PRINCE EDWARD ISLAND

CURRICULUM

Intermediate Home Economics

Curriculum Guide

Prince Edward Island Department of Education
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The Prince Edward Island Department of Education gratefully acknowledges the contribution of the following individuals in the development of Intermediate Home Economics Curriculum.

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I Introduction

A. Background

This document assists educators, students, and others to construct meaningful learning experiences in Technology Education in the discipline of Home Economics.

B. Rationale

The vision for Technology Education in Atlantic Canada fosters the development of all learners as technologically literate and capable citizens who can develop, implement, and communicate practical, innovative, and responsible technological solutions to problems. Home Economics 7-9 provides modular curriculum components designed to achieve the general curriculum outcomes for technology education.

A Technological Problem Solving

B Technological Systems

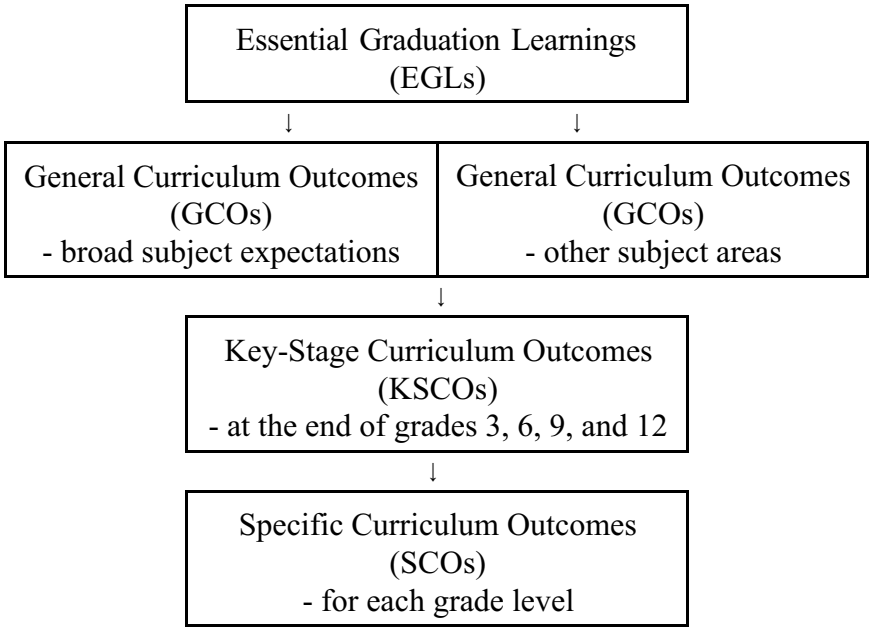
C History and Evolution of Technology

D Technology and Careers

E Technological Responsibility

II. Program Design and Components

Specific Curriculum Outcomes



Essential Graduation Learnings:

Essential Graduation Learnings are statements describing the knowledge, skills, and attitudes expected of all students who graduate from high school. Achievement of the Essential Graduation Learnings will prepare students to continue to learn throughout their lives. These learnings describe expectations not in terms of individual school subjects but in terms of knowledge, skills, and attitudes developed throughout the curriculum. They confirm that students need to make connections and develop abilities across subject boundaries if they are to be ready to meet the shifting and ongoing demands of life, work, and study today and in the future. Essential Graduation Learnings are cross-curricular, and curriculum in all subject areas is focused to enable students to achieve these learnings. Essential Graduation Learnings serve as a framework for the curriculum development process.

Specific Essential Graduation Learnings:

Aesthetic Expression
Graduates will be able to respond with critical awareness to various forms of arts and be able to express themselves through the arts.

Citizenship
Graduates will be able to assess social, cultural, economic, and environmental interdependence in a local and global context.

Communication
Graduates will be able to use the listening, viewing, speaking, reading, and writing modes of language(s) and mathematical and scientific concepts and symbols, to think, learn, and communicate effectively.

Personal Development
Graduates will be able to continue to learn and to pursue an active, healthy lifestyle.

Problem Solving
Graduates will be able to use the strategies and processes needed to solve a wide variety of problems, including those requiring language, and mathematical and scientific concepts.

Technology Competency
Graduates will be able to use a variety of technologies, demonstrate an understanding of technological applications, and apply appropriate technologies for solving problems.

Curriculum Outcomes:

Curriculum outcomes are statements articulating what students are expected to know and be able to do in particular subject areas. These outcomes statements also describe the knowledge, skills, and attitudes students are expected to demonstrate at the end of certain key stages in their education. These are based upon their cumulative learning experiences at each grade level in the entry-graduation continuum. Through the achievement of curriculum outcomes, students demonstrate the Essential Graduation Learnings.

General Curriculum Outcomes:
are statements that identify what students are expected to know and be able to do upon completion of study in a curriculum area.

Key-Stage Curriculum Outcomes: . . . . . .
are statements that identify what students are expected to know and be able to do by the end of grades 3, 6, 9 and 12, as a result of their cumulative learning experience in a curriculum area.

Specific Curriculum Outcomes:
Specific curriculum outcomes are statements identifying what students are expected to know and be able to do at a particular grade level. The specific curriculum outcomes serve as a framework for students to achieve key stage and general curriculum outcomes.

III Cross-Curriculum Specific Items

A. Meeting the Needs of all Students

This curriculum is inclusive and is designed to help all learners reach their potential through a wide variety of learning experiences. The curriculum seeks to provide equally for all learners and to ensure, insofar as possible, equal entitlements to learning opportunities.

The development of students' literacy is shaped by many factors including gender, social and cultural background, and the extent to which individual needs are met. In designing learning experiences for students, teachers should consider the learning needs, experiences, interests, and values of all students.

In recognizing and valuing the diversity of students, teachers might consider ways to:

- provide a climate and design learning experiences to affirm the dignity and worth of all learners in the classroom community
- redress educational disadvantage - for example, as it relates to students living in poverty
- model the use of inclusive language, attitudes, and actions supportive of all learners
- adapt classroom organization, teaching strategies, assessment strategies, time, and learning resources to address learners' needs and build on their strengths
- provide opportunities for learners to work in a variety of learning contexts, including mixed-ability groupings
- identify and respond to diversity in students' learning styles
- build upon students' individual levels of knowledge, skills, and attitudes
- design learning and assessment tasks that draw on learners' strengths
- ensure that learners use strengths as a means of tackling areas of difficulty
- use students' strengths and abilities to motivate and support learning
- offer multiple and varied avenues to learning
- celebrate the accomplishments of learning tasks that learners believed were too challenging for them

B. Gender-Inclusive Curriculum

In a supportive learning environment, male and female students receive equitable access to resources, including the teacher's time and attention, technology, learning assistance, and a range of roles in group activities. It is important that the curriculum reflect the experiences and values of both male and female students and that texts and other learning resources include and reflect the interests, achievements, and perspectives of males and females.

Both male and female students are disadvantaged when oral, written, and visual language creates, reflects, and reinforces gender stereotyping.

Teachers promote gender equity in their classrooms when they:

- articulate equally high expectations for male and female students
- provide equal opportunity for input and response from male and female students
- model gender-fair language and respectful listening in all their interactions with students

C. Valuing Social/Cultural Diversity

Social and cultural diversity is a resource for expanding and enriching the learning experiences of all students. Students can learn much from the diverse backgrounds, experiences, and perspectives of their classmates in a community of learners where participants discuss and explore their own and others' customs, histories, traditions, values, beliefs, and ways of seeing and making sense of the world. In reading, viewing, and discussing a variety of texts, students from different social and cultural backgrounds can come to understand each other's perspectives, to realize that their ways of seeing and knowing are not the only ones possible, and to probe the complexities of the ideas and issues they are examining.

All students need to see their lives and experiences reflected in their learning. Learning resources should allow students to hear diverse social and cultural voices, and to broaden their understanding of social and cultural diversity.

D. Engaging All Students

One of the greatest challenges to teachers is engaging students who feel alienated from learning - students who lack confidence in themselves as learners, who have a potential that has not yet been realized. Among them are students who seem unable to concentrate, who lack everyday motivation for academic tasks, who rarely do homework, who fail to pass in assignments, who choose to remain on the periphery of small-group work, who cover up their writing attempts fearing the judgements of peers, who are mortified if asked to read aloud, and who keep their opinions to

themselves. These students are significantly delayed when it comes to learning. Some, though not all, exhibit behaviors in classrooms that further distance them from learning. Others are frequently absent from classes. Cumulatively, these are disengaged students.

These students need essentially the same experiences as their peers, experiences that:

- engage students in authentic and worthwhile communication situations
- allow them to construct meaning and connect, collaborate, and communicate with each other
- form essential links between the world of text and their own world
- give them a sense of ownership of learning and assessment tasks

They need additional experiences as well - experiences designed to engage them personally and meaningfully, to make their learning pursuits relevant. They need substantial support in reading and writing. They need positive and motivational feedback. They need all of these experiences within purposeful and interactive learning contexts. Ultimately, the curriculum for these students should prepare them for the world they will go into after high school completion.

Preparing students means engaging them with texts and with people from whom they can learn more about themselves and their world. Many of these students feel insecure about their own general knowledge and are reluctant to take part in class discussions, deferring to their peers who seem more competent. Through the curriculum, the students described above must find their own voice. The learning environment must be structured in such a way that these students, alongside their peers, develop confidence and gain access to information and to community.

The greatest challenge in engaging these learners is finding an appropriate balance between supporting their needs by structuring opportunities for them to experience learning success and challenging them to grow as learners. Teachers need to have high expectations for all students and to articulate clearly these expectations.

E. Links to Community

A complete curriculum allows for the flexibility of inclusion of the community through various means. Such activities as guest speakers, field trips, and historical presentations allow the students to become more aware of the influence of the community on their lives. Students gain insight into the current workings of their local society, as well as observe role models and establish contacts with the community.

This curriculum guide provides suggestions, wherever possible, for community involvement to become an integrated part of the course.

F. The Intermediate High School Learning Environment

Learning environment for grades 7-9 is:

- participatory, interactive, and collaborative
- inclusive
- caring, safe, challenging
- inquiry based, issues oriented
- places where resource-based learning includes and encourages the multiple uses of technology, the media, and other visual texts as pathways to learning and as avenues for representing knowledge.

An important responsibility of the teacher is to create learning environments in which learning takes place. The teacher structures the learning situation and organizes necessary resources. Assessing the nature of the learning task, the teacher may find that the situation calls for teacher-directed activities with the whole class, small groups of students, or individual students. Such activities include direct instruction in concepts and strategies and brief mini-lessons to create and maintain a focus for learning.

When students have developed a focus for their learning, the teacher moves to the perimeter to monitor learning experiences and to encourage flexibility and risk taking in the ways students approach learning tasks. The teacher intervenes, when appropriate, to provide support. In such environments, students will feel central in the learning process.

As the students accept more and more responsibility for learning, the teacher's role changes. The teacher notes what the students are

learning and what they need to learn, and helps them to accomplish their tasks. The teacher can be a coach, a facilitator, an editor, a resource person, and a fellow learner. The teacher is a model whom students can emulate, a guide who assists, encourages, and instructs the student as needed during the learning process. Through the whole process, the teacher is also an evaluator, assessing students' growth while helping them to recognize their achievements and their future needs.

Learning environments are places where teachers:

- integrate new ways of teaching and learning with established effective practices
- have an extensive repertoire of strategies from which to select the one most appropriate for the specific learning task
- value the place of dialogue in the learning process
- recognize students as being intelligent in a number of different ways and encourage them to explore other ways of knowing
- value the inclusive classroom and engage all learners in meaningful activities
- acknowledge the ways in which gender, race, ethnicity, and culture shape particular ways of viewing and knowing the world
- structure repeated opportunities for reflection so that reflection becomes an integral part of the learning process.

G. Safety

Students need to feel safe, both physically and emotionally, in the school setting. In a learning environment where cooperative, active, and collaborative teaching strategies are utilized, students must become knowledgeable of their role in enabling a safe environment to exist.

Empowering students to take ownership for their own safety and those of their peers is an essential component of the classroom learning. Teachers can provide students with the knowledge necessary to prevent unnecessary risks in their learning environment. By outlining the risk factors involved in the classroom setting, students can become active participants in the ownership of their own safety. In all learning situations, the teacher needs to encourage a positive, responsible student attitude toward safety.

Risk is involved in everything a person does. To minimize the chance of harm, the student must become a conscious participant in ensuring a healthy, safe learning environment. Complacent attitudes regarding safety reflect a behavior which invites a less protected setting.

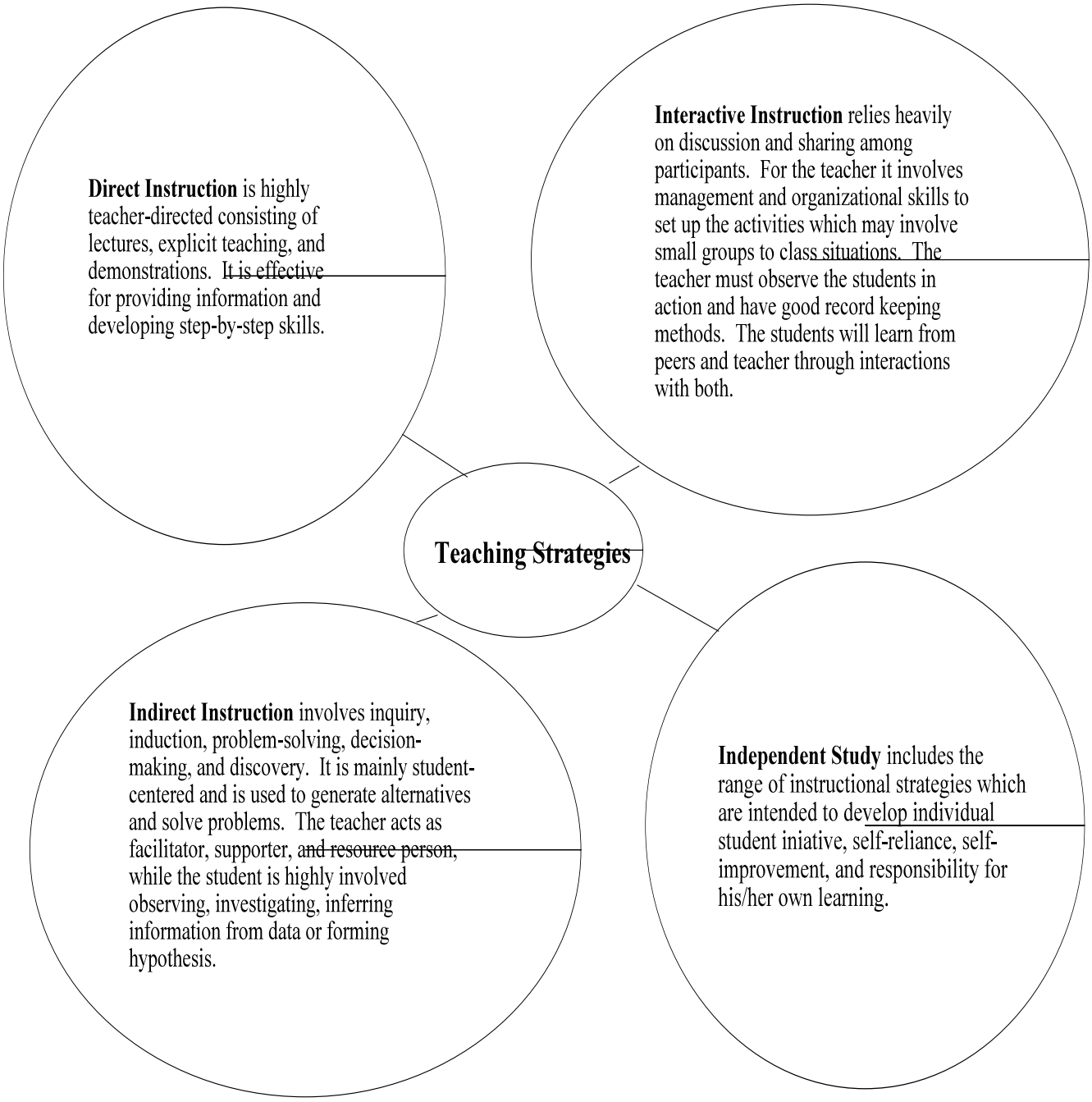
While physical safety is of utmost importance in the classroom setting, emotional safety is equally important. Students need to know the unaccepted behavior and the consequences that ensue. Students should be encouraged to be active learners without being intimidated by others. In every learning environment, teachers foster cooperative, respectful verbal dialogue, and physical presence. Student consequences to the contrary is an essential component to the learning process.

IV Teaching Strategies

Learning theory research clearly indicates that teachers need to employ a wide variety of instructional strategies to address the learning styles of all learners. Moreover, the nature of certain content or processes can only be taught effectively if specific instructional strategies are employed. In order to achieve this objective, students must have an opportunity to co-operatively brainstorm, discuss, evaluate information, and make informed decisions. Students often point to laboratory activities as the best part of the program. This is not necessarily because of the principles learned, but rather because they have a chance to work co-operatively and be actively involved in the learning process.

Teachers are ultimately responsible for determining the best teaching methods for their students, the best way of grouping them, and the best way to present material to make it relevant and interesting. Exemplary teachers use a variety of instructional strategies and have the flexibility to call upon several different strategies both within one period and during a unit of study. Adolescent learners need a balance between practical work, listening, discussing, and problem-solving.

Instructional Strategies



V Assessment and Evaluation

The terms "assessment" and "evaluation" are often used interchangeably. However, they are not exactly the same. "Assessment" refers to the process of collecting and gathering information about student performance as it relates to the achievement of curriculum outcomes.

"Evaluation" refers to the systematic process of analyzing and interpreting information gathered through the process of assessment. Its purpose is to make judgements and decisions about student learning. Assessment provides the data. Evaluation brings meaning to the data.

Assessment and evaluation are integral parts of the teaching/learning process. Assessment must reflect the intended outcomes, be ongoing, and take place in authentic contexts.

Assessment and learning are two sides of the same coin. The methods used to collect educational data define in measurable terms what teachers should teach and what students should learn. And when students engage in an assessment exercise, they should learn from it.

Meaningful learning involves reflection, construction, and self-regulation. Students are seen as creators of their own unique knowledge structures, not as mere recorders of factual information. Knowing is not just receiving information but interpreting and relating the information to previously acquired knowledge. In addition, students need to recognize the importance of knowing not just how to perform, but also when to perform and how to adapt that performance to new situations. Thus, the presence or absence of discrete bits of information - which has been the traditional focus of testing - is no longer the focus of assessment of meaningful learning. Rather, what is important is how and whether students organize, structure, and use that information in context to solve problems.

Evaluation may take different forms depending on its purpose. *Diagnostic* evaluation will identify individual problems and suggest appropriate corrective action. Evaluation may be *formative* in that it is used during the instructional process to monitor progress and to make necessary adjustments in instructional strategies. *Summative* evaluation is intended to report the degree to

which the intended curriculum outcomes have been achieved. It is completed at the end of a particular instructional unit.

Since the specific curriculum expectations indicate behaviors involving knowledge, skills and attitudes, assessment must reflect student performance in each of these areas. The learning outcomes specific to the cognitive domain emphasize the acquisition of cognitive skills at three taxonomic levels: knowledge, understanding, and higher-order thinking. This will help to ensure that the focus on instruction goes beyond the lower levels of learning - recalling facts, memorizing definitions, solving problems and so on. Likewise, the focus of evaluation should also go beyond testing at the knowledge level.

Assessment/Evaluation Techniques

The evaluation plan should include a wide variety of assessment methods. Any single item of information about a student's learning is only a minuscule sample of that individual's accomplishments. All types of learning outcomes cannot adequately be evaluated with a single type of instrument. Notions about students having different learning styles also apply to their performance on items designed for purposes of evaluation.

Evaluation strategies must closely resemble the nature of the instructional program, curriculum, and modern learning theory. There is significant movement toward authentic assessments or performance assessments. These could include such strategies as open-ended questions, exhibits, demonstrations, hands on execution of experiments, computer simulations, writing, and portfolios of students' work over time.

A multifaceted plan is needed to respond to the differences in the intended learning outcomes, the learning styles of students, and to reflect the APE Essential Graduation Learning.

Individual learning outcomes, the criteria for success and the form that assessment and evaluation will take, should be clearly understood by teachers, students, and parents. This involves clearly describing unit and lesson objectives and how the achievement of these objectives will be assessed. If students are to see themselves as responsible for their own learning, the requirements for attaining success in a unit of work must be clearly understood. The assessment and evaluation of the unit should contain no surprises.

The techniques and strategies for assessment and evaluation are as varied as the approaches to teaching and learning. Routman (1994) and Gough and Griffiths (1994) provide lots of useful information on assessment (evaluation) techniques and practices. Following are some brief notes on some of the more common techniques.

Teacher Observation

Teacher observation is probably the most underrated means of assessing student achievement. While many observations are subjective, they are still valid because of the teacher's knowledge of the individuals and the environment in which the learning took place. In order to make their observations as valid as possible and to facilitate the recording of information, teachers may select from a variety of common techniques for recording observations or may devise their own method. Some common recording systems include checklists, rating scales, and anecdotal records.

Checklists are useful for the assessment of the scientific process skills (classifying, inferring, etc.) or skills such as using a microscope or other piece of equipment. In these situations there are specific behaviors which are considered essential. The disadvantage of the checklist is that it can only indicate success or failure and not degrees of success.

Rating scales can be used in the same way as checklists except that rating scales have the added advantage of allowing the evaluator to indicate degrees of success.

Anecdotal records can be used to record the many informal observations made by teachers. Anecdotal records can provide information which is either not available or very difficult to obtain through other means. Teachers prepare charts containing the students' names, the date, and the type of progress observed. At the end of an activity, observations may be shared with students and ways to improve an activity may be discussed. Recording the results of these discussions provide teachers with guidelines to assess the effectiveness of the learning activities.

Teacher Student Conferences

While teachers spend a lot of time with the whole class or with groups of students, they spend much less time in one-on-one situations with students. The interview or conference is a way to gather information about students which is not easily obtainable in other ways. On a one-to-one basis students will be able to share

much more information through conversation than through assessment techniques which require writing.

The conference can provide an opportunity for the teacher to ask questions about content, to determine the student's facility with particular skills, or to question students on their feelings about the topic or activity.

It is important that teachers keep a written record of the conference discussion for future reference. While time constraints of large classes and tight timetables at the intermediate level often prevent the use of student/teacher conferences, it is an evaluation technique worthy of consideration where time permits.

Written Tests
Written tests, which might include multiple-choice, extended response, and/or free-response questions, are used most often to determine the student's achievement in the cognitive domain. Care must be taken to ensure the questions be constructed in such a manner to reflect the presentation mode of the content as well as the reading level of the students.

Performance Tests
For tasks that involve technical skills, teachers may use performance tests to determine whether a student understands the fundamental concept and can complete the task at hand. For example, the teacher may provide the appropriate materials and ask the student to complete a simple electric circuit given the circuit diagram. This task requires that the student understands the concept of a circuit and can assemble the materials into the concrete representation of the concept. A simple checklist or a rating scale could be a valuable tool for recording the teacher's observations of the student's performance.

Laboratory Reports
Laboratory reports are used to assess a variety of concepts, skills, and attitudes. They can test a student's ability to develop a hypothesis, control variables, design an experiment, and to communicate their findings in various ways. They also test the student's ability to record and handle data, to analyze, extrapolate, synthesize, and evaluate their findings. However, it is not necessary to require students to do detailed laboratory reports on each activity that is done in a laboratory setting. This often creates "busy work" for the students and requires the teacher to spend a

great deal of time reading and grading reports. For example, if an activity requires that students produce a graph of the data collected, the assessment could focus on the students' ability to produce a proper graph. Other aspects of laboratory work would be selected for assessment in subsequent activities. A detailed lab report may be required at the culmination of a unit or term.

Journals
Journals are especially useful for students to express their feelings or attitudes toward a particular topic or issue. These writings are useful for the evaluation of students' attitudes towards science.

Projects
Projects include research projects, and activities done individually or as group endeavors. Projects are particularly useful for evaluating the cognitive skills, technical skills, as well as cooperative group skills.

Student Self-Evaluation
Students need to be aware of their own strengths, weaknesses, areas needing improvement, and attitudes. Students can engage in simple self-evaluation techniques which draws their attention to their own learning. Self-evaluation can be used for the student's assessment of his/her attitudes, interests and opinions. In a general way, self-evaluation can be used to gauge a student's impressions about his/her achievement of specific knowledge and skills.

Portfolios
A portfolio is a selection of a student's work over a period of time. It is intended as a source of information about student's achievement of the curriculum outcomes.

The main purpose of the portfolio is to provide a means for monitoring progress over time. The portfolio should enable the user to demonstrate that learning has or has not taken place.

Each piece of work must have some significance or a reason for its selection. The only guideline which can be offered regarding the number of pieces of work is that the portfolio should be representative of the student's work over time. This might suggest that samples be included which represent the topics covered or that samples be included on a regular basis (e.g. one sample per week) so that the user of the information can get a picture of the development over time. For management purposes the portfolio

should be updated periodically, removing items which are no longer relevant or appropriate.

The management of portfolios may create a problem for the teacher. The selection of items for the portfolio and the required updating is a time-consuming process. The initial setting up and establishment of the portfolio must be the responsibility of the teacher but the ongoing maintenance should be done by the student. Conversations between a teacher and students about assessment tasks and the teacher's evaluation of performance provide students with necessary information to assess their own work. In concert with opportunities to apply it to individual work and to the work of peers, that information contributes to the development of students' self -assessment skills. By developing these skills, students become able to take responsibility for their own learning.

Developing a Plan

Instruction and evaluation must reflect the specific curriculum expectations of the guide. While these guide the teacher in selecting instructional strategies and activities, they will also influence the assessment procedures used in constructing a student's profile.

Teachers hold widely diversified opinions on what constitutes appropriate instructional and evaluation strategies. No single plan will work for all teachers or students. The best option is to include a variety of assessment strategies that are congruent with those used in instruction.

Some tools and procedures used to create a student profile through evaluation are provided in the "Reference List of Assessment Tools and Procedures".

This list is not intended to be exhaustive nor is any attempt made to describe the construction and use of these items. The teacher's professional judgement should determine the best instruments and techniques to evaluate a topic or theme.

A Reference List of Assessment Tools and Procedures

1. Testing
   - Essay
   - Matching
   - True/False
   - Multiple Choice
   - Interpretation/production of illustrations
   - Interpretation/production of graphs/data tables
   - Numerical problems

2. Student Work Samples
   - Laboratory Reports
   - Major projects and written reports
   - Homework
   - Learning Journals
   - Oral Presentations

3. Checklists
   - Student self-evaluation of:
     - interest/attitudes
     - social/group skills
     - understanding
   - Teacher observation of:
     - laboratory skills
     - group work
     - interest/attitudes
   - Group Self-Evaluation
     - group skills
     - achievement

4. Anecdotal Records

5. Teacher/Student Conferences

Using Varied Assessment Strategies

Teachers must realize they are preparing students for a world where knowledge is expanding at a rate we can no longer track. This requires that we shift emphasis from content knowledge to information processing skills. Our students need to be able to select, process, and evaluate knowledge.

This knowledge does not always need to be tested directly on evaluations that rely strictly on recall of facts during tests, rather it

can be encompassed in higher level objectives such as comprehension, synthesis, or application. These could be better measured through a problem-solving approach.

It is therefore important to emphasize a variety of strategies in evaluation plans. These must reflect the teaching strategies employed in the delivery of the specific topic.

Food Curriculum

GCO: Students will be expected to evaluate and manage food technology.

SCO: By the end of grade 9 students will be expected to:	**Elaboration - Instructional Strategies/Suggestions**
• identify food preparation equipment • explain the function of food preparation equipment • demonstrate safe use of food preparation equipment • discuss how technology has changed the equipment available for food preparation • identify the information given in a recipe • describe the meaning of basic food preparation terms • correctly and accurately measure various ingredients	• demonstrate, examine, and identify food preparation equipment • demonstrate safe use of food preparation equipment • explore how technology has changed the equipment available for food preparation • analyze a recipe and identify food preparation needed • match cooking terms with proper definitions • display a chart or table of equivalent measures and abbreviations using both metric and standard systems These SCO's meet the following Technology Education general curriculum outcomes: ▸ Technological Problem Solving ▸ Technological Systems ▸ History and Evolution of Technology ▸ Technological Responsibility

GCO: Students will be expected to evaluate and manage food technology.

Worthwhile Tasks for Evaluation and/or Assessment	Suggested Resources
• demonstrate safe use of equipment • use a variety of equipment in the correct situation • list food preparation equipment needed for a recipe • identify cooking terms • create a word search for food preparation equipment or cooking terms using a puzzle maker program on the computer • complete a chart or table of equivalent measures and abbreviations using both metric and standard systems	Discovering Food and Nutrition Teacher's resource binder Food and Food Science video series - Safety in the Kitchen VID 363.1 http://www.puzzlemaker.com

GCO: Students will be expected to demonstrate an understanding of their personal responsibility in food preparation.

SCO: By the end of grade 9 students will be expected to:	**Elaboration - Instructional Strategies/Suggestions**
• investigate current problems with improper food handling • apply understanding of safe practices • efficiently clean up work area upon completion of food preparation • evaluate prepared food product • develop a basic recipe or variation of a basic recipe for a simple food product • create a food product using a recipe • create plans for preparing simply meals, making effective use of resources • identify the source, selection, cooking methods, and storage of foods from each food group	• identify and discuss "safe" and "unsafe" situations in food handling • view food safety audio visuals • evaluate given recipes • give a demonstration on proper dishwashing and drying procedures • encourage students to follow step-by-step directions to prepare food product • demonstrate how to measure ingredients correctly • encourage students to explore the sensory experience of food. Let students touch, smell, and taste foods: soft, fuzzy kiwis; cool, pebbly cottage cheese; sweet chewy raisins • offer a variety of tastes and textures in a taste testing lab These SCO's meet the following Technology Education general curriculum outcomes: ▸ Technological Problem Solving ▸ History and Evolution of Technology ▸ Technological Responsibility

GCO: Students will be expected to demonstrate an understanding of their personal responsibility in food preparation.

Worthwhile Tasks for Evaluation and/or Assessment	Suggested Resources
• categorize food items according to food groups • make posters, charts, or mobiles; use clipart to enhance your work • demonstrate the ability to measure ingredients correctly • practice clean up procedures	Discovering Food and Nutrition Teacher's resource binder http://www.nelson.com/nelson/science/Ontario/studcentre7.html

GCO: Students will be expected to demonstrate an understanding of their personal responsibility in making healthy food choices.

SCO: By the end of grade 9 students will be expected to:	**Elaboration - Instructional Strategies/Suggestions**
• identify the four basic food groups and the "other" category • have a basic understanding of the processes of digestion and absorption • identify the six main nutrient groups and their functions, and sources • explore and explain the relationship of food and life style choices to health • identify specific nutrient and related deficiencies	• encourage students to identify and discuss a range of nutritional choices that can be used to meet their nutritional preferences • identify how food preferences and wants of individuals and families have changed over time • facilitate a positive, relaxing, reassuring atmosphere to encourage learning and aid digestion. • develop a campaign to inform the student body of the various food-related health concerns • view audio visuals These SCO's meet the following Technology Education general curriculum outcomes: Technological Problem Solving ▸ Technological Systems ▸ Technology and Careers ▸ History and Evolution of Technology ▸ Technological Responsibility

GCO: Students will be expected to demonstrate an understanding of their personal responsibility in making healthy food choices.

Worthwhile Tasks for Evaluation and/or Assessment	Suggested Resources
• write television and/or radio commercials on food related health concerns • produce a video on nutrients • plan menus based on Canada's Food Guide • record daily food intakes and classify the food into food groups • display food products or labels to show how foods are grown or processed • prepare foods from each group • categorize foods according to nutrient contribution • prepare recipes rich in specific nutrients • analyze labels of food items to determine nutritional content of food items • research and report on the relationship of food to various characteristics such as: alertness, shiny hair, irritability	Discovering Food and Nutrition Teacher's resource binder Food and Food Science video series - Safety in the Kitchen Food Safety Nutrition and You http://clipartguide.com/clipart Bill Nye video's Digestion (25 min) Nutrition (25 min) available at Media Centre

GCO: Students will be expected to demonstrate an understanding of the history and evolution of food technology and of its social and cultural implications

SCO: By the end of grade 9 students will be expected to:	**Elaboration - Instructional Strategies/Suggestions**
• examine the historical evolution of food technologies and predict future developments • investigate the range of table arrangements for various types of food service; buffet, family service, plate style, etc. • explain the need for and the development of convenience foods and fast food meals • examine the impact of a multicultural society on our food choices • examine and discuss guidelines for table behavior	Genetic engineering is the introduction of genes from one cell to another cell. The genes for a desired trait are moved from one plant or animal to another. Genes are located on chromosomes. Through genetic engineering, scientists have improved food production, for example a disease resistant potato. Bioprocessing is a bio-related technology that uses living microorganisms or parts of organisms to change materials from one part to another. Many food products are created through bioprocessing. In bread making, living yeast cells are added to dough. The cells digest the sugar and starch in the dough. They also release carbon dioxide. The carbon dioxide forms pockets of gas causing the bread to rise. Cheese, yogurt, sour cream, vinegar, and sauerkraut are also made using bioprocessing technology. Bio-related technologies have changed farming. They have allowed the farmer to produce more food per acre than at any other time in history. Food technologies such as the microwave oven and the bread maker have simplified food preparation. The crock pot/slow cooker has replaced leaving the pot on the back of the stove. These SCO's meet the following Technology Education general curriculum outcomes: ▸ Technological Problem Solving ▸ Technological Systems ▸ Technology and Careers ▸ History and Evolution of Technology ▸ Technological Responsibility

GCO: Students will be expected to demonstrate an understanding of the history and evolution of food technology and of its social and cultural implications

Worthwhile Tasks for Evaluation and/or Assessment	Suggested Resources
• investigate a recent food discovery in technology and present findings to the class • prepare a simple meal plan and present with appropriate table arrangement • prepare their own nutritious convenience food • demonstrate appropriate food preparation and table behavior • evaluate an article on recent developments in food science and technology	Discovering Food and Nutrition Teacher's resource binder Food: A Multi-Cultural Feast, (12 min.) available at the Media Center

GCO: Students will be expected to demonstrate an understanding of current and evolving careers and of the influence of food technology on the nature of work.

SCO: By the end of grade 9 students will be expected to:	**Elaboration - Instructional Strategies/Suggestions**
• examine the food technologies of specific food production careers and workplaces	The Food Technology Center is involved in: **Product Development** New and improved food products and processes. **Pilot Plant** Scale ups, test batches, equipment retrofits in FTC's federally-inspected plant. **Sensory Analysis** Measuring taste, texture, appearance, and odour through formal evaluation. **Nutrition Labels** Comprehensive analysis supports nutrition claims and provides information to comply with regulations in Canada, United States and abroad. **HACCP Services and Quality Management Programs** ...support food safety in the food industry. **Analytical Services** Food chemistry and microbiology labs troubleshoot for the food industry and support product development, food safety, nutritional labeling, and sensory analyses. **Research & Development** Researchers investigate microbial concerns and look for new uses for waste products. **Technology Transfer** FTC sources existing technologies and customizes them to suit clients' requirements This SCO meets the following Technology Education general curriculum outcome: ▸ Technology and Careers

GCO: Students will be expected to demonstrate an understanding of current and evolving careers and of the influence of food technology on the nature of work.

Worthwhile Tasks for Evaluation and/or Assessment	Suggested Resources
• group discussions	Food Technology Centre http://www.gov.pe.ca/ftc/index.php3 http://collections.ic.gc.ca/potato/scitech/process.asp

Sewing Curriculum

GCO: Students will be expected to understand, evaluate, and manage technology for the purpose of constructing a sewing project.

SCO: By the end of grade 9 students will be expected to:	**Elaboration - Instructional Strategies/Suggestions**
• locate and identify small equipment in the clothing lab • demonstrate care and safety precautions in the use of the sewing equipment • identify the parts of the sewing machine • know the function of each part of the machine • demonstrate the safe use of the sewing machine	• identify examples of small equipment • group items according to use: measuring, marking, cutting, pressing, and stitching • discuss importance of safety when using small equipment • demonstrate use, care, and storage of the dry/steam iron • prepare and display a chart of safety rules • evaluate the safety of a clothing lab • demonstrate use, care, and storage of the sewing machine and/or serger • identify parts of the sewing machine and/or serger These SCO's meet the following Technology Education general curriculum outcomes: ▸ Technological Problem Solving ▸ History and Evolution of Technology ▸ Technological Responsibility

GCO: Students will be expected to understand, evaluate, and manage technology for the purpose of constructing a sewing project.

Worthwhile Tasks for Evaluation and/or Assessment	**Suggested Resources**
• organization of sewing project • use and care of equipment • knowledge of sewing equipment	Simplicity's Simply The Best Sewing Book http://www.sewing.org/educate/index.html

GCO: Students will be expected to understand, evaluate and manage technology for the purpose of constructing a sewing project.

SCO: By the end of grade 9 students will be expected to:	**Elaboration - Instructional Strategies/Suggestions**
• to become familiar with a pattern • to select fabric and prepare it for sewing • to practice sewing skills	• demonstrate how to properly layout pattern for project • demonstrate how to transfer pattern markings to fabric • demonstrate how to measure accurately • demonstrate how to do the following hand sewing techniques: ▸ running stitch ▸ blanket stitch ▸ overcasting hemming by hand ▸ slipstitch ▸ application of fasteners • demonstrate how to do the construction techniques: ▸ backstitch ▸ plain seam ▸ seam finishes (pinked, zig-zag, serger) ▸ casings ▸ machine hemming ▸ clipping ▸ grading ▸ notching ▸ pressing These SCO's meet the following Technology Education general curriculum outcomes: ▸ Technological Problem Solving ▸ History and Evolution of Technology ▸ Technological Responsibility

GCO: Students will be expected to understand, evaluate and manage technology for the purpose of constructing a sewing project.

Worthwhile Tasks for Evaluation and/or Assessment	**Suggested Resources**
• examine and use a pattern instruction sheet • watch a demonstration on pattern layout • identify pattern symbols and their function • demonstrate ability to measure accurately • label a piece of fabric with the following terms: ‣ selvage ‣ bias ‣ lengthwise grain ‣ crosswise grain ‣ raw edge • distinguish between knitted and woven fabric • be able to distinguish between the basic natural and man-made fibers	Level 1 ‣ tote bags ‣ pillow case ‣ aprons ‣ book covers ‣ pencil case ‣ stuffed toys/funfur creations ‣ pin cushion ‣ barley baby ‣ tissue holder Level 2 ‣ shorts ‣ locker caddy/organizer ‣ tote bags ‣ pillows ‣ mobiles, wall hangings Level 3 ‣ sweat shirts ‣ pants ‣ wind/splash pants ‣ tights, biking shorts ‣ simple skirt

GCO: Students will be expected to demonstrate an understanding of the history and evolution of fabric technology and of its social and cultural implications

SCO: By the end of grade 9 students will be expected to:	**Elaboration - Instructional Strategies/Suggestions**
• become familiar with fabric/garment labeling	• provide government regulations concerning fabric and/or garment labeling
• become familiar with laundry procedures	• demonstrate laundry procedures
• recognize the principles of good buymanship	These SCO's meet the following Technology Education general curriculum outcomes: ▸ Technological Problem Solving ▸ History and Evolution of Technology ▸ Technological Responsibility

GCO: Students will be expected to demonstrate an understanding of the history and evolution of fabric technology and of its social and cultural implications

Worthwhile Tasks for Evaluation and/or Assessment	Suggested Resources
• interpret care symbols • demonstrate ability to read care label • demonstrate ability to do laundry • list environmental concerns when choosing laundry soaps, softeners, etc. • view filmstrips on shopping for clothing • analyze impulse buying, sales procedures, use of credit, and exchange policies • become familiar with rights and responsibilities of the consumer	Simplicity's Simply The Best Sewing Book http://www.sewing.org/educate/index.html