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:	7
Main Subject:	Science
Big Idea:	Changing Earth's Crust
Title:	EARTH'S CRUST
Cluster:	Earth's Crust
Duration:	2–3 weeks
Materials:	copy of world map, scissors, various art supplies
Short Description:	Students will explore the Earth's crust and technology, and research that contributes to our understanding of the Earth's crust through a variety of creative text forms. The learning experience culminates with students conducting a self-directed inquiry into an area that they are still curious about and will share their learning in a self-selected creative text form. This experience combines both synchronous and asynchronous instruction.

LEARNING OUTCOMES

Science: www.edu.gov.mb.ca/k12/cur/science/scicurr.html
7-4-01, 7-4-02, 7-4-12, 7-4-13, 7-4-14, 7-4-15

English language arts: www.edu.gov.mb.ca/k12/cur/ela/index.html
Practices: Language as Sense Making, Language as System, Language as Power and Agency, Language as Exploration and Design
Lenses: Imaginative and Literary, Environmental and Technological

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					X					

Original concept created by: Denise Smith

LEARNING EXPERIENCES AND ASSESSMENT

Questions: How is our understanding of the Earth's crust impacted by evidence from technology and research?

Teacher's instructions:

Learning Activities:

Anticipation Guide (Slide 4)—As the introduction for this learning experience have students complete the 'Before' column of the Anticipation Guide. Consider facilitating a discussion where students can share their initial ideas about these topics.

Continental Drift (Slide 5)—(Note: This learning experience assumes that students already have some familiarity with the structure of the Earth (7-4-02). If students do not have this background knowledge you may want to provide an additional learning activity to address this before beginning.) Students can view the video and respond to the questions asynchronously.

Continents Adrift (Slides 6 and 7)—Students will need a paper copy of slide 7 to complete the instructions on slide 6. This activity can be completed asynchronously.

One Brilliant Woman (Slides 8 and 9)—Students can view the video and complete the response form on slide 8 asynchronously. Then have students revisit the video a second time in preparation for a synchronous class discussion using the question prompts on slide 9.

Evidence of Pangaea (Slide 10)—Students can view the video and respond to the questions asynchronously.

Medium Choice (Slide 11)—Students can view the video and respond to the questions asynchronously. Consider following this up with a synchronous discussion around the guiding question: How can creativity and joy be used to create texts that share ideas about the world around us? At this point students have viewed a puppetry animation, an animated video, and a pop-up book to learn about the changing Earth's crust. Guide the students in discussing how the authors express creativity and joy while being able to share ideas about science and scientific discoveries.

Plate Boundaries (Slide 12)—After viewing the video on the different plate boundaries, students will recreate or draw pictures of the different plate boundaries. This can be done asynchronously.

Seismograph (Slide 13)—Students can view the video and respond to the questions asynchronously.

Pause & Reflect (Slide 14)—This activity shifts students from teacher directed learning about some key points related to the study of the Earth's crust to the beginning of a self-directed inquiry. Have students individually complete the chart on slide 14. Then meet synchronously with students to discuss and share what ideas they still wonder about. This will provide support to students who may be struggling to come up with questions that they are still wondering about.

Self-Directed Inquiry (Slides 15–18)—Introduce the self-directed inquiry (see slide 15) to your students. They can choose a question they are still wondering about (slide 14) or one that a classmate shared. Slide 16 can be used to as a planning template to develop their inquiry question. They will now begin working independently to pursue answers to their question and any additional questions they might have. Students may be provided with the template on slide 17 as one way of managing their research. During this period of time that students are researching, teachers should meet either individually or in small groups to check in with their students' progress. If meeting in small groups, this would also provide an opportunity for students to share their learning and resources with each other. Establish timelines with your students for completing the research phase. Once students have completed their research, they will then need to make a plan for sharing their learning while incorporating creativity and joy through their medium. You might consider having a synchronous discussion to brainstorm and share ideas for this portion. Criteria for products can be co-created. You might consider using the template on slide 18 for this purpose. As well this template can be used as you meet with individual students or small groups to have them reflect on their progress and to provide teacher feedback before final completion of their product. Consider how students will share their final products with the class for a celebration of learning.

Learning Reflection (Slide 19)—After students celebrate their learning by sharing their products, they can complete a final reflection of this learning experience. Students will need to revisit the Anticipation Guide (slide 4) and complete the 'After' column. They would then complete the prompt at the bottom of slide 19. Students can complete this asynchronously, but could be followed up with an asynchronous discussion.

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.

APPENDIX (PRINTABLE SUPPORT MATERIALS INCLUDING ASSESSMENT)

Grade 7: Earth's Crust PowerPoint Presentation.pptx
Grade 7: Assessment Rubric.docx

	Essential Understanding	Limited	Basic	Good	Very Good to Excellent
Science Knowledge and Understanding	**Earth's geology changes over time.**	Recognizes that the Earth's geology changes over time.	Illustrates geological processes and events that take place in the Earth's crust.	Analyzes how and why the Earth has changed over time.	Evaluates how the Earth may change in the future.
	Technology and research contribute to our understanding and development of theories related to the Earth's geology.	Names technology that is used to study the Earth's crust.	Describes the evidence provided by various technologies used to study the Earth's crust.	Explains the role of technology and research in the development of theories about the Earth's crust.	Critically examines the role of technology and scientific research to the development of theories about the Earth's crust.
ELA—Communication and Comprehension	**Texts can be a source of creativity and joy while sharing ideas about the world around us.**	Recognizes texts can be used for different purposes and can express different ideas.	Appreciates how different features, forms and genres of texts can be used creatively to impact an audience.	Analyzes how text can be a source of creativity and joy that help construct connections between self, text, and the world.	Uses text to creatively and critically express ideas about the world around us.