

INSTRUCTIONS FOR USING REMOTE LEARNING PROJECTS

These materials were developed with the intention of easing the transition between in-class and temporary remote learning. Learning experiences are aligned with curricular outcomes and assessment tools have been included with each project.

Note:

1. The teacher either sends a link to the appropriate project or sends the document itself.
2. The teacher ensures that parents/caregivers receive any required school supplies (bin with pencils, markers, paper, etc.).
3. The teacher reassures parents/caregivers that communication will be maintained between home and school.
4. Parents/caregivers may access additional resources at:
 - My Learning at Home (www.edu.gov.mb.ca/k12/mylearning)
 - My Child in School (www.edu.gov.mb.ca/k12/mychild/index.html)

PROJECT OVERVIEW

Grade:	3
Main Subject:	Mathematics
Big Idea:	<ul style="list-style-type: none">• Multiplication and division are intrinsically related.• Flexible methods of calculation in all operations involve decomposing and composing numbers in a wide variety of ways.• Flexible methods of calculation require a strong understanding of the operations and properties of the operations.
Title:	MULTIPLICATION AND DIVISION
Strand:	Number
Duration:	2–3 weeks
Materials:	<p>Internet Accessible Device (if available), paper, pencil, non-permanent surface (personal white board), and dry erase markers. Links to resources can be found in the notes section of each slide if a teacher finds they would like to access them.</p> <p>Hands-on manipulatives are ideal as significant learning occurs when students can build and visualize different representations of mathematics. Websites containing virtual manipulatives are suggested.</p> <p>If a specific platform is used for delivering online instruction (i.e. Seesaw, Google Classroom), asynchronous tasks can be uploaded there.</p>
Short Description:	<p>This collection of tasks is designed around the concept of multiplication and division, more specifically introducing multiplication and division. The 6 main sections (colored tabs on top of each slide) represent independent methods/types of tasks for teaching with a combination of synchronous and asynchronous parts, some of which are easily adaptable either way depending on your situation and access to technology and connectivity.</p>

LEARNING OUTCOMES

Mathematics: www.edu.gov.mb.ca/k12/cur/essentials/docs/glance_kto9_math.pdf
3.N.1, 3.N.11, 3.N.12

ASSESSMENT

LANGUAGE ARTS					MATHEMATICS			SCIENCE			SOCIAL STUDIES		
COMP. Listening & Viewing	COMP. Reading	COMM. Speaking & Represent.	COMM. Writing	Critical Thinking	Knowledge and Understanding	Mental Math & Estimation	Problem Solving	Knowledge and Understanding	Scientific Inquiry Process	Design Process & Problem Solving	Knowledge and Understanding	Research and Communication	Critical Thinking and Citizenship
					X*	X*	X*						

* Included tasks have aspects of knowledge and understanding, mental math and estimation, and problem solving. Although no assessment tools are included with this learning experience, teachers are encouraged to gather and record evidence of student learning in all three of these categories.

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LEARNING EXPERIENCES AND ASSESSMENT

Overall

Teacher's instructions

This collection of tasks is designed around the concept of multiplication and division, more specifically introducing multiplication and division. The six main sections (colored tabs on top of each slide) represent independent methods/types of tasks for teaching with a combination of synchronous and asynchronous parts, some of which are easily adaptable either way depending on your situation and access to technology and connectivity.

These resources represent a collection of research-based, high engaging tasks to introduce multiplication and division in a remote setting. Tasks were collected with the intention that a teacher will adapt them to fit the needs of their situation and the learning needs of their students. Links to resources can be found in the notes section of each slide if a teacher finds they would like to access them.

Using the style of the three-part lesson, teachers are encouraged to select a Number Talk, a main task (which would include consolidation), and then assign an appropriate asynchronous task (game, reflection on a visual...).

FOR SYNCHRONOUS LEARNING, THE SLIDEDECK SHOULD BE IN EDIT MODE.

Step-by-step instructions for students:

These will need to be provided by the teacher in terms of what parts will be student-led and those that will be teacher-led. More detailed instructions for each learning experience are included in the NOTES section under each slide.

APPENDIX (PRINTABLE SUPPORT MATERIALS INCLUDING ASSESSMENT)

Grade 3: Multiplication and Division.pptx
Grade 3: Multiplication and Division Rubric.docx

Multiplication and Division Rubric				
Student:	<i>Basic descriptors to help guide your formative assessments.</i>			
Basic descriptors to help guide your formative assessments. Full details of the student achievement profiles can be found here: Mental Math and Estimation Knowledge and Understanding Problem Solving	Requires considerable ongoing teacher support.	Requires occasional teacher or peer support.	Accurate, clear, and uses appropriate strategies and procedures. Requires occasional prompting for clarification.	Accurate, clear, flexible, consistent, and efficient. Justifies and explains reasoning clearly and completely using accurate math vocabulary.
	Limited	Basic	Good	Very Good/Excellent
<i>Tracking student data throughout these learning experiences allows the teacher to make an informed assessment about a student's level of achievement of these outcomes.</i>				
Describe and apply Mental Math strategies: Adding the same number (skip counting)				
Describe and apply MM strategies: Subtracting the same number (skip counting backwards)				
Describe and apply Mental Math strategies: Knowing half/ breaking into smaller parts				
Represents and explains multiplication using equal grouping and arrays (up to 5 x 5)				
Represents and explains division as equal sharing and/or equal grouping (up to 5 x 5)				
Models multiplication using concrete and visual representations (up to 5 x 5)				
Models division using concrete and visual representations (up to 5 x 5)				
Relates multiplication to repeated addition and vice versa				
Relates division to repeated subtraction and vice versa				
Relates multiplication to division and vice versa (up to 5 x 5) using arrays and related number sentences				
Solves problems in context that involve multiplication				
Solves problems in context that involve equal sharing and/or equal grouping				

Suggested Codes for daily record keeping purposes:

- I – Knowledge has been demonstrated individually
- H – Used when knowledge has been demonstrated individually, but with help from the teacher or a peer
- G – Used when knowledge has been demonstrated within a group
- X – Used when a question has been attempted but answered incorrectly
- N – Used when a question has not been attempted

Adapted from: Liljedahl, P. (2021). *Building thinking classrooms in mathematics, grades K-12: 14 teaching practices for enhancing learning*. Thousand Oaks, CA: Corwin Press Inc.