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| 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](http://www.edu.gov.mb.ca/k12/mylearning))      + My Child in School ([www.edu.gov.mb.ca/k12/mychild/index.html](http://www.edu.gov.mb.ca/k12/mychild/index.html)) |

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| PROJECT OVERVIEW | |
| Grade: | 7 |
| Main Subject: | Mathematics |
| Big Idea: | Recognize and use patterns to solve problems |
| Title: | AN EXPLORATION OF VISUAL PATTERNS |
| Strand: | Patterns and Relations |
| Duration: | 3 weeks for the entire sequence of lessons |
| Materials: | Non-specific materials from home PowerPoint slides: It is recommended that you explore Slides 1 to 36 initially, then return to complete the study of Slides 37 to the end at a later date. It is not recommended to reverse this order. |
| Short Description: | Students will explore the progression of how patterns can be plotted on a T-table or graph. Students will then explore how patterns have rules that can generate equations. These equations can be used to solve problems. |

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| Learning Outcomes |
| Mathematics: [www.edu.gov.mb.ca/k12/cur/essentials/docs/glance\_kto9\_math.pdf](http://www.edu.gov.mb.ca/k12/cur/essentials/docs/glance_kto9_math.pdf)  7.PR.1, 7.PR.2, 7.PR.3, 7.PR.4, 7.PR.5, 7.PR.6, 7.PR.7  This sequence of lessons uses mathematics outcomes as its lens. Feel free to make cross-curricular connections as you see it. |

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| 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 |
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| Original concept created by: | Jerrold Wiebe |

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| Learning Experiences and Assessment |
| Question: What are patterns, why are they important, and how can they help your mathematics learning? |
| Teacher’s instructions  This unit unfolds through the attached Grade 7 PowerPoint presentation—an exploration of visual patterns. The scope and sequence is critical to the development of algebraic thinking for students. The slides with blue trim are directed at teachers. The slides with orange trim are tasks to engage students. Please note that teachers may wish to augment the quantity of these student tasks. The learning cycle included in the preamble serves as a framework by which to explore a topic. |

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| APPENDIX (Printable Support Materials Including Assessment) |
| Grade 7: An Exploration of Visual Patterns.pptx |