



Calgary Board
of Education



Westgate School Math Night 2023



We are thrilled you could join us tonight!



Calgary Board
of Education



Agenda

Room 25: 6:30pm-7:00pm

- Introductions
- New curriculum organization
- Competencies progressions
- Transition from the program of study to the new curriculum
- Math Teaching at Westgate School
- How can you develop mathematical thinking at home?

Learning Commons: 7:00pm-7:30pm

- Explore some games and ideas

Westgate School SDP

**IMPROVE STUDENT UNDERSTANDING
OF FOUNDATIONAL CONCEPTS IN
SUBTRACTION (DIV I) AND RELATED
CONCEPTS IN DIVISION, FRACTIONS,
DECIMALS, RATIOS, PERCENTAGES (DIV II)**

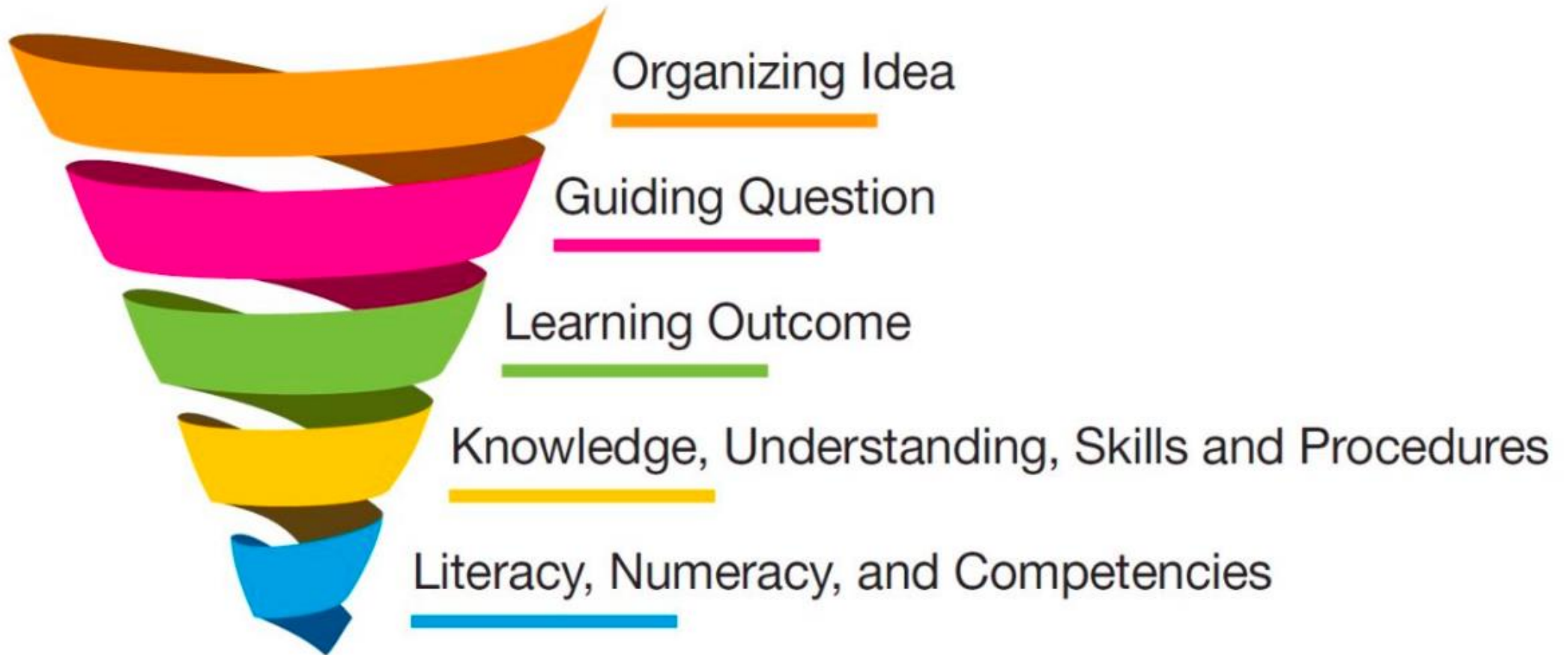
Data

Professional Learning

School processes



Structure of the New Curriculum



The New Alberta Curriculum

Mathematics [Change Subject](#) ▾

 [Collapse All](#)

[< Prev](#)

Grade 1

Grade 2

[Next >](#)

 ORGANIZING IDEA

Number: Quantity is measured with numbers that enable counting, labelling, comparing, and operating.

 GUIDING QUESTION

How can quantity be communicated?

 LEARNING OUTCOME

Students interpret and explain quantity to 100.

 KNOWLEDGE

A numeral is a symbol or group of symbols used to represent a number.

The absence of quantity is represented by 0.

 UNDERSTANDING

Quantity is expressed in words and numerals based on patterns.

Quantity in the world is represented in multiple ways.

 SKILLS & PROCEDURES

Represent quantities using words, numerals, objects, or pictures.

Identify a quantity of 0 in familiar situations.

 GUIDING QUESTION

How can quantity contribute to a sense of number?

 LEARNING OUTCOME

Students analyze quantity to 1000.

 KNOWLEDGE

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.

 UNDERSTANDING

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

 SKILLS & PROCEDURES

Represent quantities using words and natural numbers.

Identify the digits representing thousands, hundreds, tens, and ones based on place value in a number.

 [Contact Us](#)



Competency Progressions

Problem Solving

Kindergarten

I ask questions to help me solve problems.

I explore ways to overcome challenges independently or with others.

I try new ways to solve problems.

Div. 1 (grades 1-3)

I determine information that is relevant to help me solve problems.

I consider the possible outcomes of solutions.

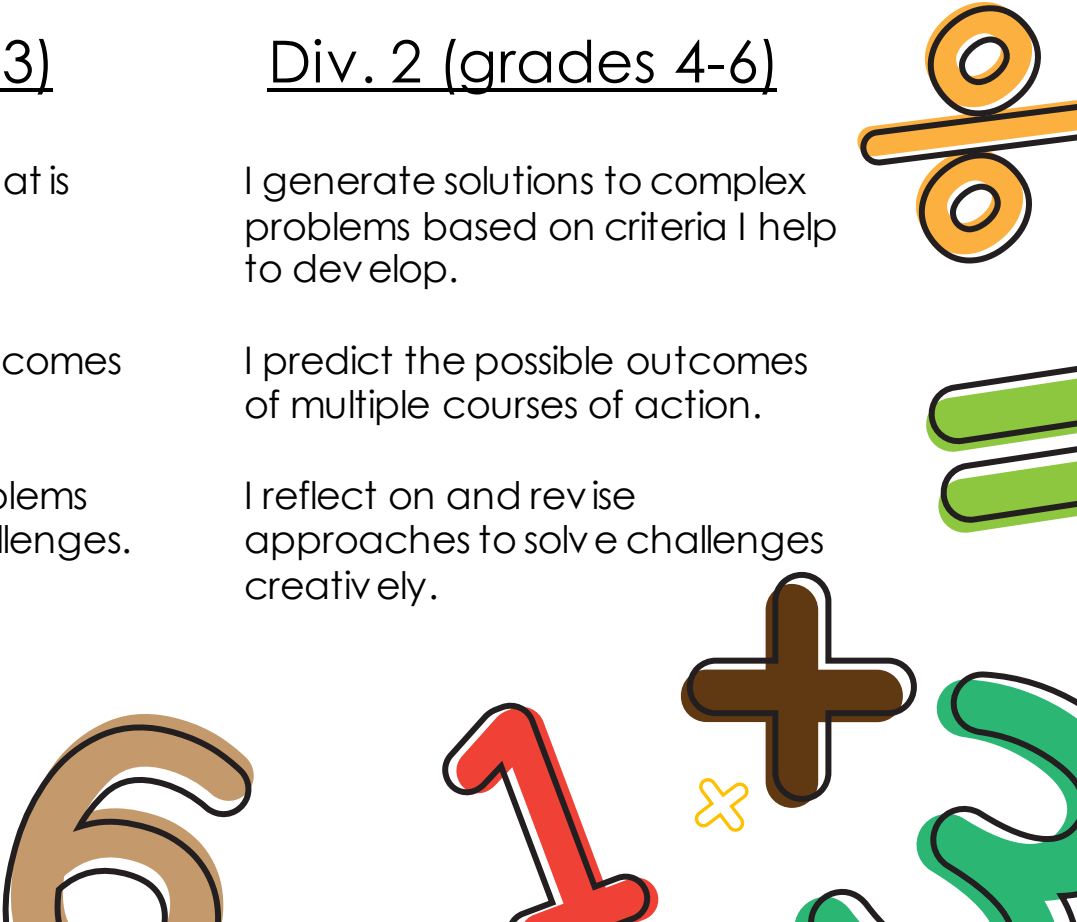
I work toward solving problems even when there are challenges.

Div. 2 (grades 4-6)

I generate solutions to complex problems based on criteria I help to develop.

I predict the possible outcomes of multiple courses of action.

I reflect on and revise approaches to solve challenges creatively.





Numeracy Progressions

Qualitative Information Magnitude

Kindergarten

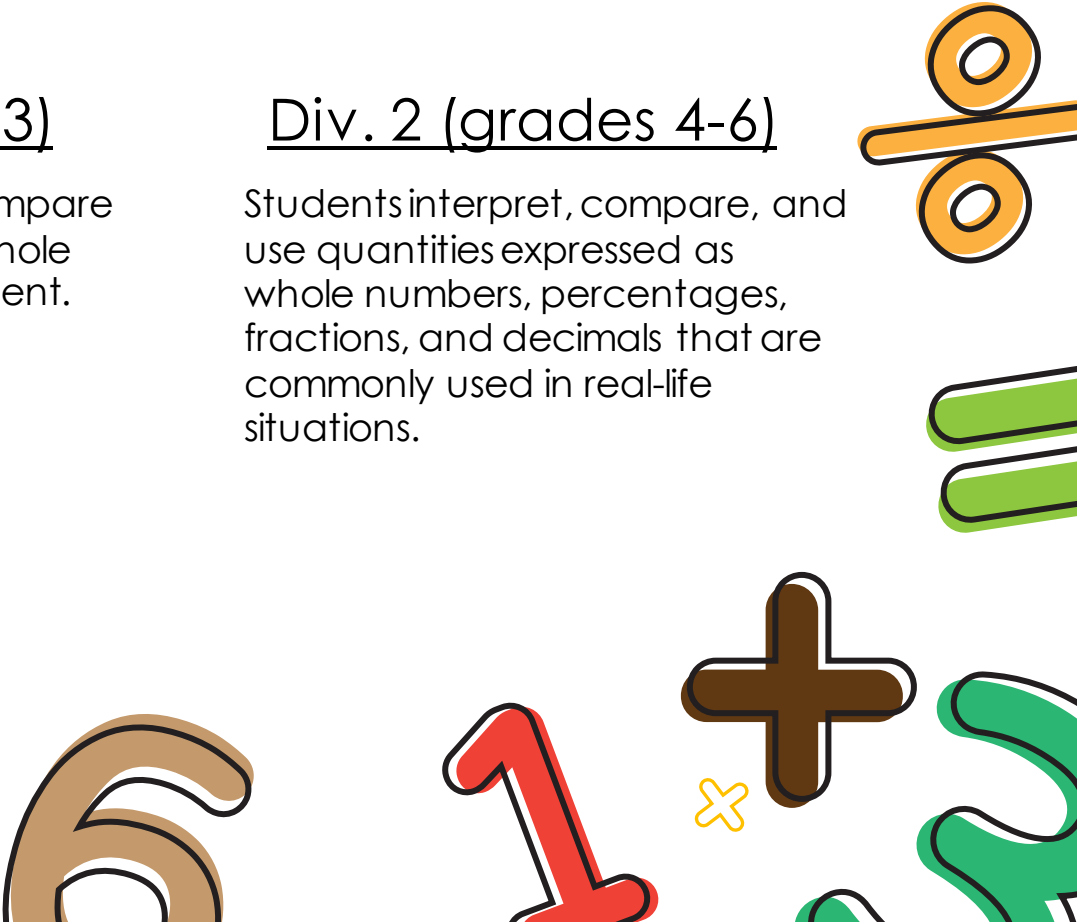
Children describe the quantity of objects as being more, less, enough, too many, or too few for a variety of purposes (e.g. to share cookies, make teams).

Div. 1 (grades 1-3)

Students interpret and compare quantities expressed as whole numbers in their environment.

Div. 2 (grades 4-6)

Students interpret, compare, and use quantities expressed as whole numbers, percentages, fractions, and decimals that are commonly used in real-life situations.



A collection of colorful, stylized numbers and symbols including a large orange '4', a blue '2', a pink '1', a green '0', and a blue '1' are scattered in the top-left corner. A yellow plus sign and a pink minus sign are also visible.

Numeracy Progressions

Qualitative Information Calculations

Kindergarten

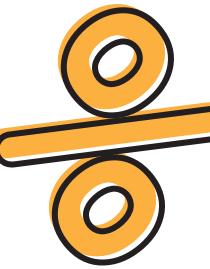
Children solve basic counting problems informally in familiar situations.

Div. 1 (grades 1-3)

Students use addition and subtraction in familiar situations.

Div. 2 (grades 4-6)

Students calculate using whole numbers and decimals in real-life situations.



A collection of colorful, stylized numbers and symbols including a large orange '4', a blue '2', a pink '1', a green '0', and a blue '5' on the left side. There are also a yellow plus sign and a pink minus sign.

Numeracy Progressions

Spatial Information Measurement

Kindergarten

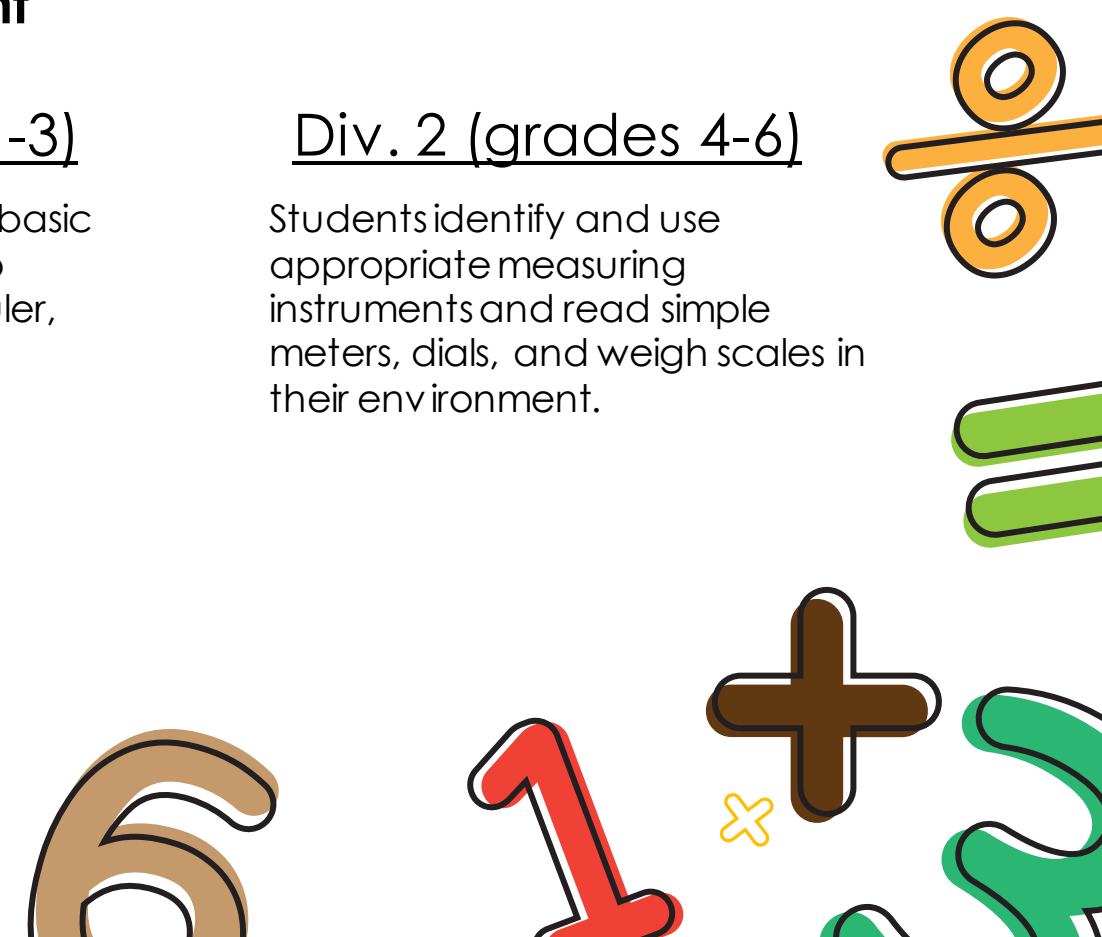
Children compare two familiar objects according to measurement attributes to complete a task (e.g., taller, shorter, heavier, smaller).

Div. 1 (grades 1-3)

Students select and use basic measuring instruments to complete a task (e.g., ruler, calendar, stopwatch, thermometer).

Div. 2 (grades 4-6)

Students identify and use appropriate measuring instruments and read simple meters, dials, and weigh scales in their environment.

A collection of colorful, stylized numbers and symbols including a yellow percent sign, a green equals sign, a brown plus sign, a red '1', and a green '2' on the right side. There is also a yellow 'x' symbol.

Bridging Student Learning to New Curriculum



What do Westgate teachers do to ease the transition to the new curriculum?

Suggestions to Support Bridging from Previous Grade 2 Curriculum to New Grade 3 Curriculum			
Topic	Previous Mathematics Curriculum: Grade 2	New Mathematics Curriculum: Grade 3	Suggestions to Support Bridging
Place Value	Students learn to work with numbers up to 100 in a variety of ways.	Students interpret place value within 100 000.	Students will need to be able to count to 1000 and understand place value (thousands, hundreds, tens, and ones).
Fractions	There is no content related to fractions.	Students interpret fractions in relation to one whole.	Students will need an understanding of part-whole relationships, including • interpreting one whole as a number of unit fractions • understanding that one whole can be any size
Geometry	Students learn how to sort 3-D objects and 2-D shapes, using two attributes.	Students relate geometric properties to shape.	New curriculum includes a stronger focus on spatial reasoning. Students may require an introduction to • lines of symmetry • slides, flips, and turns Students will need to understand that geometric attributes do not change when a shape slides, flips, and/or turns.



Diagnostic Tasks

The problem



Sam has exactly 6 coins in her piggy bank. Her coins are worth more than 75¢ but more than 100¢. What coins does she have? What is the value of her coins? Try to find as many answers as you can.

Look Fors

- Do students recognize the values of the different coins?
- Can students correctly count sets of coins? How do they count them?
- Do students recognize what values between 75¢ and 100¢ are possible?

Universal Screeners

Questions de soustraction

$487 - 235 = \underline{252} \checkmark$ Ma stratégie: $\begin{array}{r} 487 \\ -235 \\ \hline 252 \end{array}$	$542 - 315 = \underline{257} \times$ Ma stratégie: $\begin{array}{r} 542 \\ -315 \\ \hline 257 \end{array}$
$637 - 263 = \underline{474} \times$ Ma stratégie: $\begin{array}{r} 637 \\ -263 \\ \hline 474 \end{array}$	$741 - 565 = \underline{224} \times$ Ma stratégie: $\begin{array}{r} 741 \\ -565 \\ \hline 224 \end{array}$
$802 - 685 = \underline{289} \times$ Ma stratégie: $\begin{array}{r} 802 \\ -685 \\ \hline 289 \end{array}$	$224 \quad 400 - 250 = \underline{250} \times$ Ma stratégie: $\begin{array}{r} 4-2=2 \\ 0-5=5 \\ 0-0=0 \end{array}$

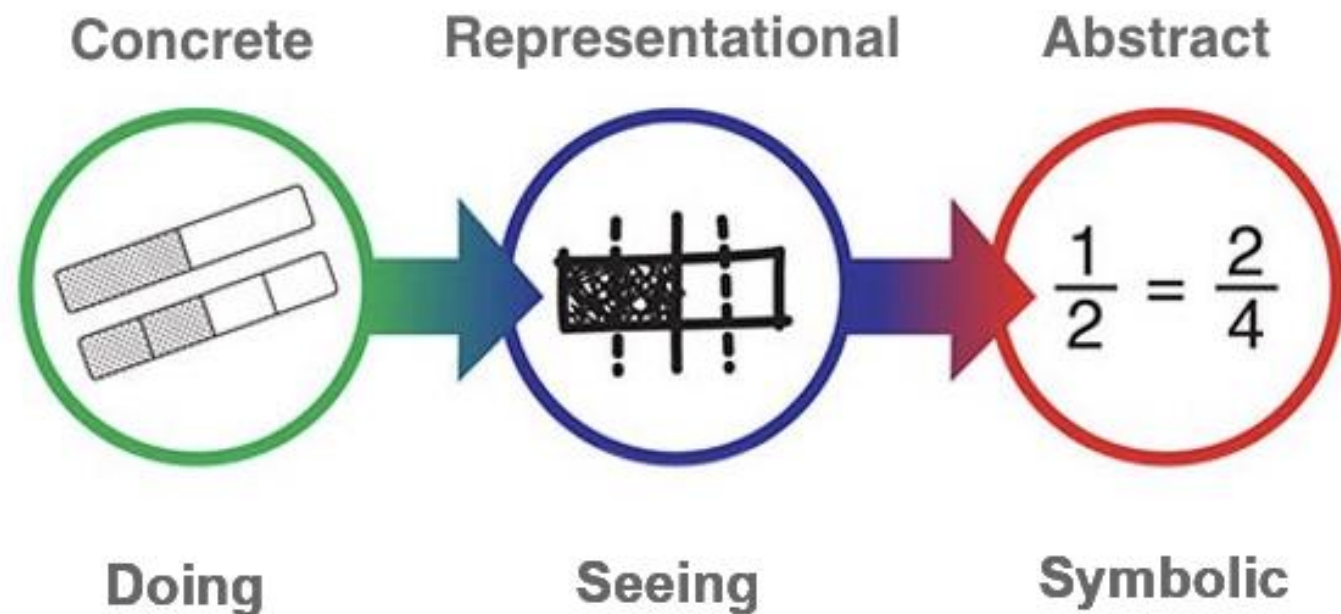
Questions de soustraction

$487 - 235 = \underline{252}$ Ma stratégie: $\begin{array}{r} 487 \\ -235 \\ \hline 252 \end{array}$	$542 - 315 = \underline{227}$ Ma stratégie: $\begin{array}{r} 542 \\ -315 \\ \hline 227 \end{array}$
$637 - 263 = \underline{374}$ Ma stratégie: $\begin{array}{r} 637 \\ -263 \\ \hline 374 \end{array}$	$741 - 565 = \underline{182}$ Ma stratégie: $\begin{array}{r} 741 \\ -565 \\ \hline 182 \end{array}$
$802 - 685 = \underline{117}$ Ma stratégie: $\begin{array}{r} 802 \\ -685 \\ \hline 117 \end{array}$	$400 - 250 = \underline{150}$ Ma stratégie: $250 + 150 = 400$

Questions de soustraction

$487 - 235 = \underline{252}$ Ma stratégie: $\begin{array}{r} 487 \\ -235 \\ \hline 252 \end{array}$	$542 - 315 = \underline{227}$ Ma stratégie: $\begin{array}{r} 542 \\ -315 \\ \hline 227 \end{array}$
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Math Pedagogy and the New Curriculum

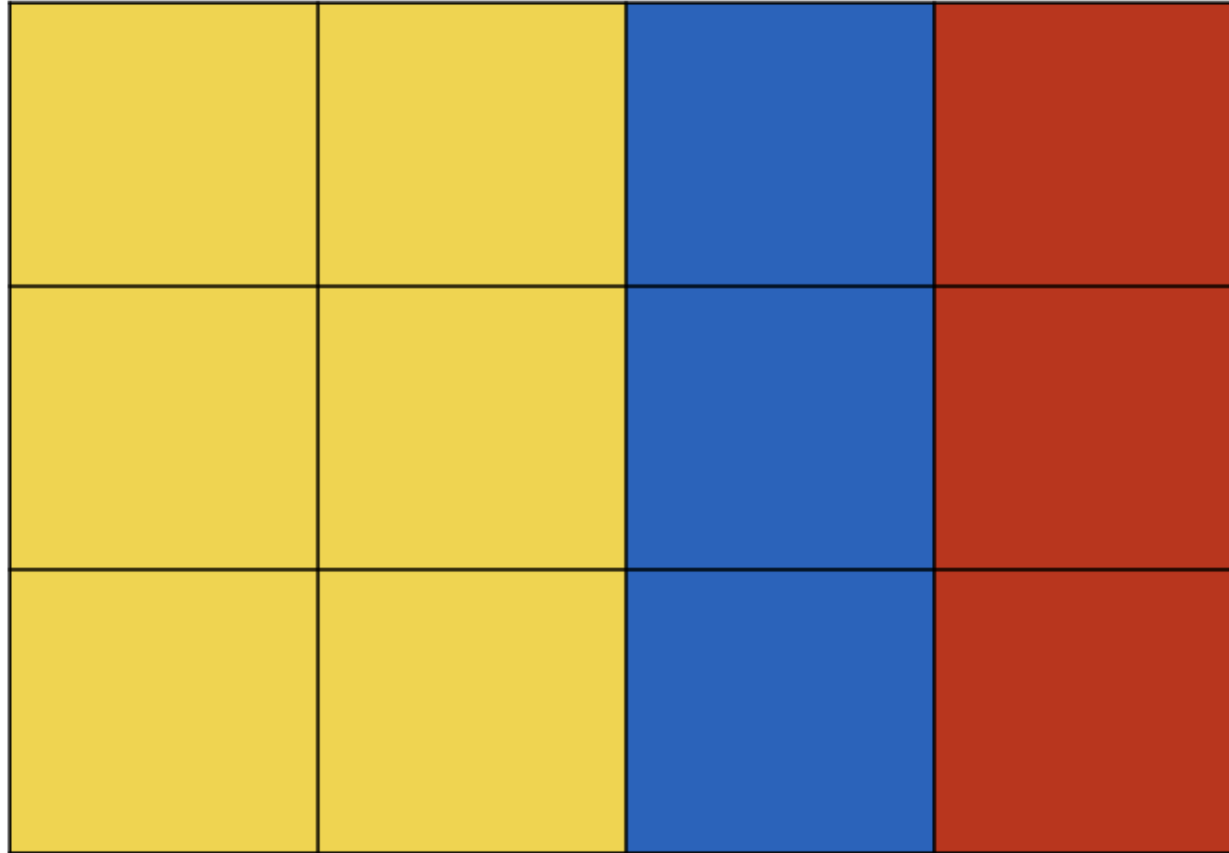


Doing

Seeing

Symbolic

Math Talks



Growth Mindset

THE POWER OF **YET**

a growth mindset attribute

I don't understand this...

I can't do this...

I'm not good at this...

It doesn't work...

This doesn't make sense...

I'm not an expert at this...

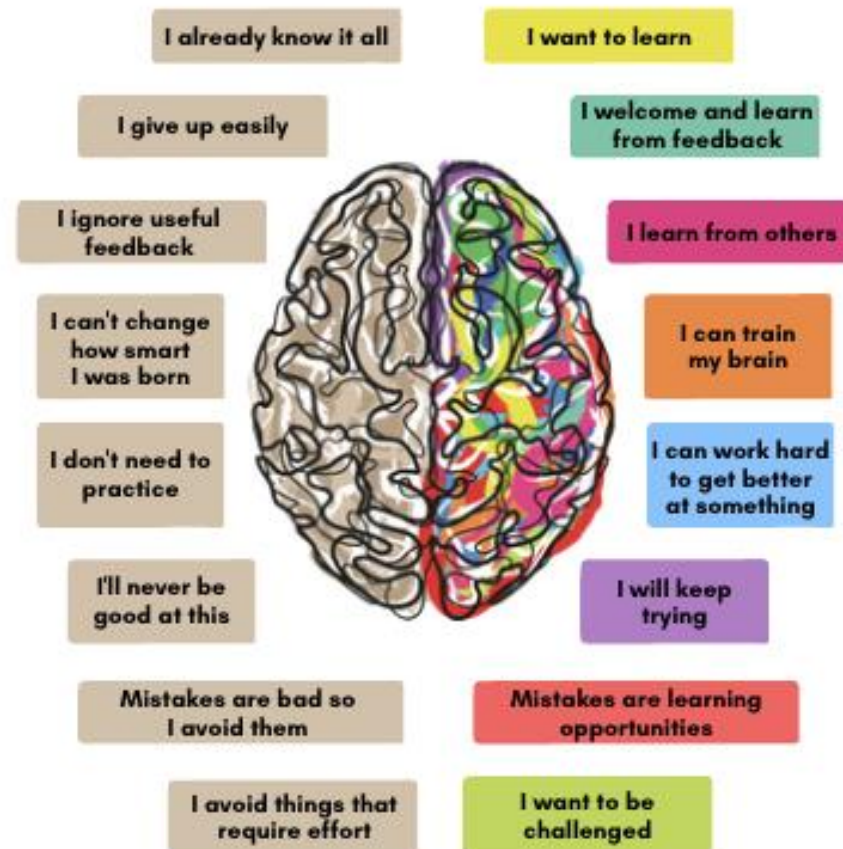
YET
YET
YET
YET
YET
YET

GROWTH MINDSET

The driver behind a learner's motivation and achievement

FIXED MINDSET

GROWTH MINDSET





How can you help mathematical thinking at home?

Play games that use dice

- model how you think when you add or subtract mentally

Play games that require strategy

- verbalize your strategy

Talk about money, play with money, let them pay with cash

Count everything - trees, cars, mailboxes, dishes, forks

Play number games in the car

- practice mental math “mystery number” I spy shapes “I see a shape that has 4 sides” practice add, subtract, multiply, divide with 2 cards

Bake and cook with children

- let them measure and convert (double, half)

Homework Help:

Ask questions before giving support

Can you draw the problem?

Can you think of a time you did something like this before?

What do you know already?

What do we need to find out?

Tell me what you think you're supposed to do.

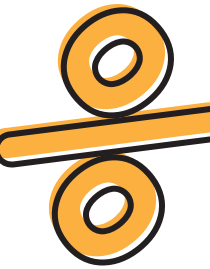
Be a Math Coach!

Do

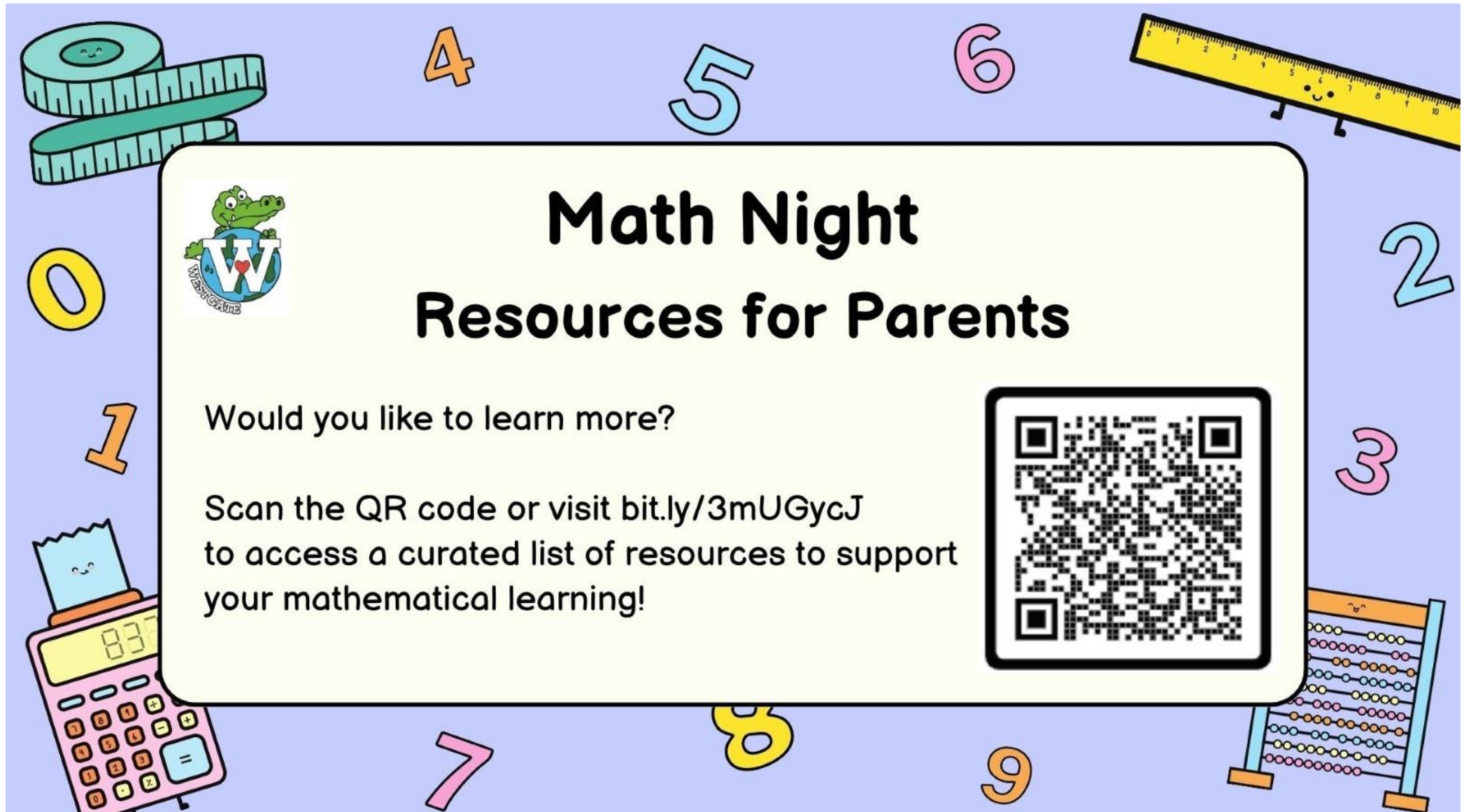
- Ask about what they are learning in Math at school
- Talk about numbers everywhere
- Play family card and board games to develop all types of math reasoning skills
- Speak about Math (and school) in a positive light
- Support your child through struggle and model your own thinking

Please do not

- Tell them they'll never use that in "real" life
- Quiz your child on basic facts until they cry
- Count the squares for your child or add their dice for them
- Say "I'm not a math person...."
- Take out your calculator (in front of them)



Thank you!

A colorful graphic with a light blue background featuring various math-related illustrations: a green measuring tape, a yellow ruler, a pink calculator, a blue abacus, and large, stylized numbers 0 through 9 in different colors. In the center is a white rounded rectangle containing the event title, a QR code, and a link.

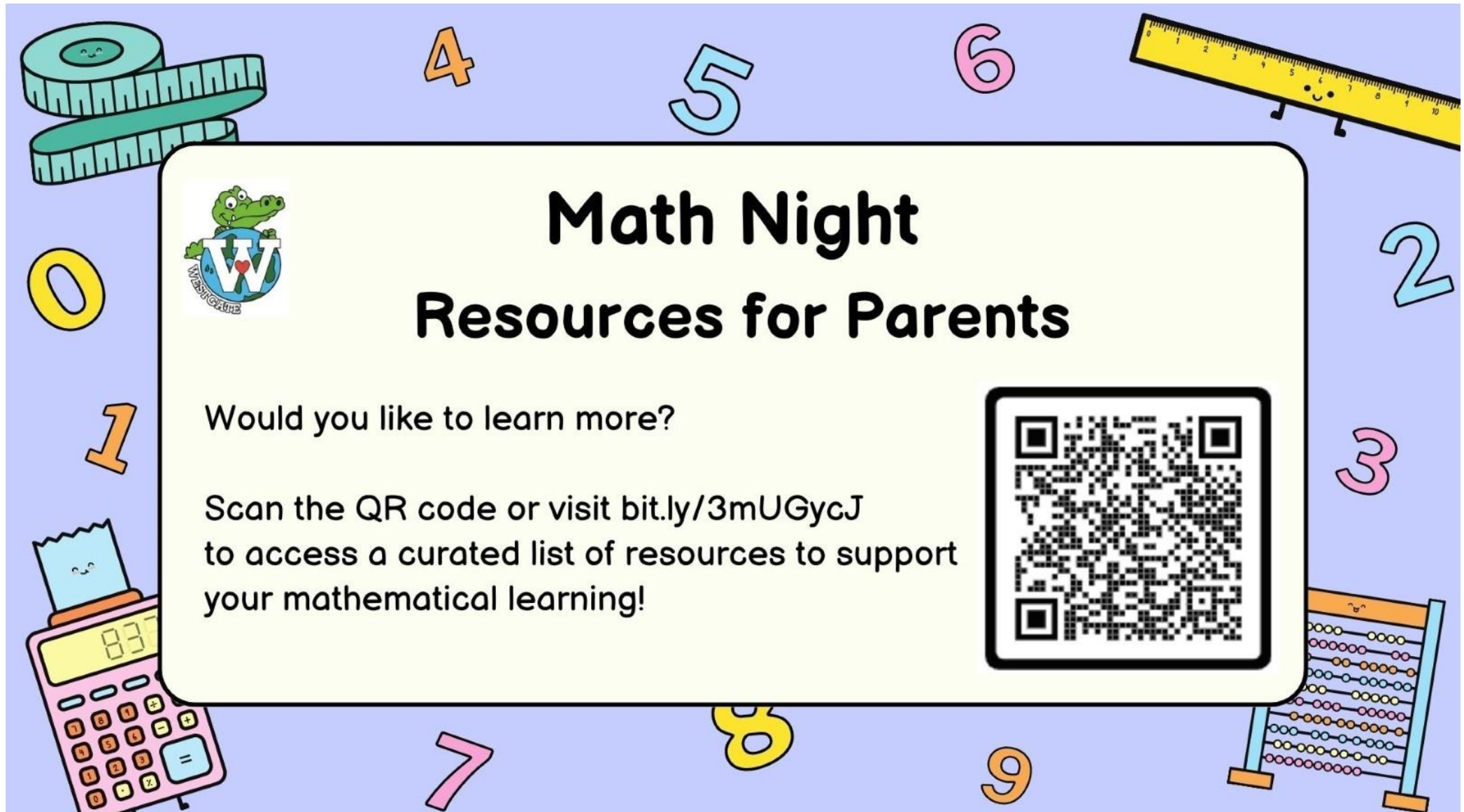
Math Night Resources for Parents

Would you like to learn more?

Scan the QR code or visit bit.ly/3mUGycJ
to access a curated list of resources to support
your mathematical learning!



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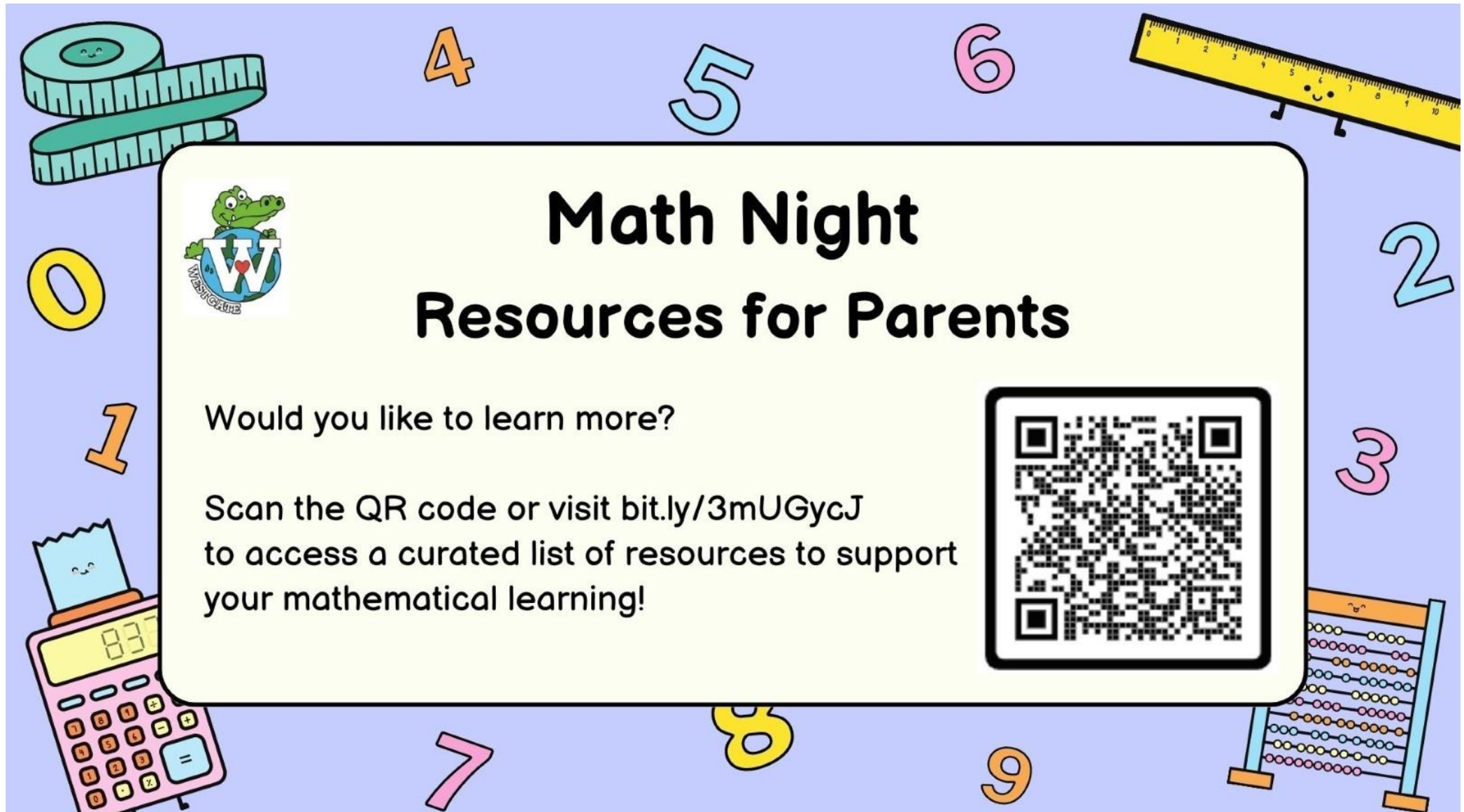
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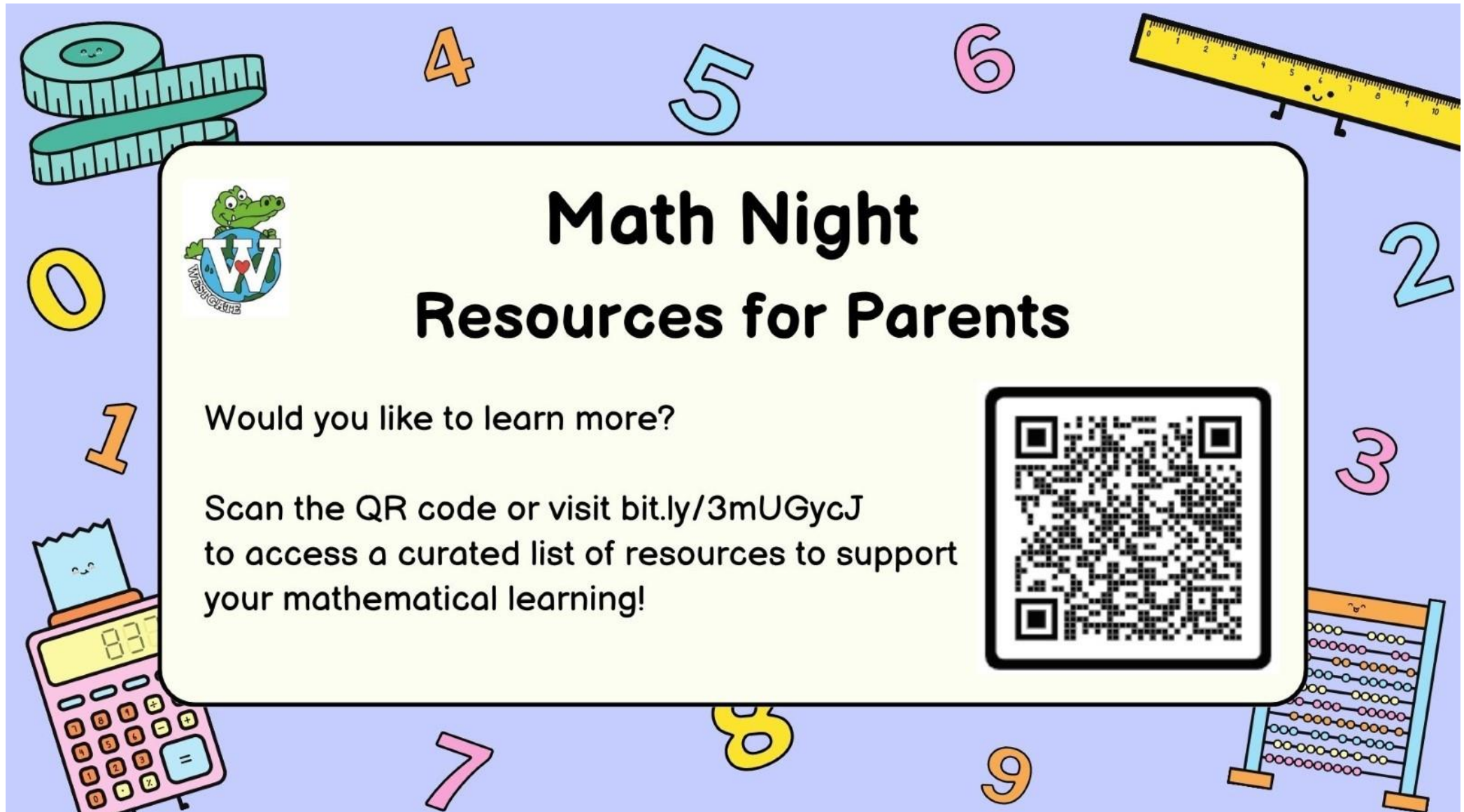
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