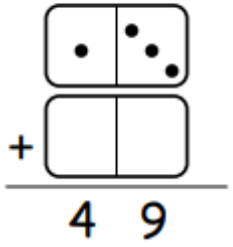

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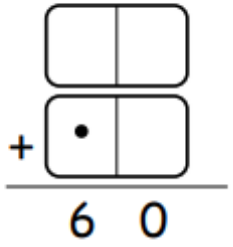
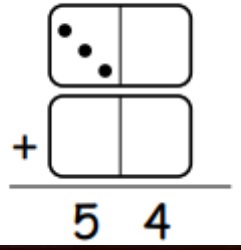
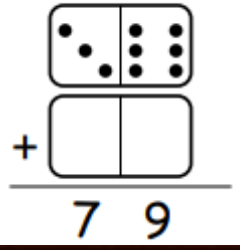


6 0



5 4



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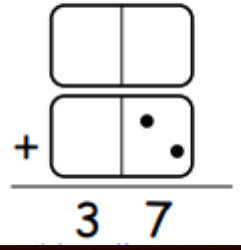


3 7

Spectrum Number Lines

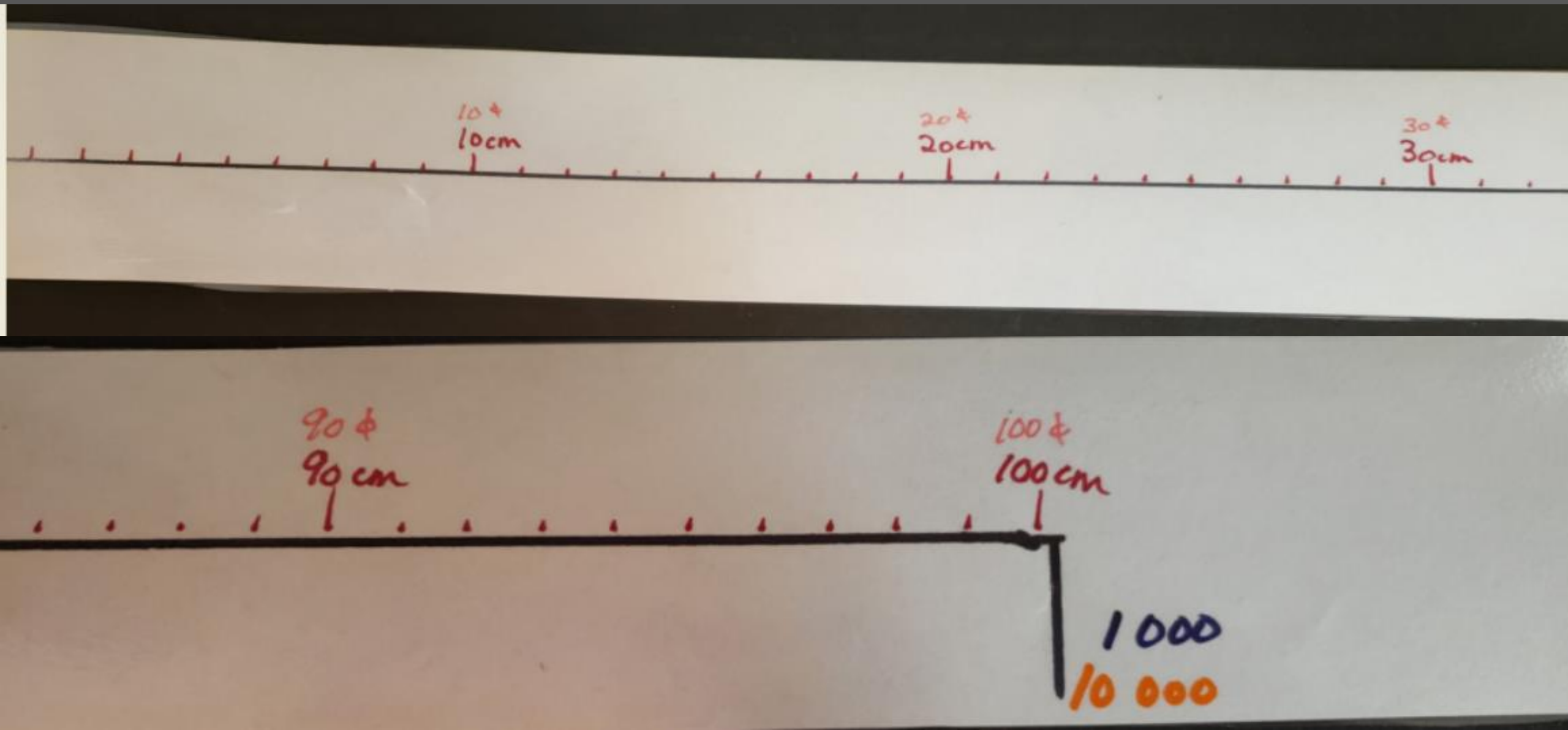
Create the Unit Fractions Visually - no fraction terminology

Suggested amounts of Money for each Ziplock Bag

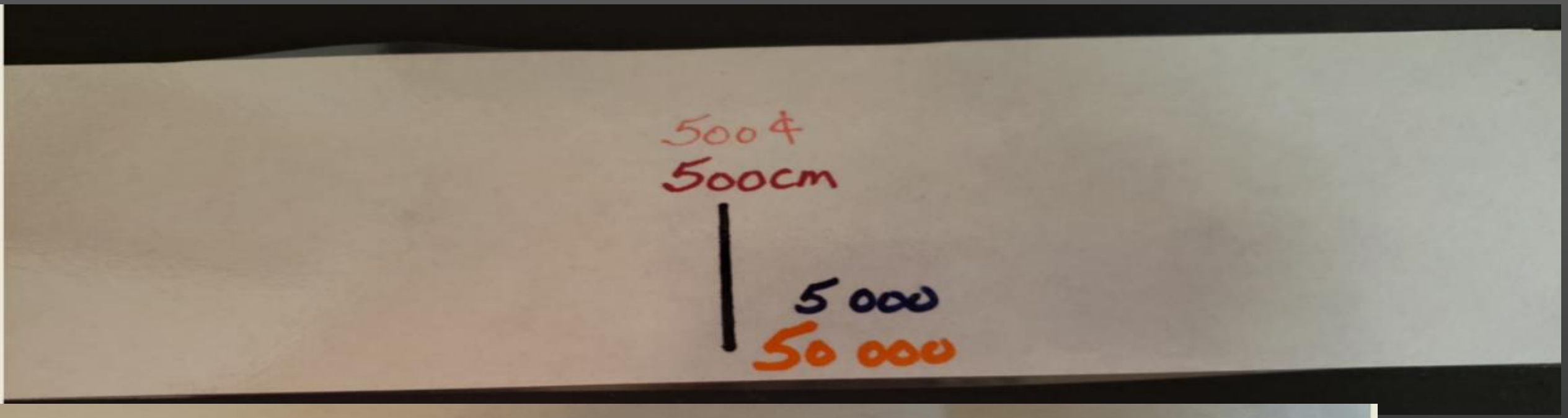
10 pennies
6 nickels
10 dimes
6 quarters
4 loonies
3 toonies
2 x $5.00
2 x $10.00
2 x $20.00
2 x $50.00
1 x $100.00

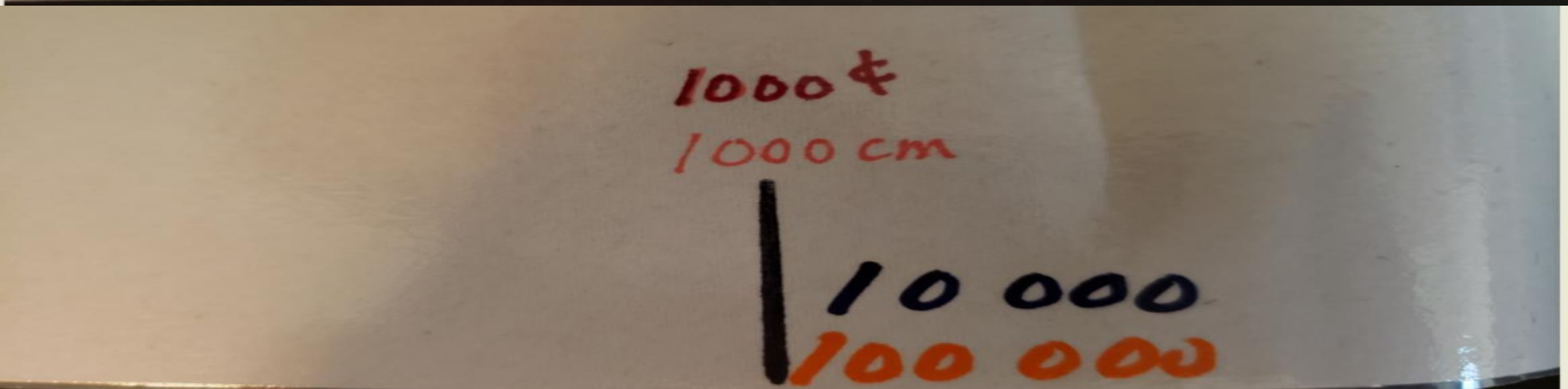
Additional cash, if needed, can be retrieved from the “Bank”

Counting and Visualizing 1000, 10 000, 100 000

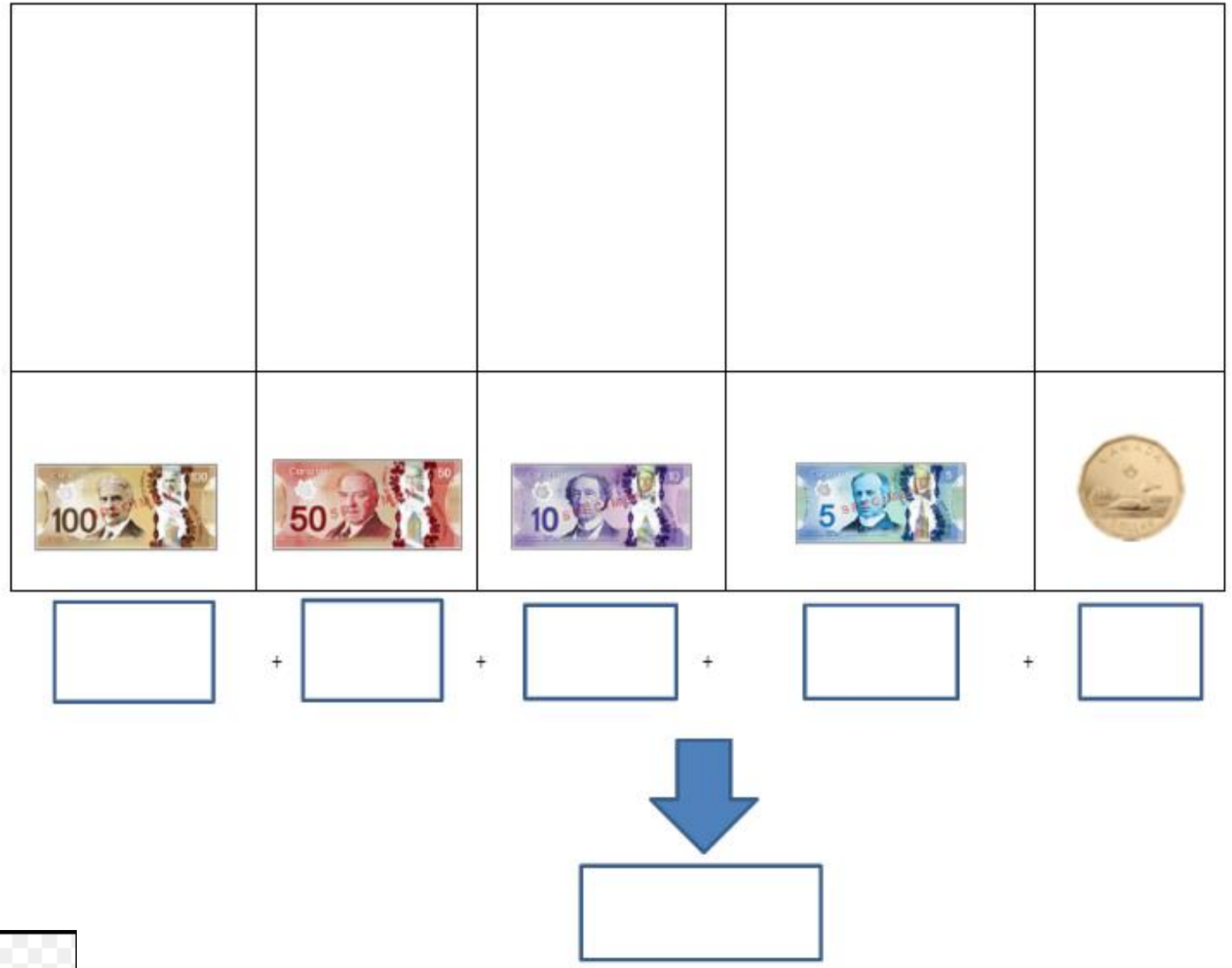


Counting and Visualizing 1000, 10 000, 100 000





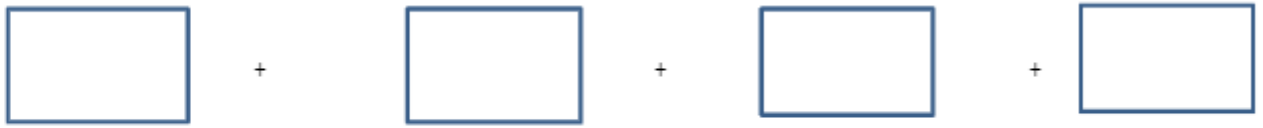
Place Value Chart Beginning with Money (Loonie, $5, $10, $50, $100)



All templates can be accessed through the www.movingforwardcurriculum.ca website under Math Kits

Place Value Chart Beginning with Money (Loonie, $5, $10, $100, $1000)

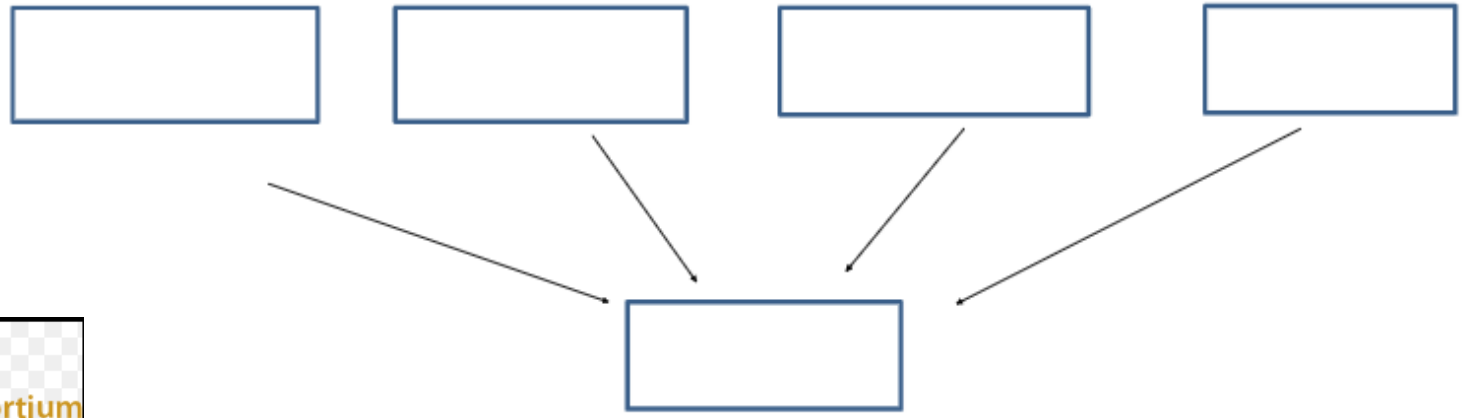
THOUSAND ($1000.00)			



$1000.00 = 100 000¢

Place Value Chart Beginning with Money (Penny, Nickel, Dime, Quarters)

Quarter 	Dime 	Nickel 	Penny 



Money App

Exploring Bank Notes

Show Me the Money

Bingo - Coin Identification

- Cards
- Call sheet
- Instructions

Coin sorting by Letter

Alberta Education Planning Guides - all grades and available documents

Canadian Money Big Book - Grades K-3 - Note: You may use this but not house it on your computer unless you have a membership in "Access Copyright" - scroll below the slide deck to download and open.

Subitizing Cards

Slide Deck for Money

First Nations KTCEA Curriculum - Use for Cycles - Time Idea

Grade 3 Math Kit (look in Additional Resources)

Helping students to count by representing, describing, relating and comparing using Cuisenaire Rods

Activities to engage the learner specific to rods and place value will be the focus of the November session

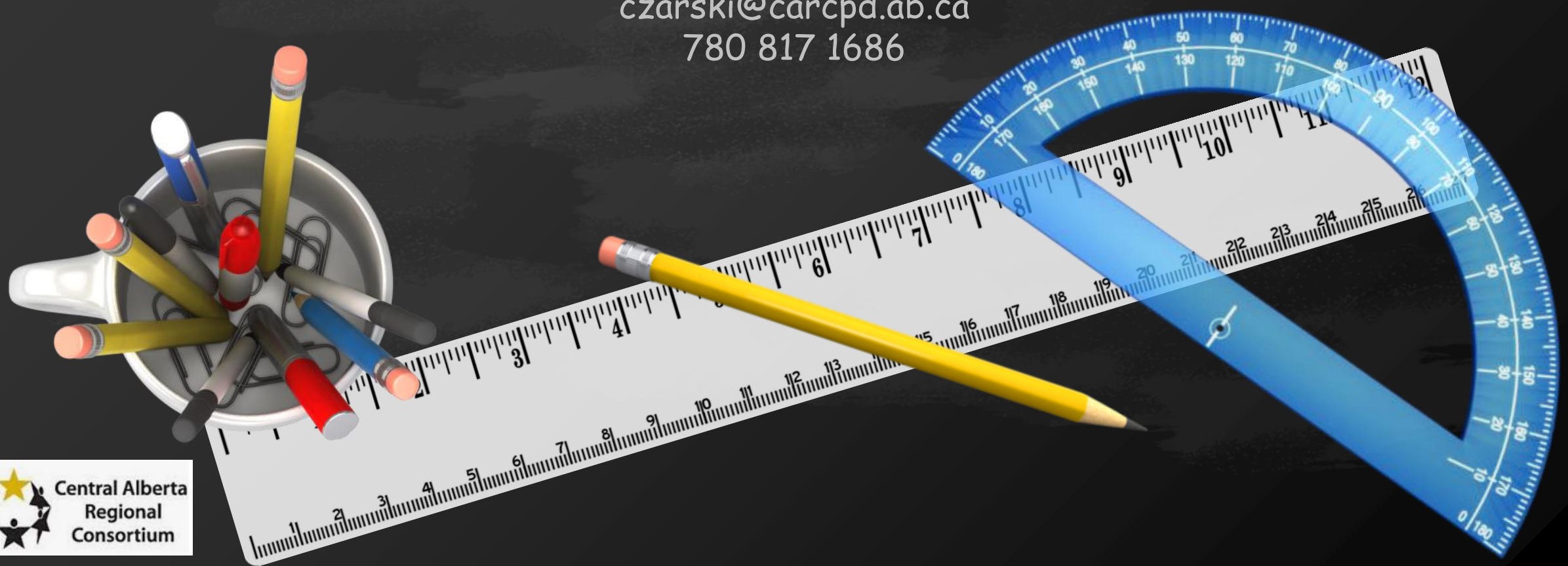
The end of November session will focus on Place Value and the start of Unit Fractions. Keep them strong in money, conversions, cents beyond 100 and dollars to 100.

Central Alberta Regional Consortium

Thank You

Do not hesitate to reach out for anything you might need.

Chris Zarski
czarski@carcpd.ab.ca
780 817 1686



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