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:	4
Main Subject:	Mathematics
Big Idea:	The same object or space can be described using different measurements
Title:	USING MEASUREMENT TO UNDERSTAND AND DESCRIBE THE WORLD
Strand:	Shape and Space/Patterns and Relations/Number
Duration:	1–2 weeks
Materials:	See PowerPoint, Slide 5
Short Description:	This is a collection of learning experiences grounded in the concepts of area and perimeter, enhanced through patterns and the development of mental math multiplication strategies. Synchronous time is preferred for some of the learning experiences; however, the majority are adaptable to an independent format if necessary.

LEARNING OUTCOMES

Mathematics: www.edu.gov.mb.ca/k12/cur/essentials/docs/glance_kto9_math.pdf
4.SS.3, 4.SS.4, 4.PR.3, 4.PR.4, 4.N.5

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						

Original concept created by: Heather Jones

LEARNING EXPERIENCES AND ASSESSMENT

Question: How can we use measurement to understand and describe our world?

Teacher's instructions

This collection of tasks is designed around the concept of measurement, more specifically perimeter and area. The sections (colored blocks on Slide 6 of the PowerPoint) represent independent sets of learning experiences that could function effectively as 45minute to 1 hour sessions 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.

Each section provides a different way of engaging with the concept and is divided into three main parts:

1. **Get Ready** begins the experience with an activity meant to activate student thinking and promote rich student discourse. This activity can be delivered prior to the lesson as an asynchronous task so students have time to prepare their thinking. It can also be delivered at the beginning of the synchronous session to help the teacher pre-assess prior knowledge and prime thinking for the upcoming learning experience.

2. **Work It Out** comprises the main learning experience for the day. This is where new content is presented and individual or small-group responses are required. These activities are best completed with students working in pairs or small groups. If your platform allows for breakout rooms, this feature is a good tool that will facilitate student collaboration and discourse.

3. **Look Back** is a final culminating task that provides opportunities to check for student understanding of the concepts, consolidate different solutions, and solve problems. It allows for students to reflect on their learning and make connections.

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 4: Measurement.pptx
Grade 4: Measurement Rubric.docx

Use Measurement to Understand and Describe Our World				
Student:	***Basic descriptors to help guide your formative assessments.***			
Full details of the student achievement profiles can be found here: **Knowledge and Understanding** **Mental Math and Estimation** **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**
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.				
Understand the difference between perimeter and area				
Determine and record area and recognize that area is recorded in square units				
Construct different rectangles for a given area to demonstrate that many rectangles may have the same area				
Represent and describe patterns and relationships using charts and tables				
Identify and explain mathematical relationships using charts and diagrams				
Describe and apply the mental math strategy of halving/doubling				
Describe and apply the mental math strategy of add one more group, count on from a known fact				
Describe and apply the mental math strategy of knowing half/ breaking into smaller parts				
Solve problems involving area and perimeter				

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.