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 :	Weather
Title :	BOY, WERE WE WRONG
Cluster :	Weather
Duration :	2–3 weeks
Materials :	*Boy, Were We Wrong about the Weather!* by Kathleen V. Kudlinski. Various materials for creating weather instruments at home (e.g., cardboard, plastic, or paper cups, straws, jar, masking tape, sharpie marker, etc.)
Short description :	This learning experience begins with a couple of synchronous lessons to set the stage for the experience. Afterwards, the students can work mostly asynchronously. Several of the learning activities require data collection over a period of 5 days. These should all be started early in the experience and can be running simultaneously to allow for reflection at the end of the experience on what students observed.

LEARNING OUTCOMES

Science: www.edu.gov.mb.ca/k12/cur/science/scicurr.html
5-4-01, 5-4-05, 5-4-06, 5-4-07, 5-4-08, 5-4-10, 5-4-11, 5-4-12

Mathematics: www.edu.gov.mb.ca/k12/cur/essentials/docs/glance_kto9_math.pdf
5.SP.1

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: Denise Smith

LEARNING EXPERIENCES AND ASSESSMENT

Questions:

How do meteorologists make predictions about future weather conditions?
How do meteorologists measure current weather conditions?
How has weather predicting changed over time?
How do we gather and organize data to answer questions?

Teacher's instructions:

Day 1:

Synchronously:

- Read aloud the story *Boy, Were We Wrong About the Weather!* by Kathleen V. Kudlinski.
- Introduce the questions, assessment rubric, and thoughtbook for this experience (slides 2–5).

Asynchronously:

- Ask students to complete the rating activity, they should jot ideas in their thoughtbook about their choices. (slide 6).
- Assign students to read or view at least two weather forecasts to determine what components they have in common. (slides 7 and 8—this slide has been set up with two generic print resources. Links to local radio and/or TV stations should be added.)

Thoughtbook Note:

Students should be encouraged to have a duotang, scribbler, or a 2-pocket folder for a thoughtbook. Encourage students to use the thoughtbook to note their ideas on the slides that indicate thoughtbook in the top left-hand corner. They can also be encouraged to use the thoughtbook as place to collect their data for the various activities and to play with different ways of organizing their data in this space.

Day 2:

Synchronously:

- Whole class or small group discussions about the common features of weather forecasts
- Review the upcoming tasks in this experience. Be sure to note for students that each of the first three tasks in the PowerPoint (Meteorologists Predictions, Collecting Weather Data, and Other Forecasters) can be done in any order but each requires 5 days of data collection so one should be started today and one each over the next 2 days. The fourth task can be completed any time after these three are started. Allow for 7 days for these tasks to be completed.

Asynchronously:

- Students begin one of the first three tasks

Days 3–9:

Synchronously:

During this time, students will mostly work through the tasks asynchronously. They should start the other two tasks that require data collection on day 3 and 4. Occasional synchronous sessions may be needed to support students. Some suggestions for these may include:

- Discussion about the difference between first-hand and second-hand data.
- Discussion about how we can organize data (charts have not been provided to allow opportunity for students to determine a method that will use to do this)
- Technology skills such as working with charts and inserting links
- Organization for the Weather History task (see note below)

Asynchronously:

Students will work on the four tasks independently.

Weather History Note: For this task you will need to decide if you are making a class timeline or if you will organize students into groups and have several timelines created. You may have students work individually or in pairs. You will want to put the slide for this in a separate PowerPoint slide that can be shared and edited by your class.

Weather technology that can be assigned for this task includes: rain gauge, anemometer, barometer, mercury thermometer, weather satellite, sling psychrometer, wind vane, hygrometer, weather maps, weather balloon, wind sock, weather radar, pyranometers, transmissometer, ceilometer.

Days 10:

As a culminating discussion, you might have students share how and why their thinking changed or stayed the same through the learning experience.

How to Use the Assessment Rubric

1. The rubric is to be used throughout the learning experiences. There is no need for individual criteria or rubrics for each task. Students will use each task to further their understanding of the essential understandings. Students will be demonstrating this through a variety of modalities.
2. As you collect evidence of students' level of understanding, highlight or check off their progress on the rubric. You should notice your students move across the rows as their understanding develops throughout the experiences. Do not average your check marks or highlights. Students obtain their highest level of understanding. It does not matter where they start.

Step-by-step instructions for students:

See Boy Were We Wrong PowerPoint.

APPENDIX (PRINTABLE SUPPORT MATERIALS INCLUDING ASSESSMENT)

Grade 5: Boy, Were We Wrong.pptx
Grade 5: Assessment Rubric.docx

Assessment Rubric

Report Card Category	Big Idea	Limited	Basic	Good	Very Good to Excellent
Science—Knowledge and Understanding	**Observations and measurements of air are used to make predictions about future weather conditions.**	Names components of weather that can be observed and measured.	Identifies instruments that are used to observe and measure weather.	Explains how local weather conditions are observed and measured.	Designs an instrument to observe and measure local weather conditions.
	Knowledge about weather has changed over time and has impacted our accuracy in forecasting.	Names technology that helps us understand weather.	Describes how advances in technology have impacted our scientific understanding of weather.	Compares various methods of forecasting.	Evaluates the accuracy of short- and long-term forecasts.
Science—Design Process and Problem Solving	**Scientific and technological developments result from evaluating information and ideas encountered during investigations and daily life.**	Follows a template or instructions to build a weather instrument.	Observes and collects data to represent findings from the construction of a design.	Manipulates the design of a weather instrument to improve its accuracy.	Appraises the design of technology to observe and measure weather.
Mathematics—Knowledge and Understanding	**Data is gathered and organized in order to answer questions.**	States sources of data.	Differentiates between first-hand and second-hand data.	Selects data to answer questions about weather.	Compares data about weather from a variety of resources.