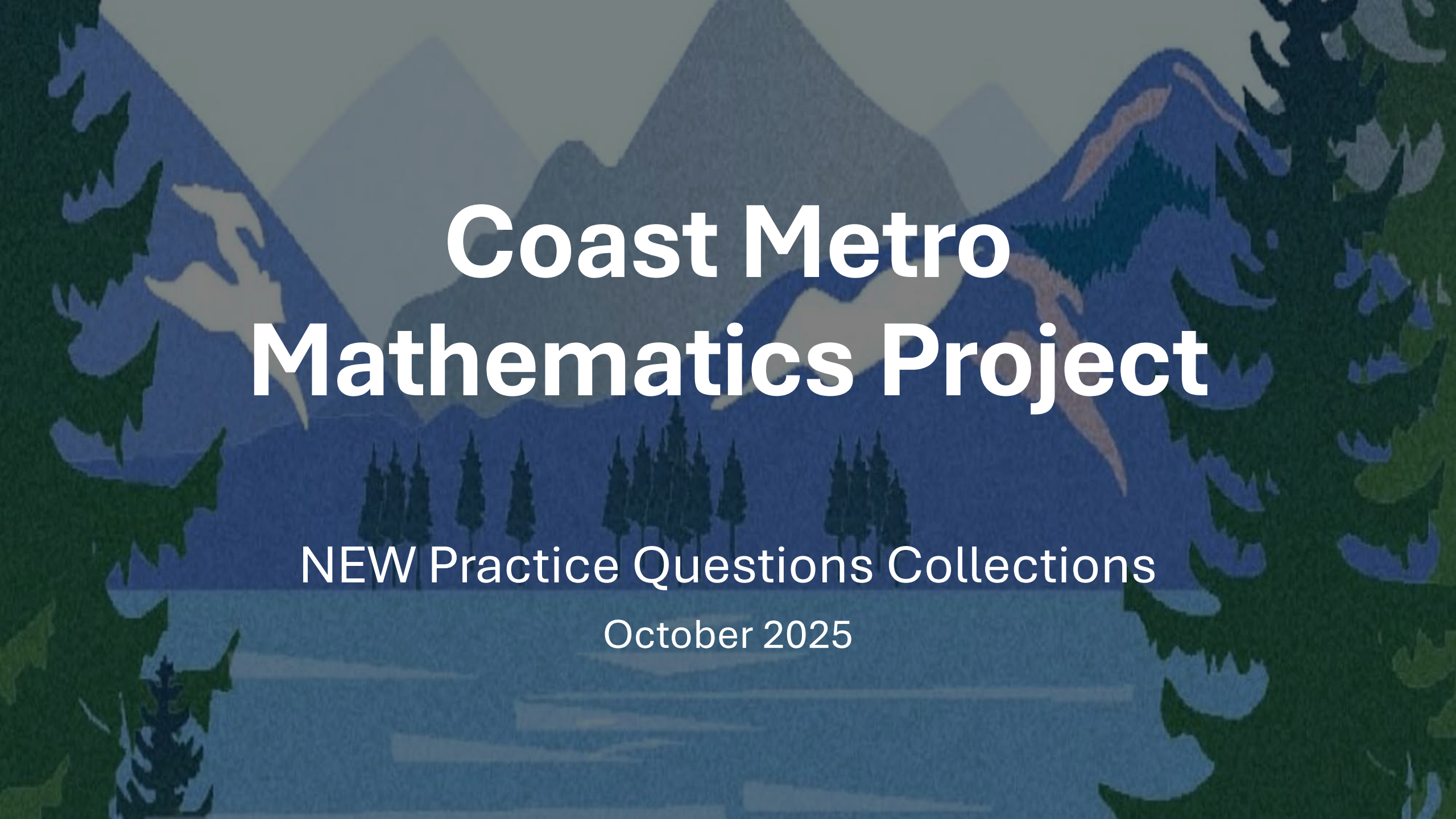


Coast Metro Mathematics Project

NEW Practice Questions Collections

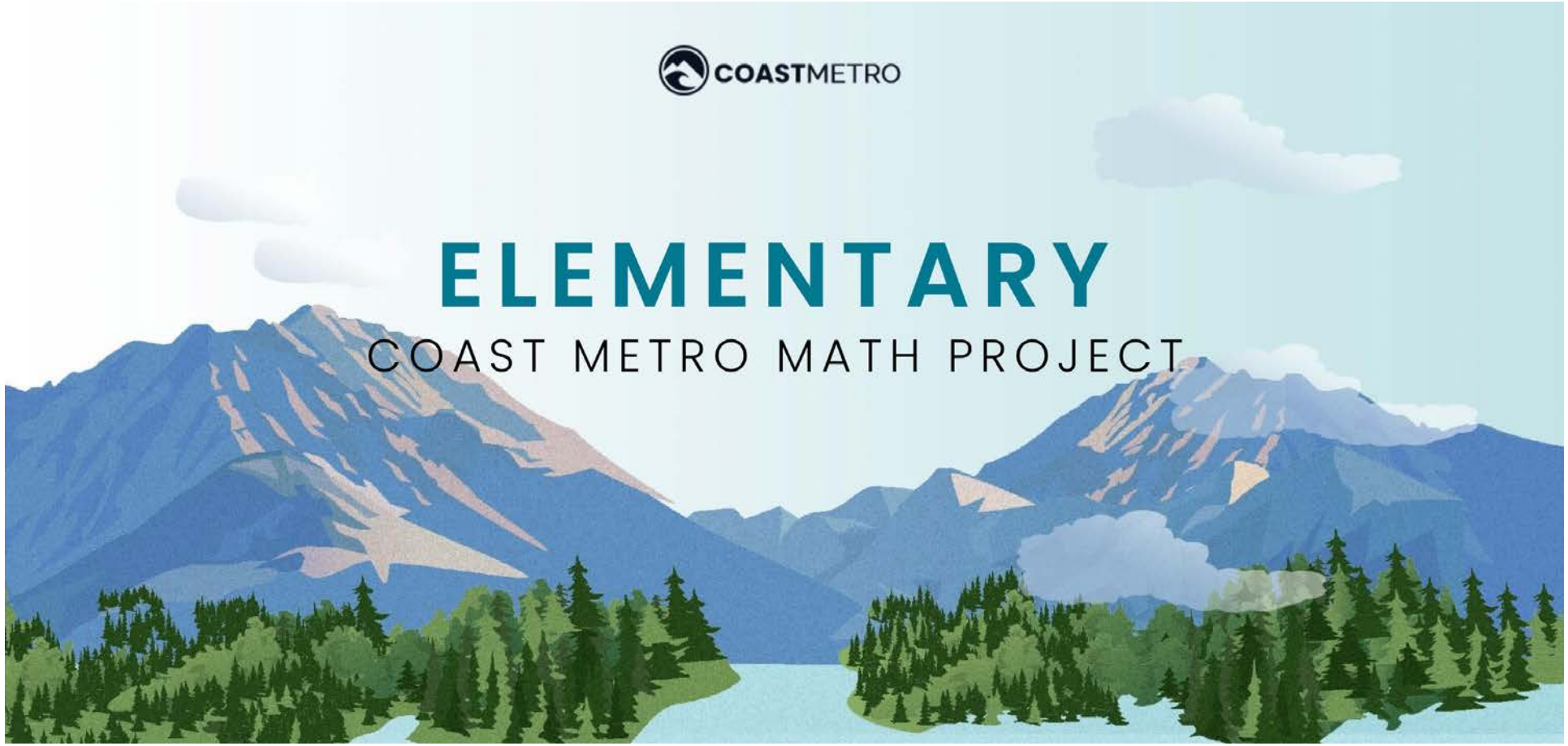
October 2025

Coast Metro Math Project Practice Questions

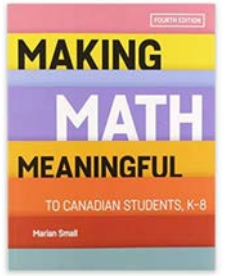
Session facilitators:

- Janice Novakowski
- Joshua Angiola

coastmetro.ca



the story of this project



- Coast Metro and LMMC collaboration in Spring 2022 with Dr. Marian Small
- Feedback from Coast Metro districts that elementary mathematics is an area needing resources and supports to enact the BC curriculum
- Summer secondment of LMMC teachers to draft the framework and develop three grade levels of resources
- Feedback cycle on first phase
- Moved from goal of a PDF document to a website resource
- Saturday secondment of LMMC teachers to complete grade level resources and general resources through March 2023
- Development of website and soft launch in April 2023 for feedback
- Coast Metro launch of their website and Elementary Math Project May 2023
- Grade 8 resources developed Summer 2024
- Next phase: Practice Questions Summer 2025

Part One: Considerations and Overview

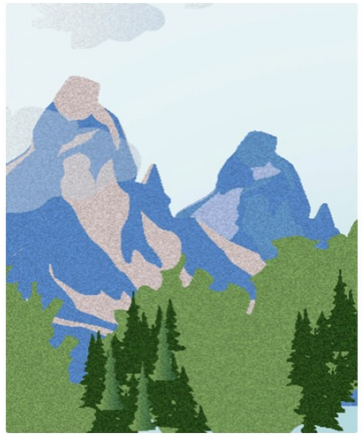
INTRODUCTION

After a successful spring 2022 professional learning series with Dr. Marian Small, the Coast Metro Consortium invited educators from the Lower Mainland Math Contacts (LMMC) group to develop an elementary math framework to support teachers in the Coast Metro region in the teaching and assessment of elementary mathematics. A team of teachers from the LMMC collaborated over the summer of 2022 using suggested elements from the Coast Metro Consortium to develop a shared vision for elementary mathematics education, grounded in the BC K-7 mathematics curriculum. This collaborative work continued through to March 2023 and is being made available to all BC educators. The following K-7 resources are focused on Number and Number Operations and the corresponding curricular competencies.

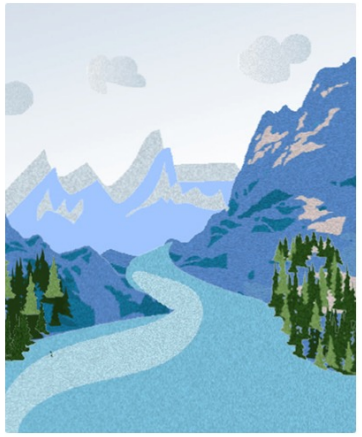
READ MORE

Part Two: Grade Level Frameworks

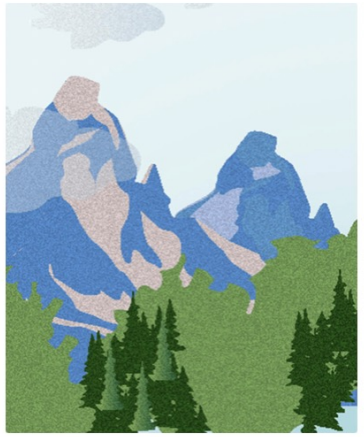
Part Three: K-7 General Resources



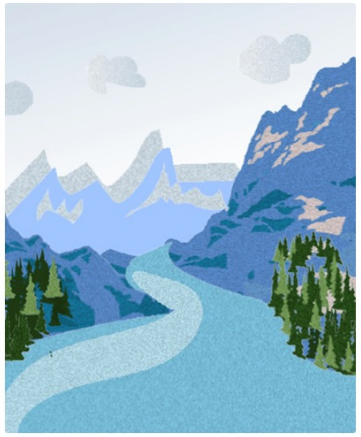
Math Games



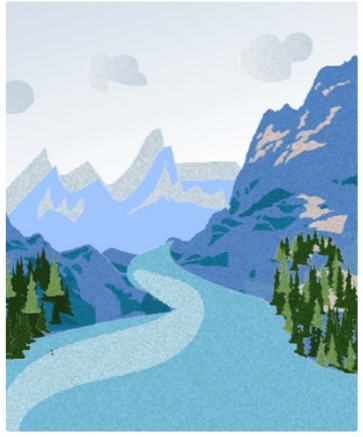
Indigenous Connections



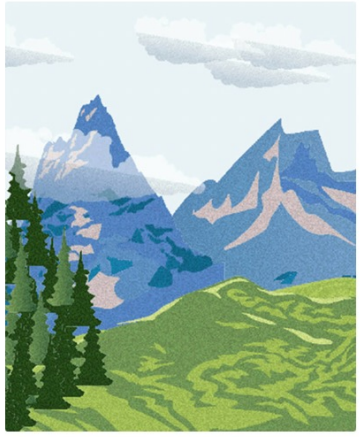
Assessment Tools



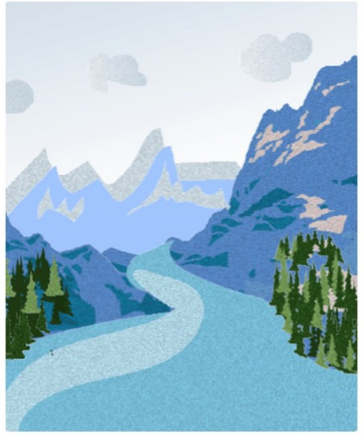
Instructional Routines



Practice Questions



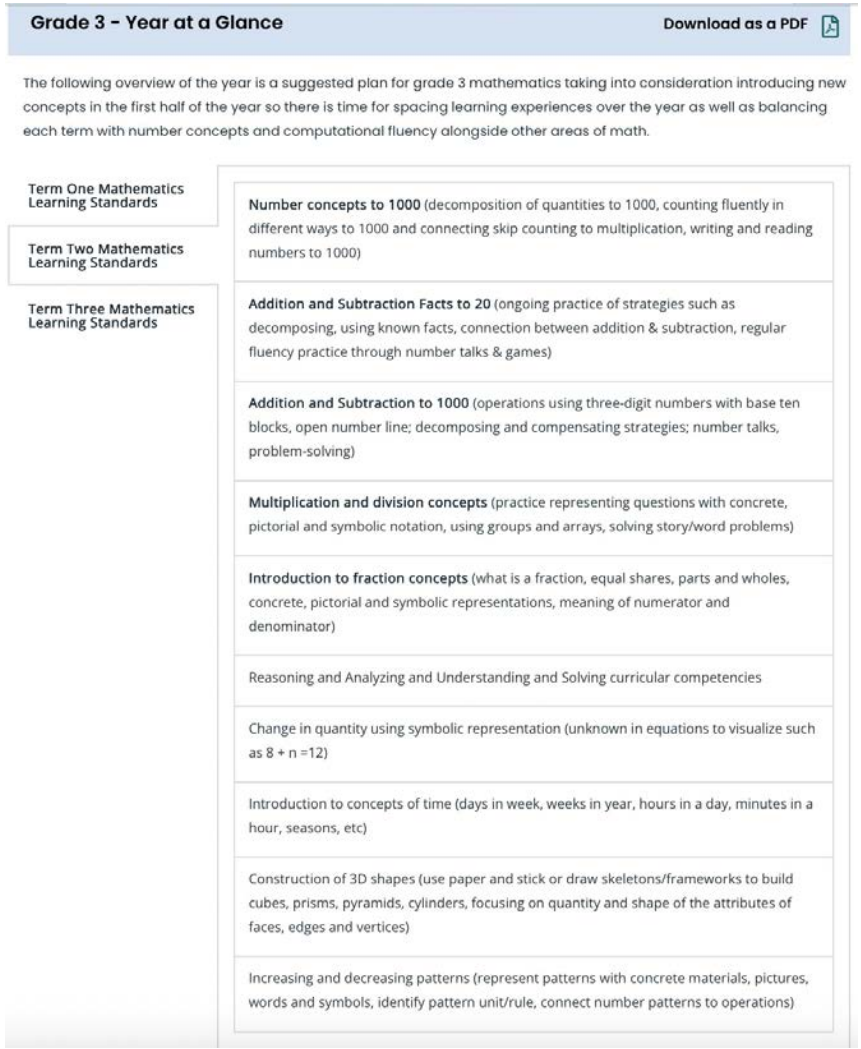
Children's Literature



French Resources

Suggested Year Plans

online
accordion
format



Grade 3 – Year at a Glance Download as a PDF

The following overview of the year is a suggested plan for grade 3 mathematics taking into consideration introducing new concepts in the first half of the year so there is time for spacing learning experiences over the year as well as balancing each term with number concepts and computational fluency alongside other areas of math.

Term One Mathematics Learning Standards

Term Two Mathematics Learning Standards

Term Three Mathematics Learning Standards

Number concepts to 1000 (decomposition of quantities to 1000, counting fluently in different ways to 1000 and connecting skip counting to multiplication, writing and reading numbers to 1000)

Addition and Subtraction Facts to 20 (ongoing practice of strategies such as decomposing, using known facts, connection between addition & subtraction, regular fluency practice through number talks & games)

Addition and Subtraction to 1000 (operations using three-digit numbers with base ten blocks, open number line; decomposing and compensating strategies; number talks, problem-solving)

Multiplication and division concepts (practice representing questions with concrete, pictorial and symbolic notation, using groups and arrays, solving story/word problems)

Introduction to fraction concepts (what is a fraction, equal shares, parts and wholes, concrete, pictorial and symbolic representations, meaning of numerator and denominator)

Reasoning and Analyzing and Understanding and Solving curricular competencies

Change in quantity using symbolic representation (unknown in equations to visualize such as 8 + n =12)

Introduction to concepts of time (days in week, weeks in year, hours in a day, minutes in a hour, seasons, etc)

Construction of 3D shapes (use paper and stick or draw skeletons/frameworks to build cubes, prisms, pyramids, cylinders, focusing on quantity and shape of the attributes of faces, edges and vertices)

Increasing and decreasing patterns (represent patterns with concrete materials, pictures, words and symbols, identify pattern unit/rule, connect number patterns to operations)

COASTMETRO

ELEMENTARY MATH PROJECT

Grade 3

Year at a Glance

The following overview of the year is a suggested plan for grade 3 mathematics taking into consideration introducing new concepts in the first half of the year so there is time for spacing learning experiences over the year as well as balancing each term with number concepts and computational fluency alongside other areas of math.

Term One Mathematics Learning Standards
Number concepts to 1000 (ways to make 1000, building understanding of place value with hundreds, tens and ones, counting by 10s, 50s and 100s from different starting points)
Addition and Subtraction Facts to 20 (review and practice of strategies including counting on, making and bridging 10, decomposing, doubles and related doubles, adding on to find the difference, through number talks, games and other practice tasks)
Addition and Subtraction to 1000 (review adding and subtracting two-digit numbers, begin strategies and practice to add and subtract two and one-digit numbers to and from three-digit numbers)
Introduction to multiplication and division concepts (meaning of symbols, groups, arrays, repeated addition, repeated subtraction, types of division contexts – partitive and quotitive, representing process of multiplication and division with concrete materials)
Communicating and Representing curricular competencies
Bar graphs and pictographs using one-to-one correspondence (collect data and represent in charts and tables, graphing data, interpreting data)
Likelihood of simulated events (using comparative language such as more, less or equally likely and develop an understanding of chance while flipping coins, rolling dice and using spinners)

Term Two Mathematics Learning Standards
Number concepts to 1000 (decomposition of quantities to 1000, counting fluently in different ways to 1000 and connecting skip counting to multiplication, writing and reading numbers to 1000)

printable pdf format

Suggested Week Plans

Sample Week at a Glance:

Download as a PDF

Before this week of lessons, grade 3 students will have developed an understanding of 100 and other century numbers and had some experience representing three-digit numbers with concrete materials and symbolic forms. They will have learned to play the math games Three-Digit Face Off and Place the Digits as a whole class. The students have been introduced to adding and subtracting three-digit numbers.

Monday −

Read excerpts from Animals by the Numbers by Steve Jenkins inviting conversation about how numbers help us understand our world

Pose a problem inspired by the book or invite students to choose an animal and create a mini-project highlighting numbers about that animal (size, population, distance traveled, amount of food, etc)

Closing circle – share and discuss numbers used and compare animal's numbers with a partner

Tuesday +

Wednesday +

Thursday +

Friday +

Based on formative assessment information from this week, next week's planning would include extending ways to represent three-digit numbers in different ways, including expanded notation. Students will continue to develop strategies such as decomposing by place value or compensating to add and subtract three-digit numbers in different ways.

COASTMETRO

ELEMENTARY MATH PROJECT

Grade 3

Key Number Concept 1: Place Value

Sample Week at a Glance

Before this week of lessons, grade 3 students will have developed an understanding of 100 and other century numbers and had some experience representing three-digit numbers with concrete materials and symbolic forms. They will have learned to play the math games Three-Digit Face Off and Place the Digits as a whole class. The students have been introduced to adding and subtracting three-digit numbers.

Monday	Read excerpts from Animals by the Numbers by Steve Jenkins inviting conversation about how numbers help us understand our world Pose a problem inspired by the book or invite students to choose an animal and create a mini-project highlighting numbers about that animal (size, population, distance traveled, amount of food, etc) Closing circle - share and discuss numbers used and compare animal's numbers with a partner
Tuesday	Same but Different routine: comparing 428 and 824 Math Workshop -exploring place value relationships through base ten blocks -Three-Digit Face Off game -Counting Collections between 100-300 -Teacher led small group instruction: reading and writing two or three-digit numbers Closing Circle - students sharing what they did, what they learned and where they want to go next with their learning about place value
Wednesday	Class discussion having students share what they know about place value. Invite students to choose different materials to help them think about place value in new ways. Include base ten blocks, Cuisenaire Rods, ten frames, grid paper, loose parts, numerals, etc. Invite students to represent numbers in different ways.

Three-Part Lesson Framework

before, during, after

1) Getting Started (10-15 minutes) – cognitive preparation of Ss, sometimes called "explore"

2) "Work" Phase (30-40 minutes) – SS are solving math problems, Ss planning the strategies, methods and materials to use, Ss choose how they will share their process and solutions, sometimes called math workshop

3) Consolidation Phase (10-15 minutes) – teacher selects Ss to share and connect via a math congress or assembly or a gallery walk

credited to Dr. John van de Walle, mathematician and mathematics education researcher, Virginia Commonwealth University

what we heard from teachers across the province was a need for more "practice" questions" to use during Math Workshop and throughout the year in different ways

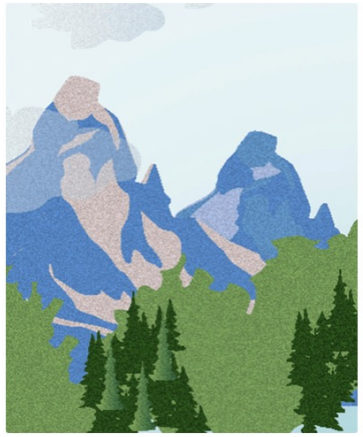
What is practice?

- intentional
- social
- spaced
- interleaved
- deliberate
- materials
- repetitive
- structured
- guided
- dynamic
- games
- rote
- retrieval
- playful
- collaborative
- purposeful
- extending
- transfer to deeper learning
- stickiness
- identity
- student agency

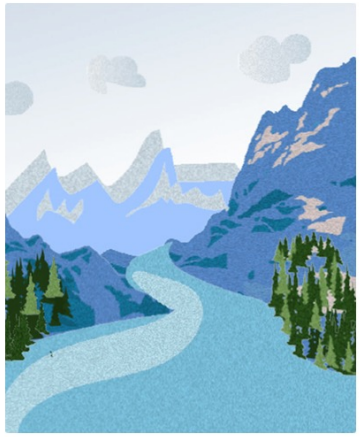
Coast Metro Summer Writing Project 2025

- Stage One: Grades 2 and 6
- LMMC teachers
- Creating a bank of practice questions
  - online and as a downloadable pdf, slides and pages
  - address all five "strands" of the BC mathematics curriculum
  - include closed and open questions that embed competencies
  - including suggestions and frames for teachers to develop their own practice questions and other instructional supports for teachers

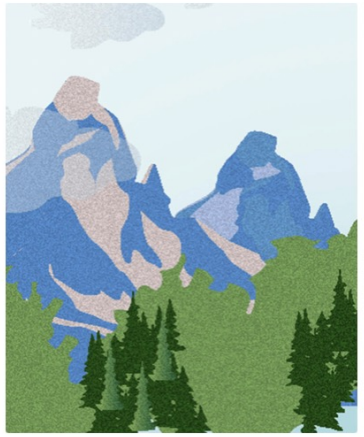
Part Three: K-7 General Resources



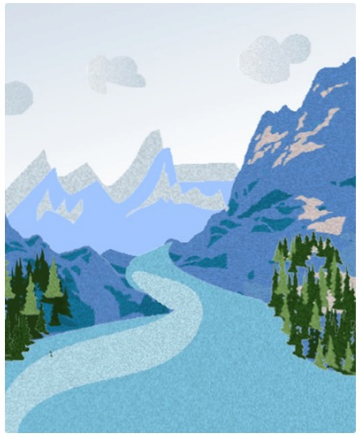
Math Games



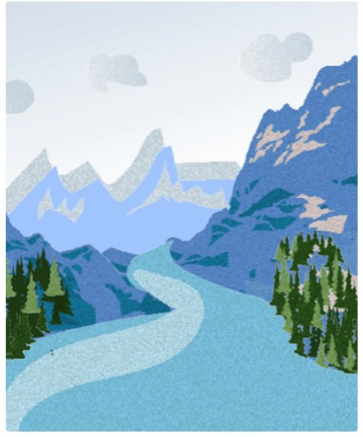
Indigenous Connections



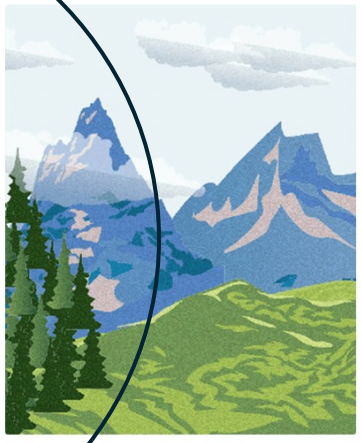
Assessment Tools



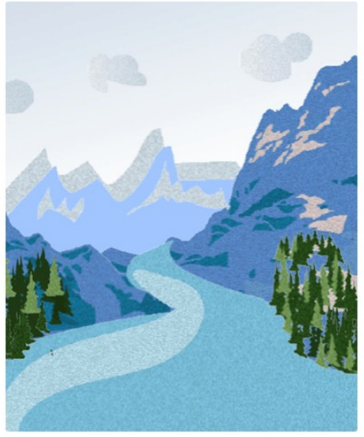
Instructional Routines



Practice Questions



Children's Literature



French Resources

Practice Questions

What is this resource?

Welcome to a new (2025) resource designed to supplement the Coast Metro Elementary Mathematics Project. This resource was developed in collaboration with the Coast Metro Consortium and the Lower Mainland Math Contacts network of teachers, in response to teacher requests from across the province.

This resource includes two components: 1) support materials for teachers to use to think about and implement effective mathematics practice in their classrooms, and 2) banks of BC curriculum-aligned grade-level practice questions, focusing on the five big ideas in our K-9 mathematics curriculum.

What is Practice?

Mathematics practice involves repeated engagement with new or previously learned concepts, skills, processes, and competencies to build understanding, fluency, and proficiency. Mathematics teachers from across Coast Metro were asked what words came to mind when asked about practice:

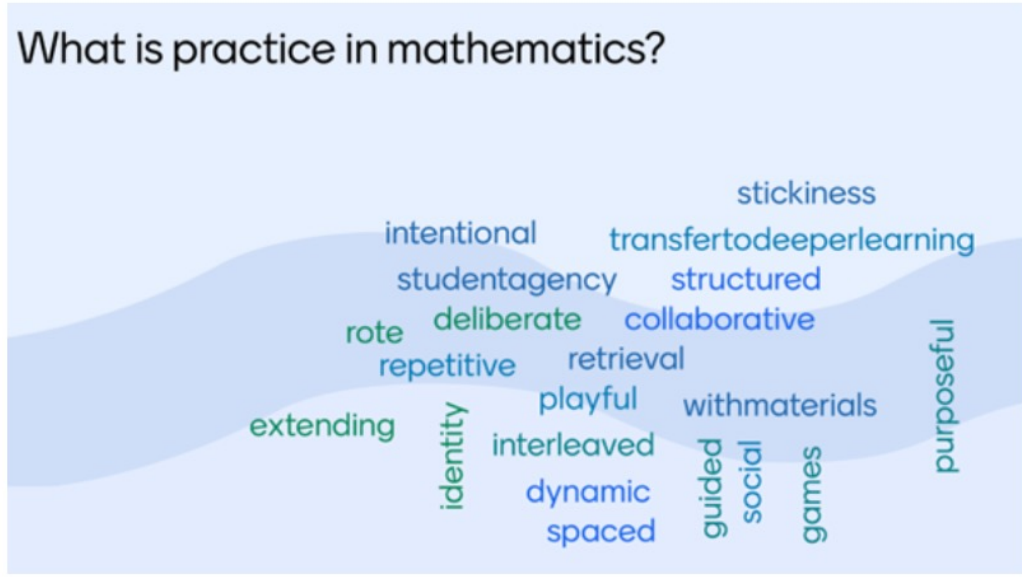


Image Source: Created by Lower Mainland Mathematics Contacts using Mentimeter

For practice to be effective, it needs to be accessible to all students through choice of materials, number ranges, types of questions, choice of supports and how, when, where, and who students learn with.

What are types of practice?

Students can engage in mathematics practice in many different ways. First, we can consider how students are grouped: whole group, small group, or individual. In mathematics, whole group practice is often embedded within math talks and other instructional routines. You can find more information about these routines on the Coast Metro website here:

https://coastmetro.ca/elementary-math-project/instructional-routines/

Small group practice can occur in many ways and at various points during a lesson or week, for example, students might be working on a practice task during Math Workshop. Math games are another type of small group practice. More information about using math games for small group practice is included in this resource.

Independent practice can occur when a student is using materials, responding to a question or task orally or recording their process and solutions with pictures, numbers, and words on a whiteboard or in a math notebook.

The collection of practice questions included in this resource is intended for independent practice but could also be used for small group practice. Within these types of practice, we also consider a second form of practice: closed and open questions. Closed questions being those with only one correct response, while open questions may have a range of different responses and/or different approaches or strategies.

How can this resource be used in classrooms?

These teacher-created BC curriculum-aligned can be used in many ways to create different forms of practice tasks:

- copy and paste a set of questions onto a page, then photocopy/print for each child with room for students to respond under each question
- print the pdf version of the questions and either print selected pages for students or cut them into strips to glue onto a page of the students' notebooks to answer and record their thinking on the page
- project them onto a screen to read together and then provide students with individual whiteboards to respond on
- print on cardstock and cut up to put in a basket as a choice task during Math Workshop
- have available for a TTOC or colleague providing coverage for your class

The practice questions are compiled under the following mathematics areas:
Number Concepts, Computational Fluency, Patterning, Algebra, Data, Probability, Geometry, Measurement, and Financial Literacy.

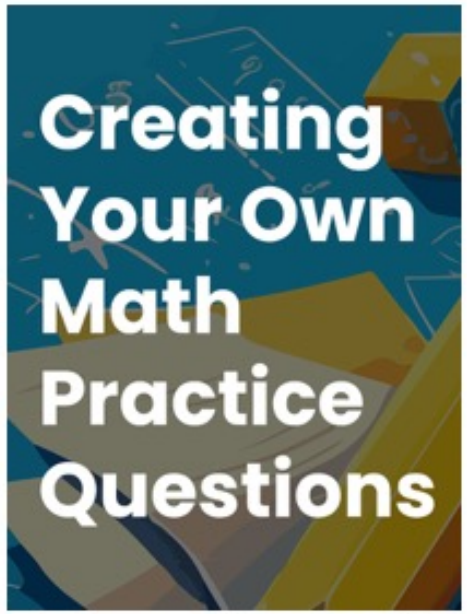
This collection of practice questions is a comprehensive list of example questions that can be adapted and adjusted to create more questions as necessary throughout the school year.

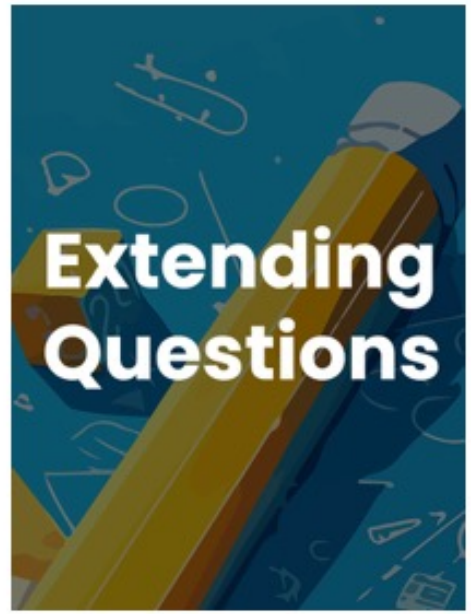
It is intended that Number and Computational Fluency are developed all year long, with regular practice in these areas embedded throughout each week. To this end, we have provided many more practice questions in these areas. Please refer to the Coast Metro "Year at a Glance" documents on each grade level tile to see how Number Concepts and Computational Fluency are developed over the school year:

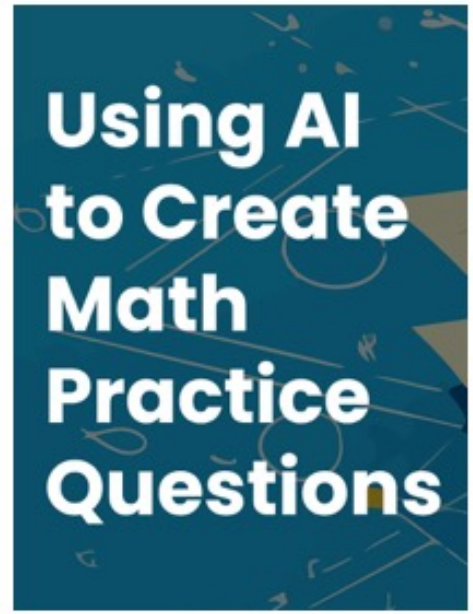
https://coastmetro.ca/elementary-math-project/

Also note that we have included sets of mixed review practice questions as we know it also important to have spaced review for all areas of the mathematics curriculum.


Using Games as Practice

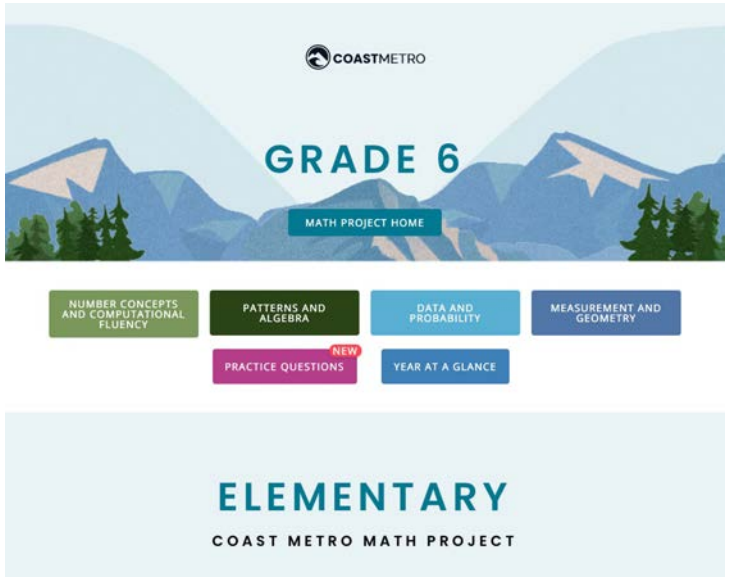

Creating Your Own Math Practice Questions


Extending Questions

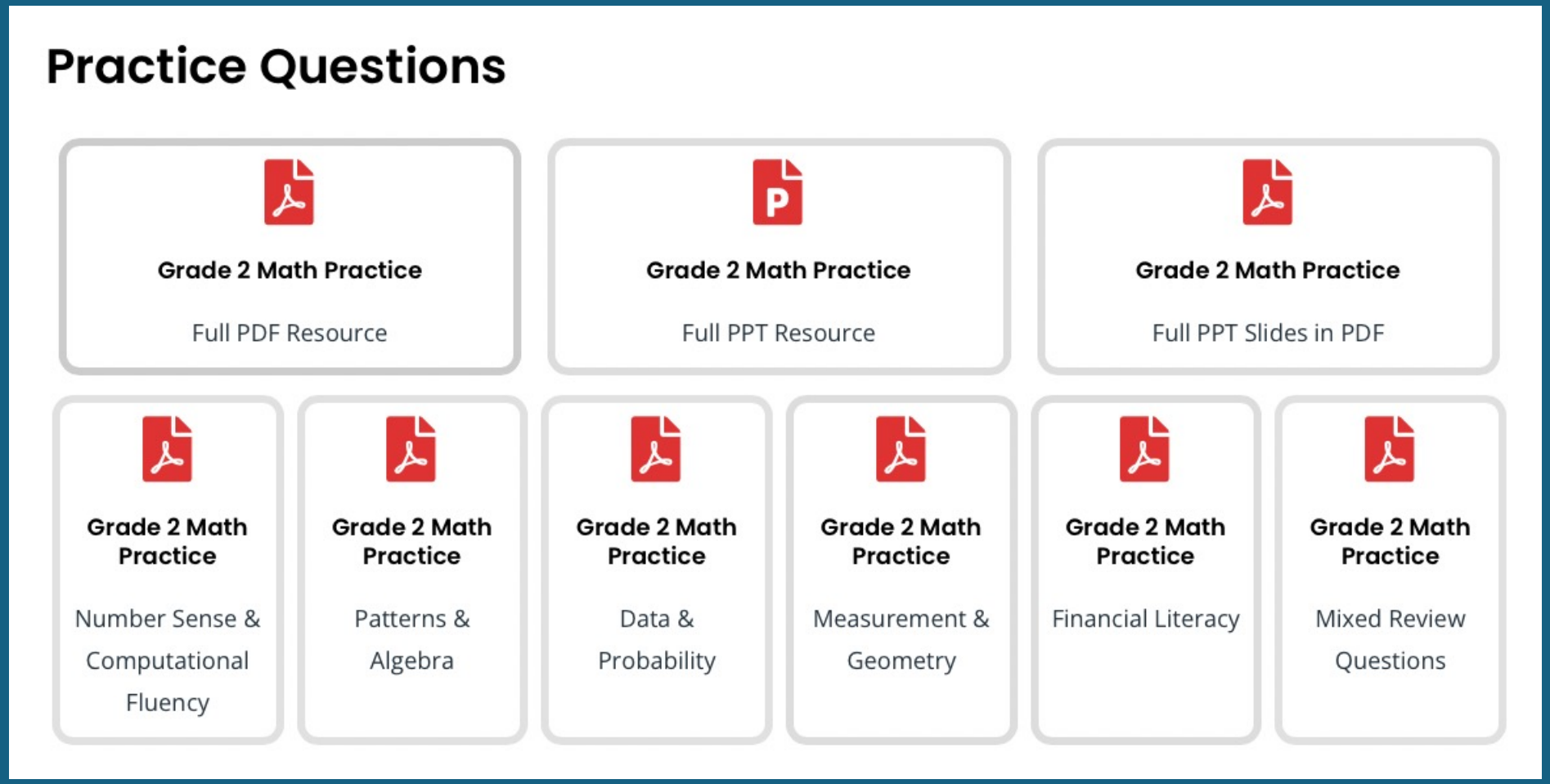

Using AI to Create Math Practice Questions


Glossary of Terms

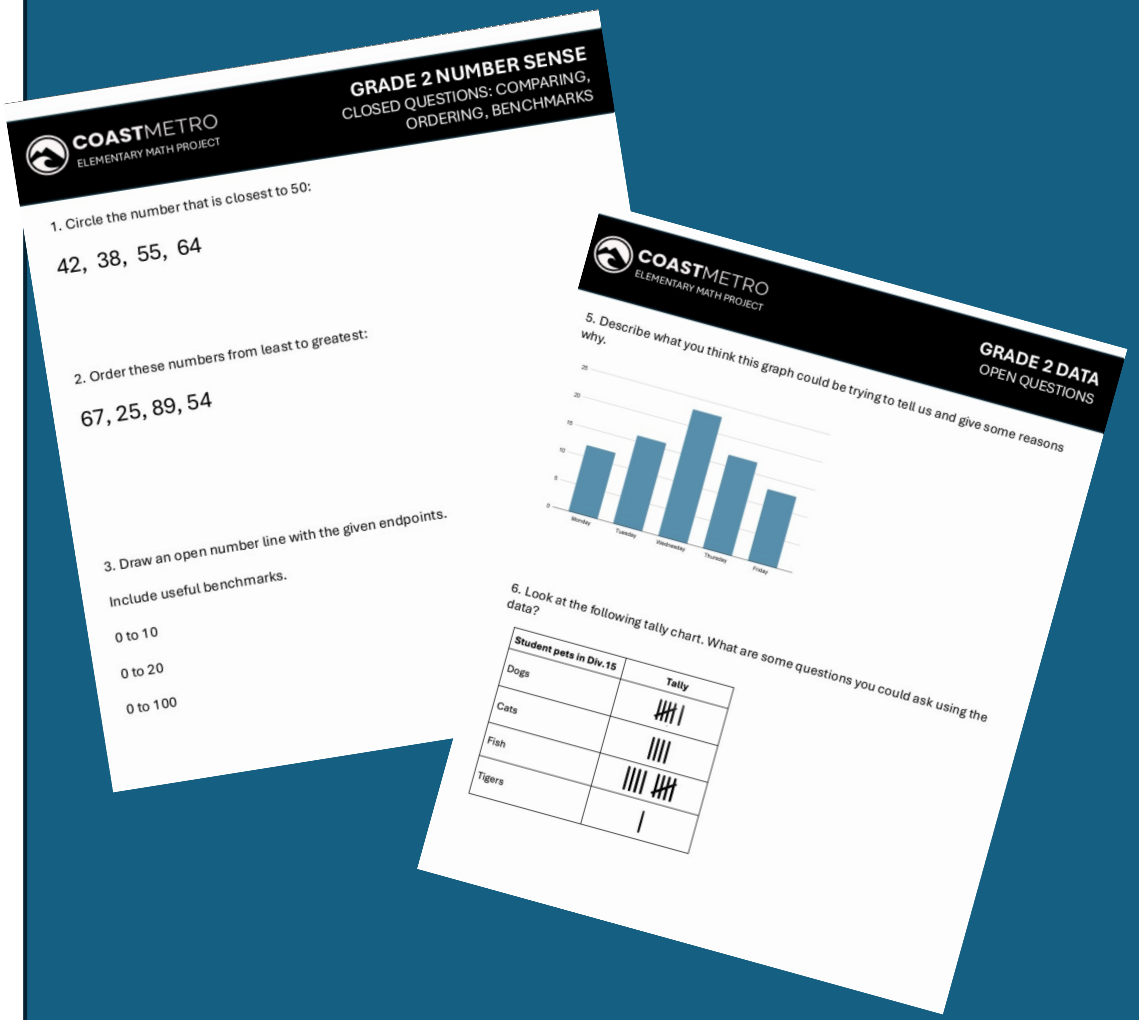
where to find the banks of practice questions!

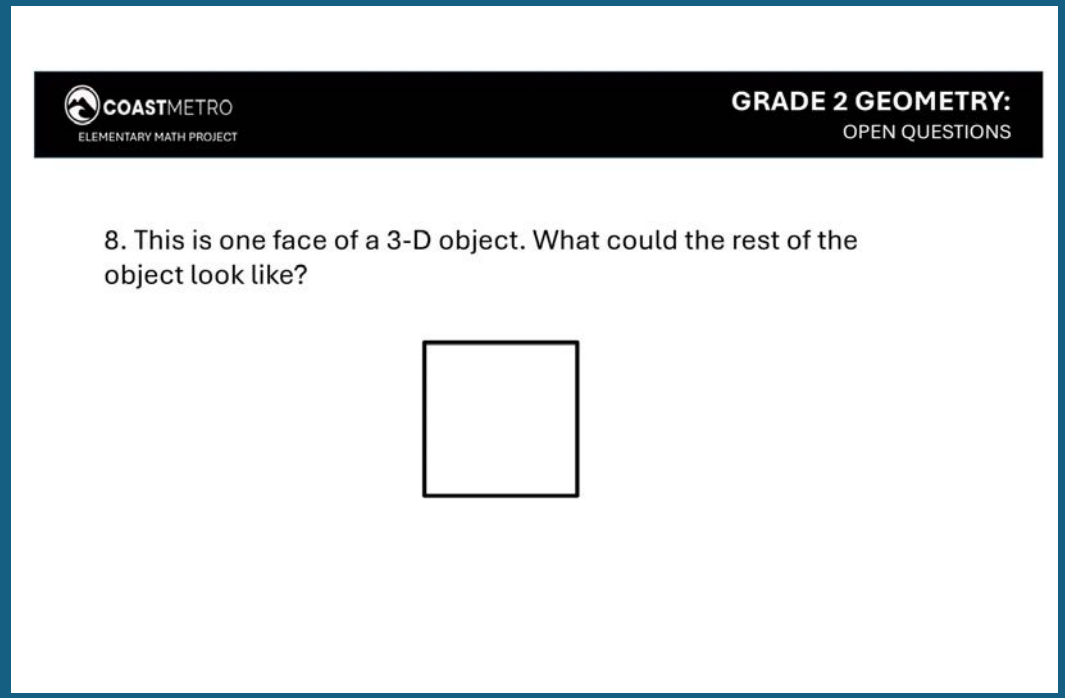


New Banks of Practice Questions Grades 2 and 6

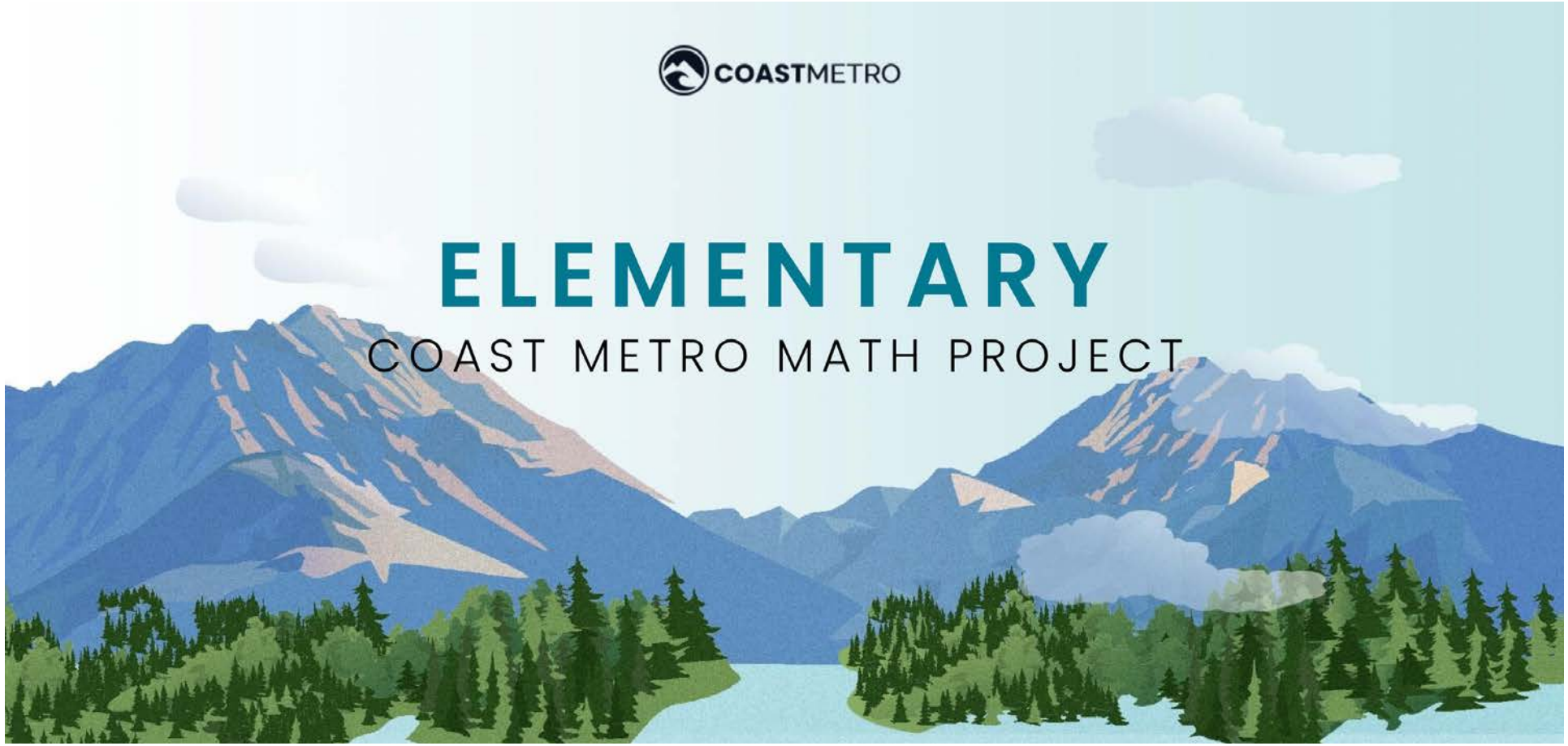


New Banks of Practice Questions

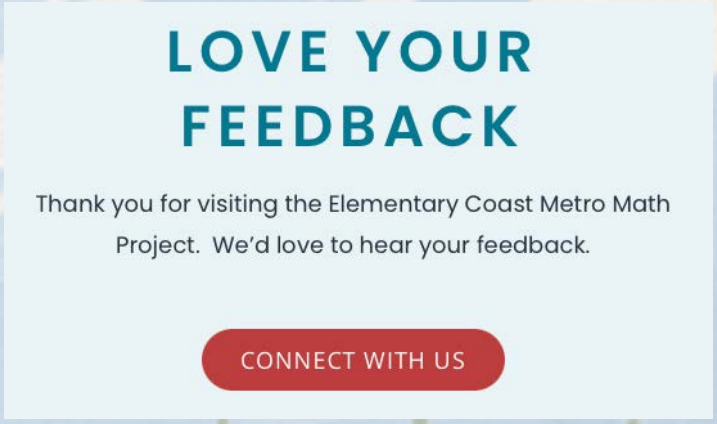




and let's have a look at coastmetro.ca



How will you use the collections of practice questions to support the teaching and learning of mathematics?



thank you!