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. The 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 :	5
Main Subject :	Science
Big Idea :	Simple Machines
Title :	LEVERS
Cluster :	Forces and Simple Machines
Duration :	5-10 hours
Materials :	Pen, Pencils, rubber bands, bulldog clips, miscellaneous building supplies found around the house or classroom, playdough or similar
Short description :	This project focuses on the exploration of levers, their classes and uses, identifying lever anatomy using proper vocabulary, identifying levers present in everyday life, inquiry and building of a scale trebuchet for accuracy and power, and building a lever to move an object. Secondary learning goals include measurement, the implementation and exploration of levers using critical inquiry and the problem-solving loop, and presentation and communication skills when explain final project through written, digital, or oral media.

LEARNING OUTCOMES

Science: www.edu.gov.mb.ca/k12/cur/science/scicurr.html

5-3-01, 5-3-02, 5-3-03

Mathematics: www.edu.gov.mb.ca/k12/cur/essentials/docs/glance_kto9_math.pdf

5.SS.2, 5.SP.3

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	X			

Original concept created by: David Gamble

LEARNING EXPERIENCES AND ASSESSMENT

Question:

Teacher's instructions:

Have students read and complete the attached PowerPoint. Edit and augment where needed to fit unique teaching and learning context.

Step-by-step instructions for students:

See instructions in project, multiple assignment found within.

APPENDIX (PRINTABLE SUPPORT MATERIALS INCLUDING ASSESSMENT)

Grade 5 Levers PowerPoint

Assessment Rubric – see next page

Outcomes Addressed	Achievement Grade Profiles https://www.edu.gov.mb.ca/k12/assess/report_cards/grading/profiles.html			
	Limited	Basic	Good	Very Good to Excellent:
Science - Design Process and Problem Solving	Requires considerable, ongoing teacher support to ▪ apply strategies to solve practical problems and to explain reasoning ▪ use scientific vocabulary ▪ use criteria or constraints to define a problem and evaluate the chosen solution ▪ recognize when changes need to be made to a plan ▪ work collaboratively with peers	Requires occasional teacher or peer support to ▪ apply strategies to solve practical problems and to explain reasoning ▪ use scientific vocabulary ▪ use criteria or constraints to define a problem and evaluate the chosen solution ▪ recognize when changes need to be made to a plan ▪ work collaboratively with peers	Applies appropriate strategies to solve practical problems; requires occasional prompting to recognize when changes need to be made to a plan. Explains and justifies reasoning using appropriate science vocabulary, and generalizes to similar contexts; requires occasional prompting for clarification. Collaborates effectively with peers.	Demonstrates flexibility, resilience, and creativity when solving practical problems; critically analyzes results and makes any necessary changes to a plan. Explains and justifies reasoning clearly using appropriate science vocabulary and generalizes to other contexts. Collaborates effectively with peers, often taking a key role in group work.
5-3-01 Use appropriate vocabulary related to their investigations of forces and simple machines.				
5-3-02 Describe, using diagrams, the forces acting on an object and the effects of increasing or decreasing them				
5-3-03 Investigate a variety of levers used to accomplish particular tasks in order to compare them qualitatively with respect to				
Math - Knowledge and understanding	Requires considerable, ongoing teacher support to make connections between math concepts and the applications of appropriate skills apply concepts in similar situations	Requires occasional teacher or peer support to make connections between math concepts and the applications of appropriate skills apply concepts in similar situations	Shows relationships between math concepts and applies appropriate skills. Correctly applies concepts in similar situations.	Makes connections, applies relationships and skills efficiently. Consistently and efficiently applies concepts in similar and new situations.
5.SS.2 - Demonstrate and understanding of measuring length by * Selecting and justifying referents for the unit mm * Modelling and describing the relationship between mm, cm and m				
5.SP.3 - Describe the likelihood of a single outcome occurring using words such as: Impossible, Possible and Certain				