Home Economics/Industrial Arts Learning Outcomes Samples

- Home Economics: Food and Nutrition
- Home Economics: Human Development
- Home Economics: Clothing and Textiles
- Industrial Arts: Comprehensive Safety
- Industrial Arts: Comprehensive Measurement
- Industrial Arts: Planning and Design
- Blank Learning Outcome Templates
LEARNING OUTCOMES SAMPLES

This document has been designed to allow for maximum flexibility to provide Middle Years students in Manitoba with the opportunity to experience the hands-on skills development, knowledge, and resources available in Home Economics/Industrial Arts education. Middle Years education can be categorized from Grades 5 to 8 or Grade 6 to Senior 1, depending on the educational setting. It is for this reason that four levels of learning outcomes (exploratory, introductory, intermediate, and advanced) that are not grade-specific have been outlined in this document. The four levels provide an opportunity for each school to select the time allocation that suits the needs of their learning environment to incorporate Middle Years Home Economics/Industrial Arts programming into their educational plan. The inclusion of Home Economics/Industrial Arts education in the Middle Years involves the implementation of the three Cs—Commitment to Middle Years Home Economics/Industrial Arts education by Careful and Cooperative timetabling.
**General Learning Outcome:** To incorporate a variety of foods from each food group every day in one’s diet to provide the energy necessary to lead an active life.

**Former Major Objective:** To relate the selection of foods to the needs of individuals. (*Home Economics 7-9, Manitoba Education: 1985, 45*)

<table>
<thead>
<tr>
<th>Exploratory Specific Learning Outcome(s)</th>
<th>Introductory Specific Learning Outcome(s)</th>
<th>Intermediate Specific Learning Outcome(s)</th>
<th>Advanced Specific Learning Outcome(s)</th>
<th>Suggested Instructional Approaches Refer to pages 49-54</th>
<th>Suggested Assessment Methods/Tools Refer to pages 55-56</th>
</tr>
</thead>
</table>
| 1. Identify the groups in *Canada's Food Guide to Healthy Eating*, including “Others.”
  - Grain Products
  - Vegetables/Fruit
  - Milk Products
  - Meats and Alternatives
  - Others
  - Combination Foods | 1. Identify the recommended ranges of servings for each food group for Canadians between the ages of four to adult.
  2. Determine the amount of food that is the equivalent of one or two servings from a list of food products.
  3. List and discuss age and gender factors that determine the number of servings. | 1. Identify the leader nutrients associated with each food group.
  2. Determine the function of the nutrients in the body.
  3. List and discuss activity level and body size factors that determine the number of servings. | 1. Compare and contrast various food guides:
  - China Pagoda
  - Great Britain Food Plate
  - Canadian Vegan
  - American Food Pyramid
  - Canadian Northern Guide
  - Canada's Food Guide | *Explicit teaching*
  *Didactic Questioning*
  *Jigsaw*
  *Reading and Viewing for Meaning*
  *Brainstorming*
  *Discussion*
  *Research* | *Checklists*
  *Rubrics*
  *Self-assessment*
  *Presentations*
  *Projects* |
| **Suggested Learning Activity**
Grocery Bag Activity: categorize foods into groupings.
Picture Card Activity: picture card sets available through Manitoba Milk Producers. Create a poster. | **Suggested Learning Activity**
Personal food recall for one day to calculate the number of servings of food consumed.
Determine personal goals/strategies to improve an area of the food guide that is not meeting the recommended daily serving amounts. | **Suggested Learning Activity**
Taste Test: Processed snacks (fat/sugar/salt-based snacks) compared to snacks chosen from the Food Guide.
Taste Test: Compare and contrast “light,” “low sodium/fat” products, to regular product lines. | **Suggested Learning Activity**
Divide class into groups to research and compare/contrast a guide/pyramid/pagoda/plate to the CFG for Healthy Eating. | |
| **Process/Project**
Plan and prepare a breakfast that encompasses foods from three out of four food groups. | **Process/Project**
Plan and prepare a lunch that encompasses foods from three out of four food groups. | **Process/Project**
Plan and prepare a nutritious snack that encompasses food(s) from the food guide. | **Process/Project**
Each group to plan and prepare a meal plan from one of the food guides/plates/pagodas. | *Research*
*Gallery Walk* | |

---

**Home Economics: Food and Nutrition**
### General Learning Outcome:
To recognize the importance of meeting basic needs and healthy personal development.

### Former Major Objective:
To gain an understanding of ourselves through the study of child development. *(Home Economics 7-9, Manitoba Education: 1985, 37)*

<table>
<thead>
<tr>
<th>Exploratory Specific Learning Outcome(s)</th>
<th>Introductory Specific Learning Outcome(s)</th>
<th>Intermediate Specific Learning Outcome(s)</th>
<th>Advanced Specific Learning Outcome(s)</th>
<th>Suggested Instructional Approaches Refer to pages 49-54</th>
<th>Suggested Assessment Methods/Tools Refer to pages 55-56</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the basic needs – Physical, Social, Intellectual, and Emotional</td>
<td>1. Describe the factors that enhance or inhibit the meeting of basic needs. For example: • Families • Breakfast programs • Friends • Bullies • Government standards of food, health care, etc. • Disasters, etc.</td>
<td>1. Determine the connection between meeting basic needs and healthy personal development.</td>
<td>1. Analyze the special needs of people at various stages of their lives.</td>
<td>• Guest Speaker • Didactic Questioning • Jigsaw • Concept Mapping • Admit/Exit Slips • Essays and Reports • Discussion</td>
<td>• Reflection Logs • Self-assessment • Written Assignment • Quizzes</td>
</tr>
<tr>
<td>2. Identify the people who facilitate meeting basic needs. • Peer groups • Families • Coaches • Teachers, etc.</td>
<td>Suggested Learning Activity Small-group discussions/brainstorming for ten people that students depend on, and why students depend on them. Classify the needs as physical, intellectual, social, or emotional.</td>
<td>Suggested Learning Activity Create a survivor game based on case studies.</td>
<td>Suggested Learning Activity Relate true and fictional stories of feral children (Amala and Kamala of India, the Gazelle boy of the Sahara Desert, etc. vs. Tarzan, Mowgli, Romulus and Remus, George of the Jungle), and compare the capabilities of feral children to those created in fiction, or to students themselves.</td>
<td>Suggested Learning Activity Plan activities that will help provide the basic needs for an elementary-aged or special needs student.</td>
<td>Suggested Learning Activity • Explicit Teaching • Didactic Questioning • Problem Solving • Inquiry and Research • Gallery Walks • Primary Research • Focused Imaging • Discussion</td>
</tr>
<tr>
<td>Suggested Learning Activity Plan activities that will help provide the basic needs for an elementary-aged or special needs student.</td>
<td>Process/Project Develop a class bulletin board featuring pictures, poems, media, articles, etc., that illustrate basic needs being met or requiring a further commitment.</td>
<td>Process/Project Survivor Games: What would you take with you on a 20-year round trip to Mars? On a life raft? View parts of films: <em>Greystoke: The Legend of Tarzan, Lord of the Apes</em> (1984), <em>Castaway.</em></td>
<td>Process/Project Visit a special needs or elementary school classroom where students would lead or facilitate an activity.</td>
<td>Process/Project • Role Playing • Guides for Viewing • Problem Solving • Inquiry and Research • Admit/Exit Slips • Gallery Walks • Field Trips • Games</td>
<td>Process/Project • Reflection Logs • Journaling or Notebooking • Rubrics</td>
</tr>
<tr>
<td>Suggested Learning Activity Plan activities that will help provide the basic needs for an elementary-aged or special needs student.</td>
<td>Process/Project Small-group discussions/brainstorming for ten people that students depend on, and why students depend on them. Classify the needs as physical, intellectual, social, or emotional.</td>
<td>Suggested Learning Activity Create a survivor game based on case studies.</td>
<td>Suggested Learning Activity Relate true and fictional stories of feral children (Amala and Kamala of India, the Gazelle boy of the Sahara Desert, etc. vs. Tarzan, Mowgli, Romulus and Remus, George of the Jungle), and compare the capabilities of feral children to those created in fiction, or to students themselves.</td>
<td>Suggested Learning Activity Plan activities that will help provide the basic needs for an elementary-aged or special needs student.</td>
<td>Suggested Learning Activity • Explicit Teaching • Didactic Questioning • Problem Solving • Inquiry and Research • Gallery Walks • Primary Research • Focused Imaging • Discussion</td>
</tr>
<tr>
<td>Suggested Learning Activity Plan activities that will help provide the basic needs for an elementary-aged or special needs student.</td>
<td>Process/Project Develop a class bulletin board featuring pictures, poems, media, articles, etc., that illustrate basic needs being met or requiring a further commitment.</td>
<td>Process/Project Survivor Games: What would you take with you on a 20-year round trip to Mars? On a life raft? View parts of films: <em>Greystoke: The Legend of Tarzan, Lord of the Apes</em> (1984), <em>Castaway.</em></td>
<td>Process/Project Visit a special needs or elementary school classroom where students would lead or facilitate an activity.</td>
<td>Process/Project • Role Playing • Guides for Viewing • Problem Solving • Inquiry and Research • Admit/Exit Slips • Gallery Walks • Field Trips • Games</td>
<td>Process/Project • Reflection Logs • Journaling or Notebooking • Rubrics</td>
</tr>
<tr>
<td>Suggested Learning Activity Plan activities that will help provide the basic needs for an elementary-aged or special needs student.</td>
<td>Process/Project Develop a class bulletin board featuring pictures, poems, media, articles, etc., that illustrate basic needs being met or requiring a further commitment.</td>
<td>Process/Project Survivor Games: What would you take with you on a 20-year round trip to Mars? On a life raft? View parts of films: <em>Greystoke: The Legend of Tarzan, Lord of the Apes</em> (1984), <em>Castaway.</em></td>
<td>Process/Project Visit a special needs or elementary school classroom where students would lead or facilitate an activity.</td>
<td>Process/Project • Role Playing • Guides for Viewing • Problem Solving • Inquiry and Research • Admit/Exit Slips • Gallery Walks • Field Trips • Games</td>
<td>Process/Project • Reflection Logs • Journaling or Notebooking • Rubrics</td>
</tr>
</tbody>
</table>

### Home Economics: Human Development
### General Learning Outcome:
To demonstrate an understanding that assists the consumer to make educated decisions about textile products.

### Former Major Objective:
To gain understanding which assists the consumer in making decisions about textile products. *(Home Economics 7-9, Manitoba Education: 1985, 59)*

<table>
<thead>
<tr>
<th>Exploratory Specific Learning Outcome(s)</th>
<th>Introductory Specific Learning Outcome(s)</th>
<th>Intermediate Specific Learning Outcome(s)</th>
<th>Advanced Specific Learning Outcome(s)</th>
<th>Suggested Instructional Approaches Refer to pages 49-54</th>
<th>Suggested Assessment Methods/Tools Refer to pages 55-56</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify differences between woven and knit fabrics.</td>
<td>1. Demonstrate knowledge that fibres are the building block of fabric. 2. Demonstrate knowledge that there are two fibre categories: natural/synthetic.</td>
<td>1. Demonstrate knowledge of characteristics of fibres.</td>
<td>1. Make decisions based on previous knowledge to select appropriate fabrics for specific end uses.</td>
<td>Didactic Questioning  Demonstration  Inquiry and Research  Observations  Gallery Walk</td>
<td>Journaling and Notebooking</td>
</tr>
<tr>
<td><strong>Suggested Learning Activity</strong> Fabric grab bag</td>
<td><strong>Suggested Learning Activity</strong> Dissect fabric into components: fibre to yarn process. Classify fibres into categories (natural/synthetic) by reading the fibre content labels on clothing.</td>
<td><strong>Suggested Learning Activity</strong> Experiment with fabrics:  • burn test  • absorption test  • wrinkle test  Research activity: most commonly used fibres.</td>
<td><strong>Suggested Learning Activity</strong> Select and assess the fabric that is selected for a specific end use.</td>
<td>Jigsaw  Inquiry and Research  Observations</td>
<td>Checklist  Quizzes or Tests</td>
</tr>
<tr>
<td><strong>Process/Project</strong> Select knit and woven fabric to create a textile product.  • bean bag project  • bookmarks  • pencil case</td>
<td><strong>Process/Project</strong> Take students fabric shopping. Collect fibre content information from reading fibre content labels on items at home. Using a chart, classify items into fibre categories: natural/synthetic. Classify the findings through the creation of a chart.</td>
<td><strong>Process/Project</strong> Match using prior knowledge: textile items to fabric with appropriate fibre content (e.g., nylon for carpeting).</td>
<td><strong>Process/Project</strong> Match characteristics of fibres to the most appropriate end use in a project.</td>
<td>Field trip  Inquiry and Research  Problem Solving  Survey  Primary Research  Guest Speakers</td>
<td>Rubric: <a href="http://www.rubistar.4teachers.org">www.rubistar.4teachers.org</a>  Demonstration/Presentation  Checklists  Self-assessment  Peer Assessment  Journaling or Notebooking  Reflection</td>
</tr>
</tbody>
</table>
## General Learning Outcome:
To demonstrate safe practices with tools, machines, materials, and related processes.

### Former Major Objective:
To develop safety consciousness in the use of tools, machines, and processes, through a wide range of experiences related to the individual and to the production and servicing aspects of hobbies and industries. *(Industrial Arts 7-9: Core Safety Objective in All Curricula, Manitoba Education: 1983)*

### Exploratory Specific Learning Outcome(s)
<table>
<thead>
<tr>
<th>1. Identify and locate safety equipment/resources in the lab.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Eye-wash station</td>
</tr>
<tr>
<td>- Signage</td>
</tr>
<tr>
<td>- Work zones</td>
</tr>
<tr>
<td>- Personal protective equipment</td>
</tr>
<tr>
<td>- WHMIS</td>
</tr>
<tr>
<td>2. Identify and demonstrate safe lab practices.</td>
</tr>
<tr>
<td>- Behaviour/conduct</td>
</tr>
<tr>
<td>- Personal protective equipment</td>
</tr>
<tr>
<td>3. Demonstrate safe use of tools and machines.</td>
</tr>
</tbody>
</table>

### Introductory Specific Learning Outcome(s)
| 1. State the hazards that are inherent in a production process. |
| 2. Define/interpret MSDS related to specific products used in the lab. |
| 3. Identify and demonstrate safe lab practices. |
| - Behaviour/conduct |
| - Personal protective equipment |
| 4. Demonstrate safe use of tools and machines. |

### Intermediate Specific Learning Outcome(s)
| 1. Analyze hazards that are inherent in a production process. |
| 2. Identify environmental and workplace impacts on the use of hazardous materials. |
| 3. Identify and demonstrate safe lab practices. |
| - Behaviour/conduct |
| - Personal protective equipment |
| 4. Demonstrate safe use of tools and machines. |

### Advanced Specific Learning Outcome(s)
| 1. Determine and execute safe practices and procedures required for each process. |
| 2. Analyze the environmental impact of the use of hazardous materials. |
| 3. Simulate and react to a hypothetical hazardous situation. |
| 4. Identify and demonstrate safe lab practices. |
| - Behaviour/conduct |
| - Personal protective equipment |
| 5. Demonstrate safe use of tools and machines. |

### Suggested Learning Activity
- Design and construct a safety poster.
- Construct a product with tools and machinery in accordance with safe work practices.

### Suggested Instructional Approaches
Refer to pages 49-54

### Suggested Assessment Methods/Tools
Refer to pages 55-56

### Process/Project
- Design a product with tools and machinery in accordance with safe work practices.
- Perform a production process with sequential operations using safe work practices.
- Research project on natural resource management. Design jigs and fixtures for safe production procedures.

---

**Industrial Arts: Comprehensive Safety**

**Reflection Journal**
- Checklist
- Demonstrations
- Presentations
- Rubrics
- Peer Assessment
- Tests
- Quizzes
**Industrial Arts: Comprehensive Measurement**

**General Learning Outcome:** To select appropriate measurement tools and apply measurements in practice.

**Former Major Objective:** To gain knowledge and skills related to imperial and SI metric systems of measurement, measuring devices, and testing devices. (Industrial Arts 7-9: Core Safety Objective in All Curricula, Manitoba Education: 1983)

<table>
<thead>
<tr>
<th>Exploratory Specific Learning Outcome(s)</th>
<th>Introductory Specific Learning Outcome(s)</th>
<th>Intermediate Specific Learning Outcome(s)</th>
<th>Advanced Specific Learning Outcome(s)</th>
<th>Suggested Instructional Approaches Refer to pages 49-54</th>
<th>Suggested Assessment Methods/Tools Refer to pages 55-56</th>
</tr>
</thead>
</table>
| 1. Define measurement and the need for accurate measurement.  
2. Identify units and use measurement for practical purpose.  
3. Identify and compare the units in imperial vs. metric. | 1. Demonstrate the use of various measuring instruments.  
2. Apply measurement units and use tools specific to performing a task, e.g.,  
- Scale ruler  
- Tape measure  
- Micrometer  
- Point system  
3. Identify characteristics of the measurement system. | 1. Interpret units of measurement from various sources and apply to a task.  
2. Manipulate numbers in the measurement system. | 1. Decide, select, and use appropriate measurement units and tools in performing a task.  
2. Apply knowledge or ability to manipulate numbers in the measurement system to alter an existing pattern plan. | Demonstration  
Discussion  
Lesson Overviews  
Didactic Questioning  
Explicit Teaching  
Problem Solving | Demonstrations  
Projects  
Quizzes  
Tests  
Rubrics |

**Suggested Learning Activity**
Identify situations where measurement is used. 
Select appropriate measurement tools to match a task.

**Process/Project**
Measure common objects with measurement tools. 
Draw simple two-dimensional layout.

**Suggested Learning Activity**
Transfer measurements from drawing to material.

**Process/Project**
Draw three-dimensional layout. 
Construct a project from wood, paper, or metal that involves transferring measurements using specific tools.

**Suggested Learning Activity**
Read and interpret detailed project plans such as construction working drawings (blueprint). 
Use measurement tools to measure area and linear units.

**Process/Project**
Read and interpret measurements from a plan and use appropriate tools to lay out and measure materials needed for construction of a wood, paper, or metal project. 
Create plan view construction drawings.

**Suggested Learning Activity**
Create a plan involving measurements. 
Assign units of measure to a project, or alter plans for an existing project. 
Use measurement tools to create a bill of materials.

**Process/Project**
Alter dimensions of an existing plan as part of the construction of a project. 
Select and use appropriate measurement and layout tools in the process. 
Plan/design a project and apply measurement skills during the development of the project.
General Learning Outcome: To perform tasks that demonstrate application of the design process to a project.

**Former Major Objective:** To develop skills in and to understand the principles of planning and design, and to apply these skills and principles to electricity/electronics. ([Industrial Arts 7-9: Power and Energy, Section 5, Planning and Design, Manitoba Education: 1983](#)).

**Introductory Specific Learning Outcome(s):**

1. Identify and explain the steps in the design process.

   **Suggested Learning Activity:** Practise brainstorming stage of the design process.

**Intermediate Specific Learning Outcome(s):**

1. Adapt an existing product utilizing the design process.

   **Suggested Learning Activity:** Change a portion of an existing design.

**Advanced Specific Learning Outcome(s):**

1. Use the design process in a prescribed activity.

   **Suggested Learning Activity:** Follow a prescribed activity that employs the design process.

**Suggested Instructional Approaches**
- **Modeling**
- **Demonstration**
- **Discussion**
- **Interactive Instructional Strategies, pp. 53-54**
- **Didactic Questioning**
- **Problem Solving**
- **Essay and Report**
- **Interactive Instructional Strategies, pp. 53-54**
- **Brainstorming**
- **Jigsaw**
- **Guest Speakers**
- **Research Local Community for Possible Design Considerations**
- **Inquiry and Research**
- **Peer Editing**
- **Interviewing**
- **Interactive Instructional Strategies, pp. 53-54**
- **Checklists**
- **Self-Assessment**
- **Rubrics**
- **Project**
- **Demonstrations**
- **Presentations**
- **Peer Assessment**
- **Reflection**
- **Logs/Journals**
- **Project**
- **Brainstorming in groups as a way of gathering ideas for possible project concepts.**
- **Research Local Community for Possible Design Considerations.**

**Suggested Assessment Methods/Tools**
- **Project**
- **Brainstorming in groups as a way of gathering ideas for possible project concepts.**
- **Research Local Community for Possible Design Considerations.**

---

*Note: Pages 49-54 refer to Suggested Instructional Approaches, pages 53-54 refer to Suggested Assessment Methods/Tools.*
## General Learning Outcome:

### Former Major Objective:

<table>
<thead>
<tr>
<th>Exploratory Specific Learning Outcome(s)</th>
<th>Introductory Specific Learning Outcome(s)</th>
<th>Intermediate Specific Learning Outcome(s)</th>
<th>Advanced Specific Learning Outcome(s)</th>
<th>Suggested Instructional Approaches</th>
<th>Suggested Assessment Methods/Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Refer to pages 49-54</td>
<td>Refer to pages 55-56</td>
</tr>
<tr>
<td>General Learning Outcome:</td>
<td>Former Major Objective:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exploratory Specific Learning Outcome(s)</th>
<th>Introductory Specific Learning Outcome(s)</th>
<th>Intermediate Specific Learning Outcome(s)</th>
<th>Advanced Specific Learning Outcome(s)</th>
<th>Suggested Instructional Approaches</th>
<th>Suggested Assessment Methods/Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer to pages 49-54</td>
<td>Refer to pages 55-56</td>
<td>Refer to pages 49-54</td>
<td>Refer to pages 55-56</td>
<td>Refer to pages 49-54</td>
<td>Refer to pages 55-56</td>
</tr>
</tbody>
</table>