

## Manitoba Curriculum Outcomes linked to SucSeed

*\* Statements written in green italics are suggestions for carrying out each outcome*

### GRADE 5

#### **Grade 5 Science, Cluster 0: Overall Skills and Attitudes**

**Students will be expected to:**

**5-0-1a (Scientific Inquiry)** Formulate, with guidance, specific questions that lead to investigations. Include: rephrase questions to a testable form, focus research questions. GLO: A1, C2 (**ELA Grade 5, 3.1.1; Math: SP-I.1.5**)

**5-0-1c (Design Process)** Identify practical problems to solve. Examples: How can I determine the mass of air? Which prepared pizza should I buy?... GLO: C3

**5-0-1d (Design Process)** Identify various methods to solve a practical problem, and select and justify one to implement. Examples: constructing and testing a prototype; evaluating consumer products; accessing information from a variety of sources... GLO: C3 (**Math: SP-II.1.5**)

**5-0-2c** Record information in own words and reference sources appropriately. GLO: C6 (**ELA Grade 5, 3.3.2**)

**5-0-3b (Scientific Inquiry)** Identify variables that might have an impact on their experiments and, with guidance, variables to hold constant to ensure a fair test. GLO: A2, C2

**5-0-4c** Work cooperatively with group members to carry out a plan, and troubleshoot problems as they arise. GLO: C7 (**ELA Grade 5, 5.2.2**)

**5-0-4d** Assume various roles and share responsibilities as group members. GLO: C7 (**ELA Grade 5, 5.2.2**)

**5-0-4e** Use tools and materials in a manner that ensures personal safety and the safety of others. Include: keeping an uncluttered workspace; putting equipment away after its use; handling glassware with care. GLO: C1

**5-0-5e** Estimate and measure mass/weight, length, volume, and temperature using SI and other standard units. GLO: C2, C5 (**Math: SS-IV.1.5, SS-III.1.5, SS-I.1.5, SS-VIII.4.3**)

*\*Students can measure the height of their plants and weigh the final product before harvesting. This data could be used for bar graphing.*

**5-0-5f** Record and organize observations in a variety of ways. Examples: point-form notes, sentences, labelled diagrams, charts, ordered lists of data, frequency diagrams, spread sheets...

**5-0-6a** Construct graphs to display data, and interpret and evaluate these and other graphs. Examples: bar graphs, frequency tallies, line plots, broken line graphs... GLO: C2, C6 (**ELA Grade 5, 3.3.1; Math: SP-II.1.5, SP-III.2.5, SP-IV.1.5; TFS: 4.2.2–4.2.6**)

**5-0-6c** Identify and suggest explanations for patterns and discrepancies in data. GLO: A1, A2, C2, C5

**5-0-7b (Scientific Inquiry)** Base conclusions on evidence rather than preconceived ideas or hunches. GLO: C2, C4

**5-0-7e** Identify new practical problems to solve. GLO: C3

**5-0-7f** Use prior knowledge and experiences selectively to make sense of new information in a variety of contexts. GLO: A2, C4 (**ELA Grade 5, 1.2.1**)

**5-0-7g** Communicate methods, results, conclusions, and new knowledge in a variety of ways. Examples: oral, written, multimedia presentations... GLO: C6 (**ELA Grade 5, 4.4.1; TFS: 3.2.2, 3.2.3**)

**5-0-8b (Scientific Inquiry)** Identify examples of scientific knowledge that have developed as a result of the gradual accumulation of evidence. GLO: A2

**5-0-9e** Be sensitive to and develop a sense of responsibility for the welfare of other humans, other living things, and the environment. GLO: B5

### **Grade 5 Science, Cluster 1: Maintaining a Healthy Body**

**Students will be expected to:**

**5-1-03** Describe the types of nutrients in foods and their function in maintaining a healthy body. Include: carbohydrates, proteins, fats, vitamins, minerals. GLO: B3, D1

*\*Brainstorming activity: Think about what plants may offer which nutrients. Take out Canada's Food Guide for ideas. Consider: How can growing plants promote health?*

### **Grade 5 Science, Cluster 4: Weather**

**5-4-02** Describe how weather conditions may affect the activities of humans and other animals. Examples: heavy rainfall may cause roads to wash out; stormy conditions may prevent a space shuttle launching; in excessive heat cattle may produce less milk... GLO: D5

*\*Can do a talk/brainstorm about how weather conditions in various regions can affect food security i.e. by affecting crops. Can also discuss ways to protect crops from adverse weather conditions so that food remains plentiful.*

## Grade 5 English Language Arts

**General Outcome 1:** Students will listen, speak, read, write, view, and represent to explore thoughts, ideas, feelings, and experiences.

### 1.1 Discover and Explore

1.1.1 *Express Ideas:* Describe personal observations, experiences, predictions, and feelings.

1.1.2 *Consider Others' Ideas:* Consider others' ideas and observations to discover and explore personal understanding.

### 1.2 Clarify and Extend

1.2.2 *Explain Opinions:* Explain understanding of new concepts.

1.2.4 *Extend Understanding:* Ask questions to clarify information and develop new understanding

**General Outcome 3:** Students will listen, speak, read, write, view, and represent to manage ideas and information.

### 3.1 Plan and Focus

3.1.1 *Use Personal Knowledge:* Use self-questioning to determine personal knowledge of a topic and identify information needs.

3.1.2 *Ask Questions:* Ask topic-appropriate questions to identify information needs.

3.1.3 *Contribute to Group Inquiry:* Contribute knowledge of a topic in group discussion to help determine information needs.

3.1.4 *Create and Follow a Plan:* Recall and follow a sequential plan for accessing and gathering information.

### 3.3 Organize, Record, and Assess

3.3.1 *Organize Information:* Organize and explain information and ideas using a variety of strategies [such as clustering, categorizing, sequencing...].

3.3.2 *Record Information:* Record facts and ideas using a variety of strategies [such as outlining, webbing, charting...]; list authors and titles of sources.

3.3.3 *Evaluate Information:* Determine whether collected information is sufficient or inadequate for established purpose.

3.3.4 *Develop New Understanding:* Determine information needs during the inquiry.

**General Outcome 4: Students will listen, speak, read, write, view, and represent to enhance the clarity and artistry of communication**

### 4.3 Attend to Conventions

4.3.1 *Grammar and Usage:* Edit for complete sentences.

4.3.2 *Spelling (see Strategies)* Know and apply conventional spelling patterns using a variety of strategies [including phonics, structural analysis, and visual

memory] and resources [such as junior dictionaries, electronic spell-check functions...] when editing and proofreading.

**4.3.3 Punctuation and Capitalization:** Know and use some punctuation conventions [including periods, exclamation marks, and question marks] when editing and proofreading.

#### **4.4 Present and Share**

**4.4.1 Share Ideas and Information:** Present information and ideas on a topic to engage a familiar audience using a pre-established plan; use print and non-print aids to enhance the presentation.

**4.4.2 Effective Oral Communication:** Select, monitor, and use appropriate volume, expression, and non-verbal cues in presentations; use physical stance and gestures to enhance communication.

### **General Outcome 5: Students will listen, speak, read, write, view, and represent to celebrate and to build community.**

#### **5.2 Encourage, Support, and Work with Others**

**5.2.1 Cooperate with Others:** Cooperate and collaborate in small groups.

**5.2.2 Work in Groups:** Ask others for their ideas and express interest in their contributions.

**5.2.3 Use Language to Show Respect:** Show consideration for those whose ideas, abilities, and language use differ from own.

**5.2.4 Evaluate Group Process:** Understand how class members help each other to maintain group process.

## Grade 5 Mathematics

**General Learning Outcome:** Collect, display, and analyze data to solve problems.

**Strand:** Statistics and Probability (Data Analysis)

**Specific Learning Outcomes:**

**5.SP.1.** Differentiate between first-hand and second-hand data. [C, R, T, V]

Achievement Indicators: Explain the difference between first-hand and second-hand data, Formulate a question that can best be answered using first-hand data and explain why, Formulate a question that can best be answered using second-hand data and explain why, Find examples of second-hand data in print and electronic media, such as newspapers, magazines, and the Internet.

**5.SP.2.** Construct and interpret double bar graphs to draw conclusions. [C, PS, R, T, V]

Achievement Indicators: Determine the attributes (title, axes, intervals, and legend) of double bar graphs by comparing a set of double bar graphs, Represent a set of data by creating a double bar graph, label the title and axes, and create a legend with or without the use of technology, Draw conclusions from a double bar graph to answer questions, Provide examples of double bar graphs used in a variety of print and electronic media, such as newspapers, magazines, and the Internet, Solve a problem by constructing and interpreting a double bar graph.

