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:	Patterns
Big Idea:	Patterns can be represented in a variety of ways
Title:	UNDERSTANDING PATTERNS
Strand:	Patterns and Relations
Duration:	1–2 weeks
Materials:	See slides
Short Description:	This is a collection of learning experiences that focus on the concepts of increasing and decreasing patterns.

LEARNING OUTCOMES

Mathematics: www.edu.gov.mb.ca/k12/cur/essentials/docs/glance_kto9_math.pdf
3.PR.1, 3.PR.2

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: Lisa Page and Dayna Quinn-LaFleche

LEARNING EXPERIENCES AND ASSESSMENT

Question: How do patterns increase and decrease?

Teacher's instructions

This collection of tasks is designed around the concept of patterns, specifically how patterns increase and decrease. The sections (coloured blocks on Slide 5 of the PowerPoint) represent independent sets of learning experiences that could function effectively as 45 minute to 1 hour sessions with a combination of synchronous and asynchronous parts, some of which are easily adaptable either way depending on the situation and accessibility 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 3: Understanding Patterns.pptx
Grade 3: Understanding Patterns Rubric.docx

Understanding Patterns Rubric				
Student:	***Basic descriptors to help guide your formative assessments.***			
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**
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.				
Describe and apply mental math strategies: Adding the same number (skip counting)				
Describe and apply mental math strategies: Subtracting the same number (skip counting backwards)				
Describe and apply mental math strategies: knowing half/ breaking into smaller parts				
Understand the terms increasing/ decreasing				
Describe a pattern rule (how a pattern increases or decreases)				
Identify part that increases/ decreases				
Identify missing parts in increasing/decreasing pattern				
Represent and describe patterns and relationships using charts and tables				
Compare two patterns for similarities/ differences				
Describe a pattern when presented oral information				
Solve problems involving mixed numbers and improper fractions				

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.