



Saskatchewan
Learning

Accounting 10, 20, 30 Curriculum Guide

A Practical and Applied Art

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Introduction

Within Core Curriculum, the Practical and Applied Arts (PAA) is a major area of study that incorporates five traditional areas of Home Economics Education, Business Education, Work Experience Education, Computer Education, and Industrial Arts Education. Saskatchewan Learning, its educational partners, and other stakeholders have collaborated to complete the PAA curriculum renewal. Some PAA curriculum guides have been updated; some components have been integrated, adapted, or deleted; some Locally Developed Courses have been elevated to provincial status; and some new guides have been developed.

A companion *Practical and Applied Arts Handbook* provides background on Core Curriculum philosophy, perspectives, and initiatives. The Handbook articulates a renewed set of goals for PAA. It presents additional information about the PAA area of study, including guides about work study and related Transition-to-Work dimensions. In addition, a *Practical and Applied Arts Information Bulletin* provides direction for administrators and others regarding the implementation of PAA courses. Lists of recommended resources for all guides will be compiled into a PAA Bibliography with periodic updates.

Philosophy and Rationale

The focus of the renewed accounting curriculum is to provide young people with practical business and financial knowledge and skills to function effectively in our changing and complex technological and market-based society. The needs of all students for decision making, resource management, citizenship, career and personal planning and financial skills must be present in the curriculum.

Young people leaving school today need essential understandings, economic, financial, and consumer skills and attitudes to cope successfully and to participate productively in an information society. Students must be able to manage personal finances, act appropriately according to their rights and responsibilities as citizens, process information effectively and efficiently, make sound decisions about life careers and choices, and participate constructively as consumers and producers. These general competencies must be coupled with those that may lead to employment or advanced studies in business.

Aim, Goals and Foundational Objectives

The aim of Accounting is to provide the opportunity for students in Grades 10, 11, and 12 to develop a basic understanding of the accounting cycle and to develop the problem-solving and decision-making skills used to interpret accounting and financial information.

Goals

Awareness: To develop an awareness and understanding of how accounting concepts interpret and influence our economy.

Employment Skills: To understand accounting by using, interpreting, and analyzing source documents, summary documents, and financial statements.

Business Environment: To realize the importance of, and to be able to adapt to, changes in support techniques in accounting such as cash control, technology, source documents, and formats of documents.

Student-Image and Business Attitudes: To understand the ethical and moral responsibilities of an employee when in a position of responsibility and trust in accounting for a business.

Personal-Use Skills: To be able to apply basic accounting concepts to personal-use situations whether for self, school, outside agencies, or business.

Communications: To develop the vocabulary and ability to communicate with peers, teachers, and community in the contemporary accounting sense.

Foundational Objectives

The student will be able to:

- examine the concepts of the Generally Accepted Accounting Principles (GAAPs) and utilize these concepts within accounting activities.
- organize and process basic financial data using the accounting equation and ledger accounts.
- understand the basic operation of a business and the role of accounting in the business.
- develop an understanding of profit planning and how it may be used as a tool in management decisions.
- analyze and use financial statements effectively when making management decisions.
- utilize basic banking functions effectively for business or personal banking decisions.
- recognize the importance of payroll functions within the business environment.
- develop an understanding of personal and business taxation.
- develop shortcuts that may make the recording of traditional accounting more efficient.
- perform basic business calculations with speed and accuracy.
- understand the organizational and legal differences of sole proprietorships, partnerships, and corporations (including cooperatives) and their applicable systems.
- develop and utilize accounting procedures that suit the needs of the agricultural sector.
- recognize technology as a tool to aid in the accounting process.
- become accustomed to and adept at the use of accounting software and understand its strengths and limitations.
- become aware of the careers and opportunities in the field of accounting that exist in Saskatchewan and other provinces.
- become aware of the post-secondary programs offered in the province that are related to the field of accounting.
- demonstrate accounting procedures for a business.
- integrate classroom learning with work-related learning.
- increase awareness of employability skills as they relate to the work environment.
- develop accounting skills that may lead to successful employment.

Common Essential Learnings Foundational Objectives

The incorporation of the Common Essential Learnings (CELs) into the instruction of Practical and Applied Arts (PAA) curricula offers students many opportunities to develop the concepts, skills, knowledge, abilities and attitudes necessary to make the transition to work and adult life. The CELs establish a link between the Transition-to-Work dimensions and PAA curriculum content.

Throughout the PAA curricula, the CELs Foundational Objectives are stated explicitly at the beginning of each module and are coded in this document, as follows:

COM	=	Communication
NUM	=	Numeracy
CCT	=	Critical and Creative Thinking
TL	=	Technological Literacy
PSVS	=	Personal and Social Values and Skills
IL	=	Independent Learning

Although certain CELs are to be emphasized in each module, as indicated by the CELs Foundational Objectives, other interrelated CELs may be addressed at the teacher's discretion.

Related Documents

Saskatchewan Learning produced the following documents to support the Accounting 10, 20, 30 curriculum guide. *Accounting 10, 20, 30: An Initial List of Implementation Materials* (2003) contains an annotated listing of resources that can be used to support and to enrich the curriculum. The bibliography assists in implementing Resource-Based Learning in the classroom. Each annotation contains a recommendation about how the resource supports the curriculum. Check recent department *Learning Resource Material Updates* for additional resources.

Course Components and Considerations

This curriculum contains core modules developed for each of the three accounting levels and optional modules that can be used at each level. The topics within the core modules serve as the means for developing the content, processes, skills, and attitudes required for understanding accounting. The core modules for Accounting 10 are entitled Accounting Cycle: Service Firm and Career Opportunities in Accounting. Module 2, the core module of Accounting 20 is entitled Accounting Cycle: Merchandising Firm. Introductory Management Accounting and Financial Statement Analysis form the core module of Accounting 30.

Most of the modules in the accounting curriculum, including the core modules, have been divided into a number of sub-modules. This provides greater opportunity and flexibility to teach some of the sub-modules in Survey Courses both at the middle level and at the secondary level. It is important to note that the sub-modules of a module are to be completed in the order presented, and that each sub-module is a prerequisite to the next. All the sub-modules of a module do not need to be taught in a Survey Course. As with all PAA courses, recordkeeping of the modules, and sub-modules, completed, and communication with the receiving teacher will be very important when using the sub-modules in a survey course.

Along with the core module for each level, optional modules will be selected to complete the 100 hours necessary for a PAA credit in Accounting at the Secondary Level. Optional modules with identified prerequisite modules have been developed to allow teachers, principals and school divisions the flexibility to cooperatively select the optional modules desired to complete the accounting courses at the 10, 20 and 30 levels. If core modules have been completed, optional modules may be used in a survey course.

Work Study Component

Work Study provides students with an opportunity to enhance personal skills and to develop skills using industry equipment and standards that may not be available in a school setting. Refer to the Work Study Guidelines, a section of the *Practical and Applied Arts Handbook* and to the *Career and Work Exploration 10, 20 A30, B30 Curriculum Guide* (2002) for information on required and best practices for student preparation, employer partnerships, and teacher responsibilities.

Creating Partnerships for Work Study

Partnerships are important to the success of the work study component. There are three distinct partners that play an important role: the industry/business, the school and the student. Personal contact is the best approach to building partnerships. One should begin by making a presentation to colleagues within the school, to the student body, to school board members, to parents and to local businesses. It is important to outline the curriculum and the benefits and responsibilities for each of the partners. See the modules outlined in the curriculum and the “Work Study Guidelines” in the *Practical and Applied Arts Handbook* for further information on work study.

Portfolios

A personal career portfolio is a valuable organizer of student projects and assignments. It encourages students to collect examples of their work as they progress through the various activities, labs, and projects. Selecting particular items to include in a portfolio encourages students to reflect on what they have learned

or accomplished and what they have yet to learn. Portfolio items may include: journal notes, drafts, photographs, audio or video tapes, computer discs, sketches and drawings, etc. Portfolios may be used for peer, teacher, self- assessment, and as a format to present selected works to parents, post-secondary institutions, or potential employers. In addition, the portfolio can demonstrate the link between home, school and community in the students' education. Each student should have a portfolio representing his or her work during the course.

The portfolio can help students:

- reflect on personal growth and accomplishment
- see links between home, school and community education and activities
- collect materials to prepare applications for post-secondary education and scholarship program entrance
- collect materials to prepare for employment applications
- focus on career planning.

The portfolio can help teachers:

- provide a framework for independent learning strategies for the student
- communicate student learning from one school year to another in a specific area of study
- identify career planning needs for students
- assess and evaluate the student's progress and achievement in a course of study.

The portfolio can help post-secondary institutions:

- to determine suitable candidates for awards and scholarships
- to evaluate candidates for program entrance
- to evaluate prior learning for program placement.

The portfolio can help community:

- reflect on the involvement in a student's education and the support offered to learners
- demonstrate the link between the home, school, and community in education.

The portfolio can help potential employers:

- identify employable skills desired in future employees
- provide evidence of knowledge and skill development of potential employees.

For purposes of Practical and Applied Arts courses, two kinds of portfolios may be valuable: a "working portfolio" to collect ideas observations, notes and critiques, and a "presentation portfolio" to maintain completed work. By keeping track of this material, students are able to monitor their level of achievement. Additions to and revisions of the portfolio should be done at the end of each module.

Working Portfolio

Students collect work over time in a working folder. Each student should also keep a journal of observations, critiques, ideas, and reflections as part of his or her working portfolio. Items in this portfolio may be used for the purpose of reflection, ongoing and summative, peer, teacher and self-evaluations.

Working portfolios may be used for purposes of conferencing between student and teacher, teacher and parent, teacher and teacher, or student and student. When a teacher examines a student's portfolio in order to make a decision regarding student progress, the information it contains may become documented evidence for the evaluation.

A daily journal may also become a part of a working portfolio as a means of tracking the student's use of time and to record progress on ideas that are being developed. This will provide the student with a focus for self-directed or independent learning as well as an anecdotal record for part of the course evaluation.

Presentation Portfolio

To compile a presentation portfolio, students should select items from their working portfolio. The presentation portfolio should cover the range of students' experiences and should display their best efforts.

The preparation of a presentation portfolio can be an assessment strategy. It is strongly suggested that students at the 30 level prepare a presentation portfolio suitable for submission to potential employers or post-secondary institutions.

Through collecting, selecting and reflecting, students are able to compile presentation portfolios that display their best collection of work.

Extended Study Modules

The extended study module is designed to provide schools with an opportunity to meet current and future demands that are not provided by current modules in the renewed PAA curriculum.

The flexibility of this module allows a school/school division to design one new module per credit to complement or extend the study of existing pure core modules and optional modules. The extended study module is designed to extend the content of the pure courses and to offer survey course modules beyond the scope of the selection of PAA modules.

The list of possibilities for topics of study or projects for the extended study module approach is as varied as the imagination of those involved in using the module. These optional extended study module guidelines, found in the *Practical and Applied Arts Handbook*, should be used to strengthen the knowledge, skills, and processes advocated in the PAA curriculum in which the extended study module is used.

It is recommended that a summary of any extended study module be sent to the Regional Superintendent of Curriculum and Instruction to establish a resource bank of module topics.

For more information on the extended study module, refer to the *Practical and Applied Arts Handbook*.

Resources

To support the principle of Resource-based Learning, a variety of instructional resources have been evaluated and recommended to support the teaching and learning of Accounting 10, 20, 30. The enclosed *Accounting 10, 20, 30: An Initial List of Implementation Materials* contains a list of annotated resources. Teachers should also consult the comprehensive PAA bibliography. The annual *Learning Resource Materials Update* can also provide information about materials evaluated since the curriculum was printed.

To order materials, except videos, teachers should check the department's Learning Resource Distribution Centre (LRDC) catalogue. An on-line ordering service is available at lrdc.sasked.gov.sk.ca/

The on-line version of this curriculum and its' accompanying list of implementation materials is accessible at www.sasked.gov.sk.ca/docs/paa.html. It will be "Evergreened", as appropriate.

Assessment and Evaluation

Student assessment and evaluation is an important part of teaching as it allows the teacher to plan and adapt instruction to meet the specific needs of each student. It also allows the teacher to discuss the current successes and challenges with students and report progress to the parent or guardian. It is important that teachers use a variety of assessment and evaluation strategies to evaluate student progress. Additional information on evaluation of student achievement can be found in the Saskatchewan Education documents entitled *Student Evaluation: A Teacher Handbook* (1991) and *Curriculum Evaluation in Saskatchewan* (1991).

It is important that the teacher discuss with students the evaluation strategies to be used in the course, when the evaluation can be expected to occur, the weighting of each evaluation strategy, and how it relates to the overall student evaluation. The weighting of the evaluation should be determined in relation to the amount of time spent and emphasis placed on each area of the course, as suggested in these curriculum guides. A suggested evaluation for Accounting is as follows:

A sample evaluation scheme:

Tests (written)	25%
Project work	15%
Information Research	15%
Homework and Assignments	10%
Classroom Presentations	10%
Work Study	25%

As discussed in the *Practical and Applied Arts Handbook*, there are three main types of student evaluation: diagnostic, formative, and summative.

Diagnostic evaluation usually occurs at the beginning of the school year or before a unit of instruction to identify prior knowledge, interests or skills of students about the subject area.

Formative evaluation is an ongoing classroom process that keeps students and educators informed of students' progress.

Summative evaluation occurs most often at the end of a module, to determine what has been learned over a period of time.

For information about program evaluation refer to *Saskatchewan School-Based Program Evaluation Resource Book* (1989).

Module Overview Chart

Module Code	Module	Suggested Time (hours)
ACCT101	Module 1: Accounting Cycle: Service Firm (Core)	40-50
ACCT101A	Module 1A: Introduction to Accounting (Core)	2-5
ACCT101B	Module 1B: Accounting Equation(Core)	2-5
ACCT101C	Module 1C: Transaction Analysis (Core)	4-8
ACCT101D	Module 1D: T-Accounts (Core)	5-7
ACCT101E	Module 1E: Financial Statements (Core)	4-7
ACCT101F	Module 1F: Introduction to Accounting Cycle: Steps 1 to 3 (Core)	6-10
ACCT101G	Module 1G: Accounting Cycle: Steps 4 to 7 (Core)	6-10
ACCT101H	Module 1H: Practical Set/Major Assignment (Core)	7-10
ACCT102	Module 2: Accounting Cycle: Merchandising Firm (Core)	40-50
ACCT102A	Module 2A: Introduction to Merchandising (Core)	2-5
ACCT102B	Module 2B: Merchandising Inventroy Accounts (Core)	4-6
ACCT102C	Module 2C:Sales and Purchases Accounts (Core)	4-6
ACCT102D	Module 2D: Special Journals (Core)	10-14
ACCT102E	Module 2E: Financial Statements (Core)	10-15
ACCT102F	Module 2F: Practice Set (Core)	7-10
ACCT103	Module 3: Introductory Management Accounting and Financial Statement Analysis (Core)	45-50
ACCT103A	Module 3A: Introductory Management Accounting (Core)	3-5
ACCT103B	Module 3B: Cost Accounting (Core)	10-15
ACCT103C	Module 3C: Fixed and Variable Costs (Core)	5-10
ACCT103D	Module 3D: Budgeting (Core)	10-12
ACCT103E	Module 3E: Financial Statement Analysis (Core)	5-8
ACCT104	Module 4: Banking and Cash Control (Optional)	10-15
ACCT104A	Module 4A: Banking (Optional)	7-9
ACCT104B	Module 4B: Petty Cash (Optional)	4-6
ACCT105	Module 5: Payroll and Taxation (Optional)	16-20
ACCT105A	Module 5A: Payroll (Optional)	7-10
ACCT105B	Module 5B: Taxation (Optional)	7-10
ACCT106	Module 6: Synoptic/Combination Journal and One-Write System (Optional)	15-20
ACCT106A	Module 6A: Synoptic/Combination Journal (Optional)	7-10
ACCT106B	Module 6B: One-Write System (Optional)	7-10
ACCT107	Module 7: Calculator and Business Applications (Optional)	10-20
ACCT107A	Module 7A: Basic Calculator Operations(Optional)	10-20
ACCT107B	Module 7B: Calculator Applications (Optional)	7-8
ACCT108	Module 8: Partnerships and Corporations (Optional)	20-25
ACCT108A	Module 8A: Comparison of Partnerships and Corporations (Optional)	7-9
ACCT108B	Module 8B: Partnerships Accounting (Optional)	5-8
ACCT108C	Module 8C: Corporate Accounting (Optional)	5-8
ACCT109	Module 9: Asset Analysis (Optional)	20-25
ACCT109A	Module 9A: Bad Debts (Optional)	4-6
ACCT109B	Module 9B: Depreciation (Optional)	5-7
ACCT109C	Module 9C: Inventory Valuation (Optional)	5-8
ACCT109D	Module 9D: Asset Analysis Example (Optional)	3-4
ACCT110	Module 10: Agricultural Accounting (Optional)	20-25
ACCT110A	Module 10A: Agricultural Record Uses (Optional)	2-4
ACCT110B	Module 10B: Agricultural Accounting Procedures (Optional)	2-4
ACCT110C	Module 10C: Agricultural Accounting Set Up (Optional)	2-4
ACCT110D	Module 10D: Agricultural Accounting Practice (Optional)	10-13
ACCT111	Module 11: Computerized Application for a Service Firm (Optional)	7-15

ACCT112	Module 12: Computerized Application for a Merchandising Firm (Optional)	10-30
ACCT112A	Module 12A: Computerized Set Up and Practice (Optional)	5-8
ACCT112B	Module 12B: Payroll Integration (Optional)	3-5
ACCT112C	Module 12C: Designing a Computerized Accounting System (Option)	8-10
ACCT113	Module 13: Career Opportunities in Accounting (Core)	2-5
ACCT114	Module 14: Departmentalized Accounting (Optional)	15-25
ACCT114A	Module 14A: Purchasing and Cash Payments(Optional)	5-8
ACCT114B	Module 14B: Sales and Cash Receipts (Optional)	5-8
ACCT114C	Module 14C: Departmental Payroll (Optional)	1-3
ACCT114D	Module 14D: Departmentalized Financial Reporting (Optional)	4-6
ACCT115A, B, C	Module 15A, B, C: Work Study Preparation and Follow-up Activities (Optional)	5-10
ACCT116A, B, C	Module 16A, B, C: Work Study (Optional)	25-50
ACCT199A, B, C	Module 99A, B, C: Extended Study (Optional)	5-20

Suggested Course Configuration

Module Code	Module	Suggested Time (hours)
	Accounting 10	
ACCT101	Module 1: Accounting Cycle: Service Firm (Core)	40-50
ACCT113	Module 13: Career Opportunities in Accounting (Core)	2-5
	Accounting 20	
ACCT102	Module 2: Accounting Cycle: Merchandising Firm (Core)	40-50
	Accounting 30	
ACCT103	Module 3: Introductory Management Accounting and Financial Statement Analysis (Core)	45-50
	Additional Modules for 10, 20, or 30	
ACCT104	Module 4: Banking and Cash Control (Optional)	10-15
ACCT105	Module 5: Payroll and Taxation (Optional)	16-20
ACCT106	Module 6: Synoptic/Combination Journal and One-Write System (Optional)	15-20
ACCT107	Module 7: Calculator and Business Applications (Optional)	10-20
ACCT108	Module 8: Partnerships and Corporations (Optional)	20-25
ACCT109	Module 9: Asset Analysis (Optional)	20-25
ACCT110	Module 10: Agricultural Accounting (Optional)	20-25
ACCT111	Module 11: Computerized Application for a Service Firm (Optional)	7-15
ACCT112	Module 12: Computerized Application for a Merchandising Firm (Optional)	10-30
ACCT114	Module 14: Departmentalized Accounting (Optional)	15-25
ACCT115	Module 15: Work Study Preparation and Follow-up Activities (Optional)	5-10
ACCT116	Module 16: Work Study (Optional)	25-50
ACCT199	Module 99: Extended Study (Optional)	5-20

Core and Optional Modules

Module 1: Accounting Cycle: Service Firm (Core)

Foundational Objectives

- To examine the concepts of the Generally Accepted Accounting Principles (GAAPs) and utilize these concepts within accounting activities.
- To organize and process basic financial data using the accounting equation and ledger accounts.
- To recognize technology as a tool to aid in the accounting process.

Common Essential Learnings Foundational Objectives

- To promote both intuitive, imaginative thought and the ability to evaluate ideas and processes in accounting. (CCT)
- To use a wide range of language experiences for developing students' knowledge of accounting. (COM)
- To support students in planning and managing projects and assignments, both individually and in groups. (IL)

Module 1A: Introduction to Accounting

Suggested time: 2-5 hours

Level: Introductory

Prerequisite: None

	Learning Objectives	Notes
1.1	To recognize and use the basic vocabulary of accounting in classroom discussions and assignments. (COM)	Accounting can be defined as the process of recording, classifying, reporting and interpreting the financial data of an organization. This learning objective will be applicable throughout Module 1 and throughout most modules.
1.2	To distinguish between accounting and bookkeeping.	The students should be reminded of which activities are bookkeeping and which activities are accounting. Students may do a "concept attainment" sorting for the concepts of bookkeeping and accounting. The entire class may visit an accounting office in the community to stimulate student interest. For example, students may visit a band office and be introduced to the band accountant or an accountant may come to the classroom.

Learning Objectives

Notes

- 1.3 To develop and propose why the study of accounting is important. (CCT)

Why keep records? What is the purpose of financial records? Who needs to know information? Students may be asked these questions and others. Students should be aware of the types of work an accountant might do; for example, routine daily activities, periodic accounting activities, GST, PST, creditors, and others.

Emphasis on why records should be kept is important. Students may arrive at the solutions in large or small groups. They may interview individuals within the community to determine the need for records. All discussion should be shared with the entire class. Students may develop questions to ask the individuals. These questions may be prechecked by the teacher for the level of thinking and evidence of process skills.

- 1.4 To identify and explain the basic differences between financial accounting, cost accounting, and management accounting.

What are financial, cost, and management accounting? There are two purposes of this learning objective: (1) Students should have a basic understanding of each type; and (2) Students should realize that the emphasis on financial accounting in most modules is not the only type of accounting performed in the field.

Financial accounting is concerned with the preparation of financial statements. Cost accounting is concerned with the reporting of costs (assets and expenses) as accurately as possible. Management accounting is concerned with decision making and the preparation of special reports to be used in making those decisions.

All three types of accounting are described within modules 1 to 13. Thirty hours of Module 3 (Accounting 30) is management accounting although there are many management accounting exercises throughout the modules.

Use an example to explain the three types of accounting. For example, if a company buys a new truck, does it record the purchase price with or without tax (cost accounting)? After five years, does it spend \$4,000 on repairs, or does it sell the truck (management accounting)? What amount has been reported on the financial statements for the truck in the last five years (depreciation—financial accounting)?

Learning Objectives**Notes**

- 1.5 To distinguish and explain the advantages and disadvantages of each form of business ownership.
- Students may research and present to the class the concepts of a sole proprietorship, partnership, corporation (include crown corporation and cooperative), and franchise. Students may consider aboriginal businesses and their forms of organization. The financial accounting process is the same as it would be for any business venture.
- Guided inquiry: Students may be given a list of the types of ownership to investigate and may be asked to prepare a report in groups or individually for the teacher or for class presentation and discussion. This assignment may be given while other learning is taking place and may be presented in one or two weeks time. Encourage students to work and discover the information and resources on their own.
- 1.6 To identify different types of business enterprises: resources, manufacturing, merchandising and service, and suggest where they are most appropriate.
- The students will find the difference between each type of enterprise and identify those in their community. From those organizations identified, discuss which are profit or non-profit.
- A law firm or a barber shop is always a service business. What type is appropriate for different businesses?
- 1.7 To develop and state the role of the manufacturer, producer, wholesaler, retailer, consumer, and citizen in the business world. (CCT)
- Give examples of each role in your community, province, or in Canada. Use magazines or newspapers if examples are not available in your community. Follow one commodity through the various steps; for example, the production of milk. Who is the producer? Who is the wholesaler or manufacturer? Who are the retailers?
- Students may prepare a manual on a commodity of their choice following it through the steps from producer to consumer.
- A research assignment may be designed to integrate several learning objectives on the introduction to the area of accounting. The assignment could involve a portfolio folder containing the following: an annual report from a local business; a list of the jobs and careers related to accounting within that business; and descriptions of the types of business enterprises and forms of business ownership within the community.
- In groups, students may prepare a bulletin board display or large wall charts identifying the roles of the business(es).

Learning Objectives

Notes

- 1.8 To develop and explain the concept and acceptance of Generally Accepted Accounting Principles (GAAPs).
- The origin of Generally Accepted Accounting Principles (GAAPs) and why their procedures are followed should be explained. The *Canadian Institute of Chartered Accountants (CICA) Handbook* published by CICA contains specific accounting guidelines for use in Canada.
- The Business Entity Concept may be introduced at this time. It provides that the accounting for a business organization must be kept separate from the personal affairs of its owner or from any other organization. In an aboriginal context, emphasize the separation of the business and its records from the Indian Band or other development vehicles.

Module 1B: Accounting Equation

Suggested time: 2-5 hours
Prerequisite: 1A

Level: Introductory

Learning Objectives

Notes

- 1.9 To prepare a Balance Sheet using proper format, showing its derivation from the accounting equation, and to identify it as the statement of financial position on a certain date.
- Approach this introductory concept from the position of:
- $$\text{What is owned} = \text{What is owed} + \text{Net worth}$$
- (Claim of Creditors)
- $$(\text{Assets}) = (\text{Liabilities}) + (\text{Owner's Equity})$$
- From the statement of financial position, introduce the concepts of asset, liability, and owner's equity. Students should know the general definitions of these terms and their relation to the accounting equation in a service firm. The words debtor and creditor should be introduced with the Accounts Receivable (A/R) and Accounts Payable (A/P) concepts.
- A statement of personal worth can be prepared before the Balance Sheet for a service firm.
- While teaching the Balance Sheet in account style, stress that assets are on the left side and liabilities and owner's equity are on the right side just as they are in the accounting equation.
- The report-form balance sheet should be shown to the students as the most common style used in business.
- Note the three-line heading asks: who? what? and when? Format must include proper spacing, the alignment of figures, no abbreviations, proper placement of figures on columnar paper, proper correction procedures, underlining, correct format, legible writing, and neatness. All these items must be stressed.

Module 1C: Transaction Analysis

Suggested time: 4-8 hours
Prerequisite: 1B

Level: Introductory

Learning Objectives	Notes
1.11 To organize and arrange transactions into revenue and expenses identifying the fact that there are primary and secondary sources of revenue. (CCT)	<p>What are expenses? Introduce expenses as expired costs matched against revenue in the income statement. What is revenue? Students should be aware that revenue is "earned income" whether by providing goods or services or by receiving interest on a savings account. Earned income from providing services is primary revenue. Interest may be secondary revenue.</p> <p>Revenue and expense accounts are nominal accounts (temporary accounts).</p>
1.12 To analyze revenue and expense transactions showing the effect on owner's equity in each case and showing how the accounting equation stays in balance at all times.	<p>Again, show the double-entry effect of transactions relating to revenue and expenses. The equation always stays in balance whether the transaction occurs on one side or changes both sides. The students may prefer to relate to the accounting equation algebraically:</p> $\text{Assets} = \text{Liabilities} + (\text{Owner's Equity} + (\text{Revenue} - \text{Expenses}))$ $A = L + (OE + (R-E))$
1.13 To perform transactions and explain the concept of drawings or withdrawals for a sole proprietorship displaying the accounting equation in balance at all times. (IL)	<p>What are drawings? How do they affect Owners' Equity and the accounting equation? Again students may prefer to solve the accounting equation algebraically:</p> $A = L + (OE + (R-E) - D^*)$ <p>*Drawings</p> <p>No salaries can be paid to owners in a sole proprietorship or partnership. All money or goods withdrawn from a business is a decrease to net worth.</p>

Module 1D: T-accounts

Suggested time: 5-7 hours
Prerequisite: 1C

Level: Introductory

Learning Objectives

Notes

1.14 To understand the concept of an account using the T-account form and the balance account form of a ledger account and to associate the left side of any account as the debit side and the right side of any account as the credit side.

Account is a record of all the transactions carried out under one title.

T-account is a simplified record of debit entries on the left and credit entries on the right under one title.

As the various types of accounts are shown to the students, each left side is the debit side and each right side is the credit side. They will be increased and decreased, however, as to their position in the accounting equation.

1.15 To associate and relate the debit and credit of each type of account (assets, liabilities, owner's equity, drawings, revenue and expenses) as being an increase or decrease to that account.

Assets are on the left side of the accounting equation and are increased on the left or debit side of an account. Consequently, they are decreased on the right or credit side. Liabilities and Owner's Equity are on the right side of the accounting equation and are increased on the right or credit side on an account. Subsequently, they are decreased on the left or debit side. Drawings and expenses decrease owner's equity, thus are debited when increased, and revenue increases owner's equity, thus is credited when increased.

$$\begin{array}{rcc} \text{Assets} & = & \text{Liabilities} + \text{Owner's Equity} \\ \text{A} & = & \text{L} + \text{OE} \end{array}$$

Debit	Credit	Debit	Credit	Debit	Credit
+	-	-	+	-	+

1.16 To analyze all types of transactions placing them in T-accounts and to finally balance ledger accounts recording opening balances and final balances after transactions.

Calculate balances on both the T-accounts and on the balance ledger accounts. Use the idea of pencil footings, normal and abnormal balances, and the correct way of expressing dollars and cents.

Module 1E: Financial Statements

Suggested time: 4-7 hours
Prerequisite: 1D

Level: Introductory

Learning Objectives	Notes
1.18 To prepare an elementary income statement for a service firm. (IL)	<p>An income statement is prepared for a period of time: Week, month, quarter, half, or year. Note the three-line heading: Who? What? And for what period? -- including the words "For the Period Ended".</p> <p>Use of the correct format and procedures for completing an income statement must be stressed.</p>
1.19 To differentiate between fiscal period and accounting period and to explain and discuss the Time Period Concept.	<p>What is a fiscal year? What is a calendar year?</p> <p>Fiscal year is the business operating year – usually starts on the first day of any month. Calendar year starts January 1 and ends December 31.</p> <p>Why would a business choose a fiscal period different from a calendar year? Students may give examples of suitable fiscal years for various types of businesses (for example, snowmobile sales, agricultural products, and others).</p> <p>What is the Time Period Concept? How does it relate to students' learning at this time? Why would it be designated as a GAAP?</p>
1.20 To relate the income statement to the balance sheet on a date at the end of the fiscal period.	<p>Refer back to the accounting equation to show that beginning owner's equity plus or minus the transactions during the period equals the owner's equity on the balance sheet after the net income or net loss is added. Teachers may mention and show an example illustrating the relationship between the balance sheet and income statement.</p> <p>Concept attainment: Teachers may present students with examples and non-examples of fiscal year and calendar year.</p> <p>Students may investigate businesses within the community that operate on a fiscal year and a calendar year. Examples and reasons may be discussed in the classroom.</p>
1.21 To discuss who would use financial statements and why. (PSVS)	<p>The use of financial statements by internal users, and external users such as banks, creditors, investors, government agencies, owners, and employees may be discussed.</p> <p>The focus of this exercise should be that the primary purpose of financial statements is to aid decision makers.</p>

Learning Objectives**Notes**

1.22 To analyze a source document and determine its relationship to a Balance Sheet or an Income Statement.

Equate an accounting transaction to a library classification system. When a library receives a new book, it determines the subject and assigns the book to that area. The same happens in accounting. When a source document arrives in a business, a transaction is assigned to it. Incorrectly classified transactions would lead to incorrect financial reports.

Students may collect different source documents from home or community sources. Each source document should be analyzed for date, document number, debit, and credit. The documents may be displayed to allow the class to see all types. The teacher may assess content of the transactions and assess student attitude to participating in the collecting of source documents with anecdotal records.

Students may brainstorm the external and internal use of financial statements.

Module 1F: Introduction to Accounting Cycle: Steps 1 to 3

Suggested time: 6-10 hours

Level: Introductory

Prerequisite: 1E

Learning Objectives**Notes**

1.23 To introduce the accounting cycle and explain how each activity to follow will relate to this cycle. (COM)

As the cycle is explained to students, they should be made aware that Canada Customs and Revenue Agency insists that a business go through the accounting cycle at least once a year for the purpose of filing income tax. A visual representation may be introduced here and may be available for students' reference at all times.

Students should be aware that all bookkeeping and accounting activity is part of one of the steps in the accounting cycle. In diagram form, show the accounting cycle as being seven or eight steps depending on whether the teacher interprets the trial balance and worksheet as one or two steps.

Steps in the Accounting Cycle:

1. Originating data
2. Journalizing
3. Posting to the Ledger
4. Trial Balance and/or Worksheet
5. Financial Statements
6. Adjusting and Closing Entries
7. Post-Closing Trial Balance.

Students should be reminded to rule and balance accounts at the end of the cycle.

Learning Objectives

Notes

1.24 Step 1: Originating Data: To identify and examine the information contained on source documents.

What is the GAAP of Objectivity? It essentially says all accounting data must be supported by a source document. Have students discuss and bring examples of source documents where applicable.

How has technology affected source documents? What are the legal implications of receiving source documents in an electronic format rather than printed copy?

Stress the importance of checking the accuracy of all source documents and the procedure to follow if an error is found.

1.25 Step 2: Journalizing: To organize and record accounting data into a journal or journals. (COM)

A journal is a "book of original entry" and may be in several forms. Examples should be given. Students may also be made aware that the entries in a journal are a chronological record of all transactions within a set of records.

Journals can be used manually or on a computerized accounting system. A printout of some sample screens should be given and compared to manual journal formats.

Although the general journal has traditionally been the first journal taught, it may be appropriate to introduce the **synoptic/combination journal** at this introductory level. The reason the synoptic/combination journal may be introduced here is that most small business and personal records use the combination journal. Some points to consider:

- the columns may be named to suit the particular business venture
- the debits and credits will still always equal each other and the columns must prove at the end of the page or accounting period
- this type of journal may be used on a spreadsheet application on the computer, etc.

Through Step 2 of the accounting cycle, students may be introduced to opening entries, routine entries, and compound entries in the general journal. Proper procedures and proper correction procedures are essential. Students should be shown how to do a journal proof at the end of a journal page.

It is recommended that the journal be taught manually before students complete transactions on the computer.

1.26 Step 3: Posting to the Ledger: To classify and transfer transactions into accounts in the general ledger.

The ledger may be explained as being the "book of final entry." Students should be aware of the many formats which a ledger may have (book, cards, trays, computerized screens, and others). The system may be manual or computerized. If computerized, students may be able to see the ledger account formats on screen or in hard copy.

Learning Objectives

Notes

Students should be aware of the need for a ledger: to maintain a current balance for the account, to maintain a summary of the transactions for that one account.

The transfer procedure called **posting** should be clearly demonstrated to the students allowing them to practise as soon as possible. It is desirable for students to experience posting manually before using a computerized system so they can clearly comprehend the process involved. Students should be made aware, however, that this is a repetitious process and is one of the best examples of an efficiency through computer use.

1.27 Explain and correct discrepancies when preparing a series of accounting proofs before financial statement preparation.

Proofs are prepared to ensure that all data is recorded and accurate in the journal and in the ledger. Accounting proofs may be done manually, preferably with a calculator with a paper tape.

The purpose of a journal proof is a check to assure debits equal credits by totalling each column on the journal page and by totalling the money columns to obtain a "balance forward" for the next page.

The totals in the ledger accounts must be proved after posting. After posting is completed, students should run a Zero Proof or Quick Trial Balance on the calculator. If the proof is unsuccessful, time must be spent on procedures to correct errors.

Students should know the procedures to follow in correcting errors. Before a lengthy correction process, students may calculate the trial balance difference and test it. Some quick tests to use are:

- if the difference is a multiple of 10, an addition error has likely been made;
- if the difference divided by two equals a transaction amount, two debits and/or two credits may have been recorded instead of one of each;
- if the difference is divisible by 9, a transposition error has likely occurred.

If the above quick tests do not identify the problem, students may proceed with the following:

- re-add columns preferably comparing the paper calculator tape to amounts in ledger accounts
- check transfer of account balances from ledger to trial balance;
- re-add account column balances
- check postings for incorrect amounts, amounts not posted, amounts posted twice, amounts posted in the wrong column
- check the number of zeros in the amount.

Remind students that this is a very routine operation and that it is done very quickly on the computer.

Learning Objectives

Notes

What is a trial balance and what does it prove? The trial balance is the summary of the general ledger account balances on a certain date. If $A = L + OE$, then the trial balance will balance proving debits = credits. The trial balance is the first step in preparing financial statements. Prepare a Trial Balance in proper form to assure posting was done correctly.

Module 1G: Accounting Cycle: Steps 4 to 7

Suggested time: 6-10 hours
Prerequisite: 1F

Level: Introductory

Learning Objectives

Notes

- 1.28 Step 4: Worksheet: To organize and plan accounting information for financial statements by employing a worksheet. (NUM)

A worksheet is used to summarize data to make it easier to generate financial statements before formal preparation: plan for adjustments to general ledger accounts; to sort general ledger accounts into financial statements; to calculate adjusting entries; and to calculate the amount of net income or loss.

Students should be made aware that the worksheet is a working paper and may or may not be shown to others. The students should also be made aware that the worksheet is done very easily on a spreadsheet; and if students are familiar with spreadsheet software, this is a very good application. If accounting/general ledger software is available to students, they may never see a worksheet as the process is completed automatically by the computer program.

Observe the heading of the worksheet, indicating the data is for a specific period of time. Transfer balances from the general ledger and balance the trial balance before continuing.

Verify the need for adjustments and relate it to the matching principle. Adjustments used here may include: supplies used and insurance expired (prepaid expenses), late invoices, etc. Indicate in the adjustment columns the debit and credit item to each adjustment. For example, (a) beside the debit figure for Supplies Expense and (a) beside the credit figure for Supplies.

After adjustments are calculated and the total of the adjustment columns verified, extend all account balances to the balance sheet or income statement columns. Figure and record net income/loss on the worksheet following proper procedure.

- 1.29 Step 5: Preparing Financial Statements: To prepare and interpret financial statements for an accounting period.

From a worksheet, prepare an income statement assuring the net income figure is consistent between the two. Students should be reminded that an income statement reports income for a period of time whereas a balance sheet reports assets, liabilities, and owner's equity on a specific date.

What an income statement shows.

It reports revenue and expenses, tells the net income/loss for an accounting period, states the primary and secondary sources of revenue, explains all expired costs (expenses), what expenses have been incurred, and others.

What an income statement does not show.

It does not predict future income/expenses, does not provide an exact amount of net income/loss, does not give "true" profit, does not tell the amount of available cash.

The students should be able to prepare a classified balance sheet and be able to define and give examples of current assets, fixed assets, current liabilities, long-term liabilities, and be able to arrange the assets and liabilities into their respective classes as the statement is being prepared. The equity section of the balance sheet should be expanded to include the beginning capital balance, the increase or decrease through profit or loss, the decrease through drawings, and the ending balance.

What the balance sheet shows.

When examining a balance sheet one should ask: What does the heading say? What are the current and fixed assets? How stable is the firm? Can it pay its debts? Is it strong enough to carry on business? What is the owner's claim against the assets? Has the investment of the owner increased or decreased?

What the balance sheet does not show.

It does not show details of profit and loss, does not specify the amount of withdrawals, does not show which assets are secured against loans, does not show current/market value of assets, does not show how much of the capital came through investment or how much came through accumulated profits, and others.

Financial statements from the community for students to examine would be helpful resources.

Group project: In small groups, students may be given a set of financial statements to interpret and to present to the class. Students may imagine that they are presenting the financial statements to a board of directors or to potential investors. The students playing the role of directors or potential investors could ask questions of the presenters. (CCT)

- 1.30 Step 6: Preparing Adjusting and Closing Journal Entries: To generate and relate adjusting and closing entries to the appropriate accounting period in preparing general ledger accounts for the next accounting period.

If students review the Matching Principle, the reasons for preparing adjusting and closing entries should be validated. Some of the more important reasons may be to have up-to-date financial statements or to have net income/loss as accurate as possible.

Prepare adjusting entries for prepaid expenses at this time; for example, supplies, insurance, advertising, or any others which may be expired or consumed during the current accounting period.

Learning Objectives

Notes

Students should realize the unexpired portion represents an asset to be listed on the balance sheet and carried into the next accounting period. **The concept of matching should be clearly understood.**

Prepare adjusting entries in the general or synoptic/combination journal and post them to update ledger accounts before calculating and preparing closing entries.

Define closing to mean having no balance to begin the new accounting period. Reasons for closing entries may include bringing accounts up to date, transferring net income/loss to the owner's equity account, etc.

A new nominal account, Income Summary, may be introduced at this time. Note it is a summary account to which all revenue and expenses are closed and the resulting balance is the net increase or decrease transferred to Capital. It is only open for a short time on the last day of the fiscal period. The balance of the account after all posting should be the same as the net income/loss calculated on the worksheet.

Students need to know the difference between permanent and temporary accounts.

- 1.31 Step 7: Post-Closing Trial Balance. To prepare a post-closing trial balance to prove the general ledger is in balance after all work is completed for the accounting period.
- A trial balance used after posting is called a post-closing trial balance. Prepare the post-closing trial balance paying attention to the three-line heading, again prepared on one date. If the debit and credits are equal, the general ledger is in balance and ready for the next accounting cycle. If the proof does not work out, the same steps may be followed to find the discrepancy as described in Learning Objective 1.27.
- 1.32 To interpret and analyze financial information. (CCT)
- Students may compare a beginning and ending Balance Sheet to discuss and suggest what changes during the accounting period took place and how they affected real (permanent) accounts and how the worth of the business is conveyed to readers. More comprehensive analysis takes place in Module 3.
- The students may be given questions to guide them in interpreting and analyzing the financial statements or they may arrive at differences and explanations on their own. Students should be encouraged to comment on whether the financial situation of the business or organization has improved or deteriorated.
- 1.33 To explain and discuss relevant GAAPs for nominal accounts; namely, Revenue Recognition, Expense Recognition, and the Matching Principle.
- What are these? Emphasize that these concepts apply equally to all businesses.

Module 1H: Practice Set/Major Assignment

Suggested time: 7-10 hours
Prerequisite: 1G

Level: Introductory

Learning Objectives

- 1.34 To demonstrate the ability to process information through the accounting cycle by completing a practice set/major assignment.

Notes

Students should review the steps in the accounting cycle. A practice set/simulation may be the best way to review the cycle. It may be 5 to 10 hours in length and should use simulated source documents as opposed to given statements to originate data. Frequent checks of students' work should be done to monitor the accuracy of the data.

Consideration should be given to having students check each other's work and discuss problems with the teacher. This will be a closer approximation to a work environment and will provide a different way for students to gain understanding of the processes.

Module 2: Accounting Cycle: Merchandising Firm (Core)

Foundational Objectives

- To understand the basic operation of a business and the role of accounting in the business.
- To develop accounting skills that may lead to successful employment.
- To develop an understanding of profit planning and how it may be used as a tool in management decisions.

Common Essential Learnings Foundational Objectives

- To use a wide range of language experiences for developing knowledge of accounting. (COM)
- To develop appreciation of the value and limitations of technology within business and society. (TL)
- To strengthen knowledge and understanding of how to compute, measure, and estimate and interpret mathematical data, when to apply these skills and techniques, and why these processes apply within the particular framework of accounting. (NUM)

Module 2A: Introduction to Merchandising

Suggested time: 2-5 hours

Level: Intermediate

Prerequisite: Module 1

	Learning Objectives	Notes
2.1	To review and identify the types of local business enterprises: service, manufacturing, and merchandising. (COM)	In Module 1, students developed the concepts of each type of business. This is particularly relevant in Module 2, as they will be working through the accounting cycle for a merchandising firm as opposed to the accounting cycle for a service business discussed in Module 1.
2.2	To identify examples and examine the nature of merchandising businesses.	Students could brainstorm a list of businesses and then identify those that are merchandizing ones. Debates which arise when classifying can be a good learning experience.
2.3	To recognize that the merchandising portion of a business may be the primary source of revenue or the secondary source of revenue.	What is primary revenue? What is secondary revenue? Revenue sources of the businesses identified in Learning Objective 2.2 could be discussed to determine their primary and secondary revenue.
2.4	To discuss the role of merchandising (buying and selling) between producer, manufacturer, wholesaler, retailer, and consumer.	Discuss various examples of each business in the community. Remember businesses such as a dairy that buys milk from the producer, becomes the manufacturer of certain products, acts as a wholesaler, and may act as a retailer in door-to-door sales.
2.5	To interview an owner of a merchandising business in the community to discover how the business is handled. (IL)	Students may interview a business owner in the community. The types of businesses could vary so the class gets a good distribution of results. The questions may be sent to the business prior to the scheduled interview time for consideration. Possible questions are: How do you buy goods for resale? How many suppliers do you use?

Learning Objectives

Notes

- Where do the goods come from or originate? How is the merchandise delivered to your place of business? How do you count inventory? How do you record the cost of inventory? What is the range of markup used for goods?
- 2.6 To realize that the difference between the acquisition price and the selling price must cover certain costs.
- Although the purpose here is not a preliminary discussion to cost accounting, the idea that the difference between cost price and selling price may include: profit, overhead, storage, advertising, selling, delivering, salaries, etc. should be discussed. Some examples of desired profit may be given or the students may work through a simple percentage breakdown.
- 2.7 To explain the meaning of markup, margin, and markdown and perform some basic calculations. (NUM)
- When retailers buy goods from wholesalers or manufacturers, the amount added to the cost price is called markup. This is a percentage of cost price. When the amount added to the cost price is expressed as a percent of retail, it is called margin.
- Students may discuss why items may be marked down; for example, overstocked, out of season, due date, etc. Markdown is based on retail price. Give examples.
- On the calculator, perform some basic calculations using markup (based on cost), margin (based on retail), and markdown (based on retail). Introduce special function keys where applicable. If spreadsheet software is available, students should use it.
- Retail outlets often code merchandise to assist in markdown procedures. Students may find concrete examples of various merchandising schemes used in their community. These sources of information may be shared in the classroom. Students may share samples of tags, invoices, etc. which may contain the merchandise codes needed in markdown procedures.

Module 2B: Merchandising Inventory Accounts

Suggested time: 4-6 hours
Prerequisite: Module 1, 2A

Level: Intermediate

Learning Objectives	Notes
2.8 To examine and use new accounts in the chart of accounts for a merchandising firm.	This should be used as a reference when introducing sales, purchases, merchandise inventory, etc. Sales and related accounts have account numbers beginning with 4, purchases and related accounts have numbers beginning with 5, and expenses and related accounts have numbers beginning with 6.
2.9 To define and compute the balance of merchandise inventory in a merchandising firm. (NUM)	<p>Introduce merchandise inventory as a current asset, defined as goods available for resale within an accounting period.</p> <p>The relationship that the ending inventory (items not sold) of one period becomes the beginning inventory of the next period is important to reinforce. Examples of inventory in different businesses would be helpful.</p> <p>Even if inventory is controlled by a bar code/optical character reader, physical inventory must still be taken at the end of the period to identify theft, spoilage, losses, etc.</p>
2.10 To maintain inventory records by calculating the value of inventory.	<p>Perpetual inventory should also be introduced and explained at this time. The types of inventory held in perpetual inventory would be large-ticket items such as TVs, cars, wheat, oil, and others. Students may give examples.</p> <p>Students may compare and contrast periodic versus physical inventory.</p> <p>Although the term subsidiary ledger may not be introduced until later in this module, the introduction of a card or computer record per inventory item may be useful. A mathematical exercise on the inventory card may be completed using the calculator.</p> <p>Discuss the advantages of periodic and perpetual inventory regarding cost, ease of handling, computerization, and labour hours involved. Results should determine that perpetual is much more expensive and still requires a physical inventory at the end of the period. Refer to the note in the previous section regarding optical scanners.</p>

Learning Objectives**Notes**

- 2.11 To compute and determine the function of the Cost of Goods Sold section of the Income Statement in a merchandising firm.

Begin by explaining the only difference between the Income Statement for a service firm and that of a merchandising firm is the Cost of Goods Sold section. Analyze this section on an Income Statement and discuss.

At this point in time, students may compute Cost of Goods Sold in mathematical exercises. Students should be made aware that theft or loss of inventory is automatically calculated in Cost of Goods Sold.

At the beginning of a new period there is inventory on hand. Merchandise is sold throughout the period and is replaced with the purchase of new stock. The inventory at the end of the period is the amount unsold.

After viewing several Income Statements, students should realize that the term Gross Profit or Gross Margin is the difference between Revenue and Cost of Goods Sold.

Module 2C: Sales and Purchases Accounts

Suggested time: 4-6 hours
Prerequisite: Module 1, 2B

Level: Intermediate

Learning Objectives	Notes
2.12 To distinguish between and explain the concepts of cash and trade discounts when buying and selling merchandise. (IL)	<p>A cash discount is a reduction of a bill to encourage the customer to pay promptly. Students should realize that there can be sales discounts and purchase discounts depending on whether the goods are being bought or sold.</p> <p>Students should know the meaning of C.O.D. (Cash on Delivery), On Account or Charge, Net 30 days, Net 60 days, 2/10, n/30, 1/10, 2/30, n/60, etc.</p> <p>Students may work through some examples of purchase invoices using purchases/purchase discounts/accounts payable accounts and through examples using sales/sales discounts/accounts receivable accounts.</p> <p>A trade discount is a reduction from the list price or catalogue price. Why are trade discounts offered? Different prices are offered to different customers, for example, educational institutions. Students should realize that a trade discount is taken off a list price to attain the actual sale or purchase price of the merchandise. The actual price would be the amount recorded in the sales or purchases journal. Some calculations may be completed with trade discounts.</p> <p>A catalogue may be used as an example of trade discounts. Students may use actual items and prices from the catalogue in their calculations.</p>
2.13 To identify and explain sales and its related accounts as being the main source of revenue in a merchandising business.	<p>When merchandise is sold, the revenue account for a merchandising business is called sales. Students should be shown the general journal entries for cash sales, credit or on account sales, and for credit card sales.</p> <p>Sales Returns and Allowances is a contra Sales account. What does "contra" mean? Students could give reasons as to why goods would be returned to the seller or why the customer may be given an allowance on goods purchased. The concept of net sales may be introduced to students to see the relationship between sales and sales discounts and returns and allowances.</p>

Learning Objectives

Notes

If a large balance is in this account, notice should be taken by management. What could be some solutions? Students may discuss in groups.

Source document: credit memorandum.

What is a credit memorandum? A credit memo is issued by the seller to credit or reduce the balance of the accounts receivable account.

Sales Discounts is another contra Sales account. It was discussed earlier in the module as being a cash discount used as an incentive for prompt payment.

Source document: credit memorandum which credits the seller's accounts receivable.

- 2.14 To identify and explain purchases and its related accounts as being the main record of costs of the merchandise for resale in a periodic inventory system.

Review the concept of purchases. When goods are purchased for resale, the cost account recording the transaction is called Purchases; source document: purchase invoice.

Purchases may be on account or for cash. There is often a problem of students confusing purchases for expenses or assets for purchases of inventory. Students should be shown the general journal entry for a cash purchase and a purchase on account.

When goods are ordered, instructions should be clear as to how the goods are to be delivered. Because Transportation-In or Freight-In is closely related to the cost of Purchases, it is added to Purchases on the Income Statement. Discuss the terms FOB Destination (Free on Board Destination) and FOB Shipping Point (Free on Board Shipping Point). Give examples and calculations for the total cost of an invoice with transportation added.

Purchase Returns and Allowances is a contra Purchases account. Again, students could give reasons why purchases may be returned or why an allowance for purchases may be given. The concept of net purchases may be introduced to the students. Source document: debit memo issued by the seller which debits (decreases) accounts payable.

Purchase Discounts is another contra Purchases account. It is a cash discount that should be received by the account payable by the last day of the discount period. Interestingly, the selling company regards this as a sales discount while the purchasing company regards this as a purchase discount.

Learning Objectives**Notes**

- 2.15 To apply Generally Accepted Accounting Principles (GAAP) to Sales and Purchases.
- What GAAPs relate to the area of Sales and Purchases? The Cost Principle suggests that the cash or market value of the goods is the amount recorded. Realization of Revenue Principle suggests that revenue should be recognized at the time it is earned and adjustments made for all discounts. The Matching Principle matches appropriate costs against revenue for a specific period of time. The Objectivity Principle holds that all transactions must be supported by objective evidence (source documents).

Module 2D: Special Journals**Suggested time:** 10-14 hours**Level:** Intermediate**Prerequisite:** Module 1, 2C**Learning Objectives****Notes**

- 2.16 To review and summarize the seven steps in the accounting cycle for a merchandising firm. (COM)
- In diagram form, review the steps of the accounting cycle but explain the differences of a merchandising firm.
- Steps:
1. Originating data; for example, sales and purchase related invoices, credit and debit memos, etc.
 2. Journalize: cash receipts, cash payments, sales, purchases, general, or combination journal.
 3. Post to Ledger: general and subsidiary.
 4. Trial Balance and Worksheet.
 5. Financial Statements: Classified Balance Sheet and Income Statement with Cost of Goods Sold.
 6. Adjusting and Closing Entries.
 7. Post-Closing Trial Balance.
- 2.17 Step 1: Originating Data: To understand that no entry should be made unless it has a supporting document.
- Referring to the GAAP of Objectivity, students should realize that source documents in a merchandising firm include sales invoices, purchase invoices, credit and debit memos, bills, freight bills, cash receipts, cheque stubs, and many more. These should be briefly discussed as being relevant to a merchandising business.
- 2.18 Step 2: Journalizing: To analyze each source document and enter the transaction into the appropriate book of original entry used in a merchandising firm. (CCT)
- A review of the general journal and the combination journal may be made here. However, students should be aware that if the business organization is large enough to use special journals, the general journal may only be used for opening, adjusting, closing entries, entries for Sales and Purchases Returns and Allowances, and other miscellaneous items. The synoptic/combination journal may or may not be used. Also, when using computerized accounting, there may be no special journals as such but that there may be one or two generic screens that will handle all transactions.

Sales Journal: contains all transactions involving sales of merchandise on account. The source documents used for this journal may be sales invoices, credit invoices, and charge sales slips depending on whether the journal used is a one-column journal or a columnar sales journal.

The credit terms and/or invoice number may be recorded as well as the amount.

Separate columns for GST and PST must be established in a Sales Journal as liability accounts.

Purchases Journal: contains all transactions involving purchases of merchandise on account.

The source documents used for the Purchases Journal are purchase invoices if using a one-column journal; however, many businesses keep a multi-column journal to record all acquisitions on account. The asset accounts would have special columns. The purchase invoice number may be written into the journal.

On a computerized system the purchases journal may be called the invoice register.

Cash Receipts Journal: All money received into the business must be carefully controlled and deposited promptly. All money is recorded into a cash receipts journal which usually has many columns suited to the firm's needs. (Cash control is dealt with in Module 4: Banking and Cash Control.) Source Documents: mail receipts, over-the-counter sales, cash register receipts, and others. The most common transactions are cash sales and cash received on account.

Cash Payments Journal: All money paid from the bank accounts must be carefully controlled and recorded in the cash payments journal. It is sometimes called the cash disbursements journal. The journal is usually a columnar journal suited to the needs of the firm. Source Document: the cheque stub. Examples may be given showing special columns i.e. money paid for purchases, account payable expenditures, etc.

In a larger company, the five-journal system may be used. However, a small business may only use one multi-column combination or synoptic journal to accommodate the specialized columns. An example may be useful, particularly if it comes from a local business or from a school club or activity.

2.19 Step 3: Posting to Ledgers:
To post from the multi-journal system to the general ledger and subsidiary ledgers (accounts receivable and accounts payable). (TL)

Review the posting procedure with students. Total and prove journals at the end of a page or at the end of the accounting period. At the end of a page, students should be shown how to foot and cross-foot totals as well as how to carry totals forward to the next page. Total all columns and prove equality (debits = credits) using a calculator with a tape.

The concept of general and subsidiary ledgers may be introduced by indicating that the size of the business determines the number of ledgers used. If the business has a small number of accounts receivable and accounts payable, usually only a general ledger would be used.

Students should be aware that the general ledger is the book of final entry, used to prepare financial statements, used to sort transactions into appropriate accounts, etc.

Subsidiary ledgers are secondary ledgers/records containing specialized accounts. For example, accounts receivable (customers), accounts payable (vendors), inventory, payroll, and others may be in subsidiary ledgers. Students may think of other examples.

Students should be aware that in a manual system, records may be arranged alphabetically; however, in a computerized system, the program usually numbers customers and vendors as they are entered but it is able to sort accounts in numerous ways. For example, by name, location, by invoice due date, etc.

The process of posting to both the subsidiary and general ledger is of great importance. Many errors arising on the Trial Balance are the result of poor posting technique.

After posting at the end of an accounting period, students should prove the accuracy of posting by:

- working through problems to see that the total of all customers' accounts in the Accounts Receivable Ledger equals the total in the control Accounts Receivable account in the General Ledger. The same process must occur for the Accounts Payable subsidiary ledger
- preparing a Schedule of Accounts Receivable and a Schedule of Accounts Payable to prove equality using the proper format suggested in a recommended textbook
- preparing a Zero Proof or Quick Trial Balance of the General Ledger on a calculator tape in preparation for the next step in the accounting cycle. If the proof is unsuccessful, the same steps may be followed as described in Step 3 of the Accounting Cycle in Module 1.

If students are completing optional Module 12 (computerized accounting, merchandising firm) along with Module 2 they should perform the posting function manually several times to understand the process. Posting by computer is completed quickly and efficiently without any knowledge by the user of what process is taking place. Although the routine posting of journal entries to ledger accounts is one of the main advantages of accounting software, students must be aware of what process has taken place.

Module 2E: Financial Statements

Suggested time: 10-15 hours
Prerequisite: Module 1, 2D

Level: Intermediate

Learning Objectives	Notes
2.20 Step 4: Trial Balance/Worksheet: To prove the accuracy of the General Ledger by preparing a Trial Balance and to use the Worksheet to organize and plan information for the financial statements. (TL)	<p>This process is a problem-solving technique essential to all bookkeeping functions.</p> <p>The purpose of the Worksheet may be reviewed from Step 4 of the Accounting Cycle in Module 1. The heading must be in proper form and the Trial Balance should balance before completing the Worksheet.</p> <p>The adjustments learned in Module 1 should be reviewed; namely, supplies used, insurance expired and others the teacher may have introduced. Remember, adjustments are an estimate of the expiration of the cost of assets and thus net income or loss becomes an estimate as well. The purposes of adjustments are to bring all accounts up to date and to emphasize compliance with GAAPs. The method used must suit the business concerned as adequately as possible.</p> <p>The adjustments which students should be able to do include supplies, insurance and inventory. Merchandise Inventory is usually handled as an adjustment in the adjustment columns.</p> <p>Teachers may wish to introduce, at a very basic level, the following additional adjustments for the Worksheet. More indepth coverage of these adjustments is contained in optional Module 9: Asset Analysis, which may complement the discussion here.</p> <ul style="list-style-type: none">• Prepaid expenses: For example, adjustments, rent or advertising.• Bad Debts or Doubtful Accounts: What is a bad debt? Why do we have bad debts? How can we avoid them? Should we aim for no bad debts at all? What does Canada Customs and Revenue Agency say about the amount of bad debt a company can claim? Briefly introduce the expense account and the allowance account (a contra account to Accounts Receivable).• Depreciation: What is depreciation? What accounts are affected by depreciation? Briefly introduce the expense account and the Accumulated Depreciation account (a contra account to each fixed asset). Only the straight line method for calculating depreciation should be discussed here. Students should be aware that there are other methods for calculating depreciation.• Interest Expense on loans outstanding.• An adjustment for salaries owing but not paid at the end of the accounting period.• An adjustment for unearned revenue such as interest on a bank account or term deposit.• Others may include an adjustment for a late invoice.

Learning Objectives

Notes

Students could interview business people in the community to find their policies on depreciation, credit extension, and others, and then report back to the entire class.

Reversing entries may not be necessary at this level (just accumulate payables such as wages into a liability account and accumulate receivables such as interest into an asset account).

The concepts of real accounts, whose balances are carried into the next accounting period, and of nominal accounts, whose balances will be closed at the end of the accounting period, may be reviewed here in light of the new accounts in a merchandising firm. Real accounts including new contra accounts (Allowance and Accumulated) will be carried to the Balance Sheet columns of the Worksheet. Nominal accounts which include all sales and purchases accounts are carried to the Income Statement columns and the result (net income/loss) will be included in the Owners' Equity account.

- 2.21 Step 5: Prepare Financial Statements: To prepare a Balance Sheet, Income Statement and Statement of Owners' Equity for a merchandising firm. (IL)

Review Step 5 in Module 1 when preparing financial statements. The heading on the Income Statement indicates profit for an accounting period and the Balance Sheet shows balances on one specific date.

Prepare an Income Statement from the Worksheet of a merchandising firm. The revenue section has expanded to find Net Sales, Cost of Goods Sold section, and Gross Profit/Margin. Students should realize that Cost of Goods Sold is an expense to the business. The Expenses section may be classified into selling and administrative expenses and an Income from Operations line may be calculated before the overall Net Income/Loss of the firm. An example of a condensed income statement may be introduced but students should know that a Cost of Goods Sold Statement must accompany this format.

The Balance Sheet should be classified as it was in Module 1. New contra accounts will follow related assets.

A Statement of Owners' Equity or Capital Statement may be prepared showing additional investments, amount of withdrawals, and the increase/decrease to the worth of the owner.

Students may discuss why a Statement of Owner's Equity is necessary. What does it add to the information available to financial statements readers? What readers would be interested in this statement?

Learning Objectives

Notes

- 2.22 To examine and discuss who reads financial statements and why they do.
- What do the financial statements say? Which statement shows financial worth? Which statement determines the reasons for net income/loss. Review the Cost of Goods Sold section with the class. What three factors cause a change in Owners' Equity (net income, withdrawals, additional investment)?
- Students may discuss the use of financial statements by insiders, outsiders (including banks and creditors), government agencies, owners, employees, investors, and others. In an aboriginal context, issues such as the Band being the owner and the information requirements of Band members and various funding agencies, may be discussed.
- Students could relate financial statements of the individual businesses. Students may research information for local and provincial organizations such as the Chamber of Commerce Awards, Saskatchewan Labour Force Development Board Training for Excellence Awards etc. to learn more about award-winning businesses.
- 2.23 Step 6: Adjusting and Closing Entries: To prepare, in the general or synoptic/combination journal, the adjusting and closing entries at the end of the accounting period of a merchandising firm.
- Closing entries will enter net income/loss into the owners' equity account. The only new entry for a merchandising business is to eliminate the beginning merchandise inventory balance and record the ending merchandise inventory balance into the current asset account.
- The purpose of adjusting entries should be reviewed from Step 6 in Module 1. These entries must be posted before general ledger nominal accounts will have a balance to be closed. The closing entry for merchandise inventory may be an adjusting entry as well.
- 2.24 Step 7: Post-Closing Trial Balance: To prepare a Post-Closing Trial Balance to check the equality of the general ledger upon completion of the accounting cycle in a merchandising firm.
- Review the purpose of a Post-Closing Trial Balance. Follow the procedures described in Step 7 of Module 1 (Objective 1.34).
- 2.25 To summarize the difference between a service firm and a merchandising firm. (CCT)
- Students may work in groups to summarize and review the accounting cycle of a service firm and that of a merchandising firm. Relate to questions of cost in terms of bookkeeping time (invoicing, journalizing, preparation of statements, reporting net income/loss, and others).
- Use a simulation to review the entire accounting cycle. If students have simulated their own merchandising firms as they progressed through the accounting cycle, they may be shared and tried. These simulations should be assessed by the teacher for content prior to the sharing.

Module 2F: Practice Set

Suggested time: 7-10 hours

Prerequisite: Module 1, 2E

Level: Intermediate

Learning Objectives

- 2.26 To apply the knowledge learned when studying the accounting cycle by working through a manual practice set. (IL)

Notes

The practice set may be 10 to 15 hours in length and should use simulated source documents. The type of journals used would be pertinent to the type of business. Students should work independently. Frequent checks of students' work should be done to assure accuracy of data. An audit test may be administered at the end of the simulation.

A good understanding of the accounting cycle is very important prerequisite knowledge to automated accounting. Students should feel comfortable completing a manual practice set before attempting any computerized accounting procedures.

The practice set or major project should be adapted to the environment and the capabilities of the students. For example, if Module 2 is being taught in a First Nations school the source documents, journals, ledgers, etc. should be relevant to that community. A teacher may have students accumulate source documents and within several years, have a practice set suitable for the school community.

Module 3: Introductory Management Accounting and Financial Statement Analysis (Core)

Foundational Objectives

- To analyze and use financial statements effectively when making management decisions.

Common Essential Learnings Foundational Objectives

- To contribute to the development of “strong sense” and creative thinkers. (CCT)
- To strengthen students’ knowledge and understanding of how to compute, measure, estimate and interpret numerical data, when to apply these skills and techniques, and why these processes apply within the particular framework of accounting. (NUM)
- To support students in treating themselves and others with respect.

Module 3A: Introduction to Management Accounting

Suggested time: 3-5 hours

Level: Advanced

Prerequisites: Modules 1, 2

Learning Objectives	Notes
3.1 To identify and describe the characteristics of management accounting. (COM)	<p>What is management accounting?</p> <ul style="list-style-type: none">• provides information to managers/insiders to help them with their decision making;• is a support function--intent is to aid management not drive management;• the management process must be understood before accounting, particularly management accounting, can make sense. A manager performs these functions: planning (outline steps to move toward objectives); organizing (utilize human and other resources to carry out established plans); directing (oversee daily operations to assure things are running smoothly); controlling (assure each part of the organization is carrying out what it was intended to do - compare reports to original plans and take appropriate corrective action); and decision making (make rational choices among alternatives);• strategic planning: planning to achieve a company's long-term objectives (all companies should set and work toward objectives);• analysis of the benefit of the decision and comparison of it to the cost of the alternatives (e.g., is the profit greater than the cost?). <p>How does accounting information help the manager?</p> <ul style="list-style-type: none">• to plan effectively: budgets (desires and goals of management in quantifiable terms) and performance reports (compare budgeted information to actual information for a specific period of time)• to direct operations: examine cost/price relationships to develop marketing/advertising strategies, determine appropriate sales and inventory levels, examine the costs of storage and handling, etc.• to solve problems: determination of an appropriate relationship between cost and price for forecasting, etc.

Learning Objectives

Notes

The teacher may lead a discussion with the class on "What is Management Accounting?" (Indicate functions and how the manager performs these functions.)

Students could work through a decision-making process to focus on how important decision making is to managers.

Steps for students to experience:

1. Define problem
2. Identify alternatives
3. Accumulate information for alternatives
4. Choose the best alternative.

This activity may be done in small groups. The decision to make may be to choose the band/entertainment for the next school dance, the next school assembly, etc.

3.2 To explain the role of the controller in management accounting. (COM)

What is the role of a controller?

- manager in charge of the accounting department
- "controls" by reporting and interpreting data needed for decision making
- may oversee the work of others and the preparation of reports
- often provides advice for top management
- provides assistance in the preparation of budgets
- support function.

3.3 To compare the differences and similarities of management and financial accounting.

Financial accounting reports what has happened in the past (historical data), is for external users, is very precise information that follows rules (GAAPs), and is mandatory for businesses.

Management accounting:

- data used internally by the manager for day-to-day operations
- places emphasis on the future -- prediction of costs and revenues of alternative courses of action
- emphasizes the relevance and flexibility of data -- information must be relevant to the problem at hand rather than follow a set of rules. Managers need to make good estimates and do not necessarily need to follow a set of rules (GAAPs)
- places more emphasis on non-monetary data and estimates with less emphasis on precision
- emphasizes segments or departments of the organization rather than the whole; for example, departments, divisions, etc.
- draws heavily on disciplines other than accounting; for example, economics, statistics, organizational behaviour, etc.
- is not mandatory -- a company is completely free to do as much or as little management accounting as it wishes. The most important question is: "Is the information useful?"

Learning Objectives

Notes

		<p>What are the similarities between management accounting and financial accounting?</p> <ul style="list-style-type: none">• management accounting relies on financial accounting information (unbiased, support material)• both are concerned with responsibility or stewardship to the organization: financial accounting has responsibility to the whole company while management accounting is concerned with responsibility for parts (costs and revenues)• both require accounting information that must be relevant, timely, and accurate.
3.4	To predict and present reasons why management accounting skills are becoming increasingly important. (CCT)	<p>After an introduction to management accounting, students may be able to see reasons why management accounting skills are becoming more important. Some reasons may be:</p> <ul style="list-style-type: none">• increased business competition locally and globally• cost-price squeeze• greater access to information due to technology. <p>Students should note the importance of management accounting for aboriginal people, given the increased local control through First Nations self-government. Management Accounting also plays a part in managing financial resources acquired through the Canadian Aboriginal Economic Development Program (CAED).</p>
3.5	To recall the professional accounting designations and relate them specifically to management accounting.	<p>In Module 1, Objective 1.8, students briefly discussed the professional accounting designations including CGA, CA, CMA, etc. In each of the first two professional designations, elements or classes of management accounting are required. The third group, Certified Management Accountants, specializes in management accounting.</p> <p>Students at the senior level of accounting in the secondary school may spend some time going over the content of each of the programs: analyzing management, financial, cost accounting and other areas of the programs to make themselves aware of the emphasis within each program.</p> <p>How does management accounting apply to small business? Do businesses have to be large to analyze departments or divisions or can a small business use management accounting to formulate pricing policies, analyze costs, budget, etc.?</p> <p>Students may research an accounting career path of their choice and be given the opportunity to present their research to the class in the medium of their choice. For example, a display or handout may be prepared.</p>

Learning Objectives**Notes**

Group research: research, prepare an oral presentation, and set up a display of materials and information on each of the professional accounting designations.

Representatives or members from each of the organizations may be invited to the class to discuss aspects of their professional designation. (It is possible that one individual would be able to describe all the required aspects of each professional designation.)

Students may examine actual businesses in the community or they may come up with examples of where management accounting may be used in local businesses.

Module 3B: Cost Accounting

Suggested time: 10-15 hours
Prerequisites: Modules 2, 3A

Level: Advanced

Learning Objectives	Notes
3.6 To define and explain "cost" in management accounting and in financial accounting.	<p>In financial accounting, the term "cost" was an expenditure to realize some good or service. It may have been money spent, a service provided, etc. Cost accounting becomes a base for both financial and management accounting. Although cost accounting is not referenced directly, some aspects are discussed.</p> <p>Costs are incurred in service firms, merchandising firms, and manufacturing firms. Manufacturing firms are more complex and are defined as being companies that convert raw materials into finished products. They are concerned with production as well as marketing and administration.</p>
3.7 To organize and classify costs into three categories to be used in management analysis. (CCT)	<p>In management accounting, "cost" is used in many ways. We will divide costs into manufacturing costs, non-manufacturing costs, and labour costs.</p> <p>The manufacturing costs of a product have three distinct classifications: Direct Material, Direct Labour, and Manufacturing Overhead. Students need to understand the differences and may discuss these costs with a local business or perhaps with students engaged in Entrepreneurial activities or classes.</p>
3.8 To organize and arrange non-manufacturing costs into two categories.	<p>The non-manufacturing costs of a product can be classified in two ways:</p> <ul style="list-style-type: none">• Marketing or selling costs: include all costs needed to get the product into the hands of the customer. Examples: advertising, shipping, sales travel, commissions, salaries, etc.• Administrative costs: include all costs that cannot be directly included in manufacturing costs or in marketing or selling costs. These costs tend to serve the whole organization not just manufacturing, sales, etc. Examples: general accounting, office support staff, public relations, etc.

Learning Objectives

Notes

3.9 To formulate and relate the importance of labour costs to management accounting.

As technology changes, overhead is becoming the fastest growing expenditure while direct labour costs are decreasing. In some instances, they may be lumped together and treated as a conversion cost. However, to understand and control labour costs, the following breakdown may assist:

1. Direct labour (can be directly traced to a certain product or project). Examples: factory-worker salaries, accountant wages in an accounting firm.
2. Indirect labour (not directly traceable). Examples: janitors, supervisors, materials handlers, engineers, security guards, maintenance workers, etc. A further breakdown of indirect labour costs include idle time, overtime premiums, and labour fringe benefits. These will be discussed below:
 - Idle time: is the workers' time that accumulates during machine breakdowns, material shortages, power failures, receiving directions from superiors, etc. Idle time may not be assigned to one job, but as part of manufacturing overhead to be assigned to all production. Can idle time be prevented or reduced through good planning? How much idle time should be built into a plan?
 - Overtime premium: If overtime can be directly identified with one project or product, it becomes a direct cost. Because jobs are completed in a random order, overtime becomes indirect labour costs instead of direct labour. Should we assign all the overhead costs to a job just because it was worked on at the end of the day when the overtime was put in? Should overtime be built into a management plan? What is more important -- meeting deadlines or incurring additional labour costs? Can a concern for human resources enter into this discussion?
 - Labour fringe benefits: employment costs paid by the employer. These are hidden costs to the employee and the public. The cost of employing a person does not end at the amount of gross wage as is seen in Module 5. The employer must match Canada Pension Plan (CPP), contribute to Employment Insurance (EI) and Workers' Compensation, and may contribute to company pensions, hospital plans, etc. Firms usually treat these costs as manufacturing overhead but may assign a portion to direct labour. Indirectly these costs are charged back to the consumer in the manufacturing overhead.
 - Labour and overhead combined are called the **conversion costs** of the firm. The conversion cost may be considered the cost of taking an original product and modifying it into a final product.

Learning Objectives

Notes

A debate or discussion may take place around the issue(s): should employers participate in matching employee hospitalization plans, company pension plans, dental plans, and other fringe benefit issues? What is the "cost" to the employer versus the "cost" to the employee? What about sharing profits by way of benefits? For a variation of the above activity, students may role play employees and management negotiating labour fringe benefits.

- 3.10 To assess and describe how opportunity costs become part of the management decision-making process. (NUM)

What is an opportunity cost? It is the cost of rejecting one alternative for another. For example, if Robin's Donuts decides to produce lemon coated doughnuts instead of chocolate covered doughnuts, the managers should consider the opportunity cost (profit lost on the chocolate donuts). Sometimes companies and managers become so caught up in special projects, they may overlook other important alternatives.

Opportunity costs are not entered into the accounting records. They are management decisions made which in the long run, affect the accounting records and, in the process, may use accounting records to assist managers in their decisions.

- 3.11 To define and describe the role of a sunk cost in the decision-making process.

What is a sunk cost? It is a cost previously incurred and which would not be considered in a management situation. It becomes irrelevant in the decision making process because it cannot be recaptured or decreased. For example, the initial cost of the school or of the sports equipment currently owned are irrelevant in deciding to run next year's sports program.

- 3.12 To compare and prepare the Cost of Goods Sold section of an Income Statement for a merchandising firm and a manufacturing firm.

Review the Cost of Goods Sold portion of the merchandising firm from Module 2. Students should be quite familiar with the meaning of each line.

Give students a simple income statement from a merchandising firm and that from a manufacturing firm. Note that a Schedule of Cost of Goods Manufactured is often prepared for summarization on the income statement. This exercise may then include giving the student a schedule along with the income statement for a manufacturing firm.

Have students compare and find the differences and similarities between the two statements. They should note that the Cost of Goods Sold section on the manufacturing income statement comes from the manufacturing costs that have been incurred in producing a product. These include direct costs, direct labour, and manufacturing overhead. Both firms' statements have beginning inventories however, the beginning inventory in a manufacturing firm has both raw materials inventory and a finished goods inventory.

Module 3C: Fixed and Variable Costs

Suggested time: 5-10 hours
Prerequisites: Modules 2, 3B

Level: Advanced

Learning Objectives

- 3.13 To break down and outline costs as being fixed or variable and describe how a manager may use this information. (NUM)

Notes

Costs can be classified in another manner. This classification uses changes in behaviour during periods of activity. During planning, a manager should be able to determine if the cost is fixed or variable and should be able to predict the percentage of rise or fall of the total variable cost. This information is important to the planning, controlling and decision-making process of the firm. Students may note that cost behaviour is obtained from the accounting records of the firm.

Variable costs: are called variable because the total cost varies in direct proportion to the activity level. Some examples of activity level may include the number of units produced, the number of units sold, and the hours worked. Students should be given some examples of activity bases that variable costs can be "variable with". Some activity bases may include: the number of miles driven, the number of papers delivered, the number of letters prepared in a day, the number of beds occupied in a hospital or the number of pizzas made in a evening.

How many variable costs will a company have? A manufacturing firm will have many variable costs. A service organization such as a school or hospital will have few variable costs due to its function. A service firm such as a dry cleaning establishment will have variable costs dependent on its level of activity. Remember that there may be a number of activity bases within an organization in which a manager may be concerned.

Fixed costs: Total fixed costs do not change regardless of the activity level within a certain range (relevant range). They relate more to a passage of time such as a year than to the number of units produced. Since costs are fixed, the cost per unit will decrease with increased activity. For example, if the insurance on a delivery vehicle is \$600 per year, the fixed cost per delivery would be as follows:

100 deliveries/year: $\$600/100 = \$6.00/\text{delivery}$
500 deliveries/year: $\$600/500 = \$1.20/\text{delivery}$
1,200 deliveries/year: $\$600/1,200 = \$0.50/\text{delivery}$

Other examples of fixed costs include rent, depreciation, insurance, and management salaries.

Learning Objectives

Notes

Managers usually refer to total fixed cost in planning rather than the fixed cost per unit. A manager may adjust fixed costs by reducing staff, reducing advertising campaigns, closing down a portion of the operation, etc. An example of the differences between management styles and decision making may be seen in times of recession when one manager may decide to lay off employees while another may keep employees on a full or partial payroll even if there is little work to be completed.

Today, there is a trend toward more fixed costs than variable costs because of increased automation and stabilized labour contracts.

Relevant range: is the activity level of cost behaviour within a band or range in which assumptions relative to cost behaviour would be valid. Students should know that within the relevant range, assumptions can be made because variable costs and activity can be considered relatively stable which allows assumptions to be made without a significant loss in accuracy. Variable cost and activity are directly related over relevant range. (i.e., no large cost increases such as hiring an additional employee, etc.)

- 3.14 To identify and break down mixed costs into variable and fixed costs using the high-low method and the scattergraph method.

Students need to be aware of the importance of mixed costs to managers because they are common to many businesses.

Mixed costs: contain both fixed and variable elements. For example when leasing a car, a monthly fee (fixed) may have to be paid up to a certain monthly distance. Once one exceeds that distance, a variable cost of 10¢ a kilometre may have to be paid. Other examples of mixed costs may include: electricity, heat, telephone, repairs, and maintenance.

When examining mixed costs, students may be introduced to the high-low method and the scattergraph methods of breaking mixed costs into the variable and fixed cost elements. This treatment should be basic such that students may determine how management would handle these costs. An example is given in Appendix C.

Other methods for determining the various elements of mixed costs such as least squares or regression analysis may not be suitable for students at this level.

Learning Objectives

Notes

3.15 To summarize the basic cost behaviours and determine their application to the contribution approach of an income statement. (CCT)

Review the definition of cost behaviours as being how a cost may rise or fall during changes in business activity. Give examples of fixed costs and of variable costs in different applications.

Why are cost behaviours important to the manager? The manager must plan and control variable, fixed, and mixed costs and needs cost data organized to facilitate management decision-making process.

How can cost information be organized to facilitate management decision making? A new format for the income statement called the contribution approach is set up. The contribution approach to the income statement organizes information in terms of cost behaviour. This approach to organizing costs is valuable to the internal decision-making process.

What is the contribution margin?

- $\text{Sales Revenue} - \text{Variable Costs} = \text{Contribution Margin}$.
The contribution margin is the amount remaining from sales after variable expenses are deducted. It is needed to pay fixed expenses and then considered for profit. Students should know that the contribution margin is exhibited in the contribution approach to the income statement.

How does the contribution approach to the income statement compare to the traditional approach? How will the costs be divided between variable and fixed? Students should note that the contribution income statement is geared at cost behaviour whereas the traditional approach is functional.

This particular section of the module may be introduced by having students compare a **contribution income statement** with a traditional income statement. The students should understand all the terms presented, namely variable and fixed costs, so that they may use this example as an advanced organizer or outline to refer to as the new explanations of costs are presented.

3.16 To compute and explain how changes in sales levels affect contribution margin and net income.

Cost-volume-profit (CVP) analysis involves examining the relationship between prices, volume (level of activity) and the costs involved with earning a net income. This analysis helps the manager predict the break-even point in sales (where total sales revenue = total expenses) and the levels of profitability or loss of increased or decreased activity.

CVP analysis is a **key** part of many decisions a manager will make. It studies the relationship of prices of products, volume of sales or production, the per unit variable costs, the total fixed costs, and the mix of products sold. Many management decisions can be made from the CVP analysis. Students should synthesize this at the end of this unit.

Learning Objectives

Notes

To facilitate student learning in this objective, students should have a good understanding of the terms sales revenue, variable costs, fixed costs and net income which are necessary elements of the CVP analysis equation as shown below:

$$\text{Sales Revenue} - \text{Variable Costs} - \text{Fixed Costs} = \text{Net Income (Profit)}$$

This equation forms the basis upon which all CVP analysis is established. Essentially, the CVP analysis equation is exhibited in the contribution income statement section which has been examined previously. As CVP analysis is mathematical, students should realize that a manager may solve for any one of the above factors, given information on the remaining factors. A number of variations of this equation may be introduced.

For example, review with the students the concept of contribution margin.

$$\text{Sales revenue} - \text{variable costs} = \text{contribution margin}$$

The students may be asked to relate the concept of contribution margin to CVP analysis and realize that the first two items in the CVP equation is the contribution margin as follows:

$$\text{Sales Revenue} - \text{Variable Costs} - \text{Fixed Costs} = \text{Net Income (Profit)}$$

$$\text{Contribution Margin} - \text{Fixed Costs} = \text{Net Income}$$

At this level, teachers are cautioned to use simple examples to illustrate CVP analysis. The focus here is on the power of this planning tool and not necessarily on mathematical manipulations.

Teacher hint: choose the numbers and then design the problem to go with the numbers.

See Appendix D for a sample case study.

Sales, variable expenses and contribution margin may be referred to in percentages rather than dollar amounts. The percentage of the contribution margin of sales revenue (always 100 percent) is referred to as the contribution margin (CM) ratio. After the CM percentage or ratio is calculated, it may be applied to expected or future sales projections. Thus, students should realize that this becomes a powerful planning tool for managers. Not only can they apply the ratio/percentages to total sales, but they can predict the amount of variable expenses, fixed expenses, and net income.

How will managers use this tool?

- to select product lines with the highest contribution margin ratio to recover fixed costs and to generate maximum profit
- to achieve a target net income, to determine how much product or service, knowing the CM ratio, are needed to meet a projected income
- to see the effects of changing fixed costs
- to see the effects of changing variable costs
- to see the effects of changing selling prices
- to see the effects of changing management strategies.

Students may be given the opportunity to look at many different decision-making scenarios and to examine the different effects of changes in variables.

Teachers may provide students with a case study similar to that given in Appendix D in which different variables may be held constant so that the students may see what happens when other variables change (increase sales price, decrease sales price, increase variable costs, decrease variable costs, etc.) This could be an individual performance test item.

Break-even Analysis is one part of CVP analysis that students should examine. There are two methods of calculating the break-even point: by unit amount and by dollar sales. See Appendix D.

Module 3D: Budgeting

Suggested time: 10-12 hours
Prerequisites: Modules 2, 3C

Level: Advanced

Learning Objectives	Notes
3.17 To develop a definition of profit planning and examine how budgets assist in profit planning.	<p>What is profit planning? As mentioned earlier, financial accounting is concerned with past events and historical information. Management accounting focuses on the future. Profit planning is a process by which a number of budgets are prepared in planning for the future. Management compares the budget with actual results in order to determine any corrective actions that may be necessary.</p> <p>What is a budget? A budget is a detailed plan outlining the inflow of revenue and the outflow of expenses over a period of time in the future. A budget is a plan usually expressed in quantitative terms either in units or in dollars. There are usually smaller budgets for departments or projects that may or may not be part of a larger consolidated budget.</p> <p>Students could list and discuss reasons businesses budget.</p> <p>Do the students budget? How would they prepare a budget? Do they have income? Certainly they have expenses! Students may plan a budget such as for a trip -- project their share of the gas, lodging, food costs, souvenirs, miscellaneous, etc. A budget could cover the current school year -- grade 12 -- anticipating income and expenses. Students should be aware that the time period covered by the budget is different in each of the two examples given above.</p> <p>See Appendix E for sample budgeting problems.</p>
3.18 To formulate and express the advantages of budgeting.	<p>From the reasons for budgeting, students may be able to arrive at several advantages of budgeting. They may include:</p> <ul style="list-style-type: none">• to formalize planning• to serve as objectives or goals to be used for evaluative purposes subsequent to the project• to perceive potential problems such as money, time, resources, etc.• the communication/coordination of the entire organization. <p>Students may determine other advantages.</p>
3.19 To differentiate and explain the concepts of planning and control when discussing budgets.	<p>What is planning? Planning is the process of developing future objectives and goals, and preparing the budget(s) to accompany those objectives and goals. It can be a time intensive task, and it prepares for the control phase of budgeting.</p>

Learning Objectives

Notes

3.20 To identify and present the contributions of five types of budgets to the master budget as part of the profit planning process. (NUM)

Controlling is the action taken after making a comparison of actual results with the budget. Management ensures that the objectives and goals set down in the planning stage are carried out. Activities should be monitored and corrective action taken if actual results differ from those suggested in the objectives. The budget becomes the standard by which managers measure revenues and expenses.

There can be no control without effective planning. Examples may be given to students.

The master budget is the budgeted financial statements and the subordinate schedules. It is comprised of many specialized budget schedules such as the five given below. These are by no means inclusive, but are thought appropriate at the secondary level of education.

To work through these five budgets, students may be divided into groups to choose a company in the community or a project in the school to which they may apply the budgets. The size of the project and/or product lines must be kept small. The purpose of the exercise is to understand the applicability of the various kinds of budget schedules using simple numerical calculations. As each budget is explained and learned, it may be applied to the simulation. For example, the situation should be kept simple such as sales in the school store or the products on the shelves at the local barber/beauty shop.

1. Sales or Revenue Budget:

- is the first schedule prepared because many other schedules are dependent on it
- shows expected sales and units of production
- is the key to the entire process
- uses expected selling price to extend unit sales to revenues
- is often started by individual sales persons or managers predicting sales in their own area for the next period of time
- an aggregate sales budget is influenced by economic conditions, pricing decisions, competition, marketing programs, etc.

Students may project sales through a group case study/project.

2. Purchases (Inventory) Budget:

- this budget and/or the next (cost of goods manufactured budget) would be the second budget prepared
- is applicable for a merchandising or manufacturing firms only
- projects the quantity of goods to be purchased for the designated budget period
- follows the basic format of the cost of goods sold section of the income statement.

3. Cost of Goods Manufactured Budget:

- using the sales budget as a guide, projects how to best produce the items expected to be sold
- is applicable to a manufacturing firm only
- production runs would be scheduled; labour, material, and overhead would be estimated (each of these may have an individual budget).

Students may project either inventory purchases or cost of goods manufactured in a group case study/project.

4. Selling and Administrative Expense Budget:

- anticipates selling and administration expenses from the sales and inventory/cost of goods manufactured budgets
- may include the budgets of various individuals or groups involved in selling and administration
- the two budgets may be divided: the selling budget would include marketing costs, salaries, etc. and the administrative budget may include many costs not applicable to manufacturing or selling (often these are fixed costs).

The students may project selling and administrative expense budgets for a group case study/project.

5. Cash Budget:

- cash is a major concern of a company -- management of cash is crucial to meeting debt obligations as they come due without having excess cash idle
- major goal of all organizations is liquidity -- pay all debts when they come due; (students should be reminded of a Module 1 concept that income/profit does not necessarily mean cash --the net income and net cash flow of a business may be very different)
- purpose of cash budget: to optimize cash balances; having enough cash to meet liquidity needs and not having so much cash that profitability is sacrificed (for example, excess cash should be earning interest)
- one of the useful management tools
- pulls together other budgets
- sections: receipts, disbursements, cash excess/deficiency, and financing.

3.21 To organize and construct a budgeted income statement and budgeted balance sheet based on budget information.

Review the definition of a master budget and the five types of budget schedules studied previously in this module.

Define budgeted income statements and budgeted balance sheets.

Learning Objectives

Notes

3.22 To differentiate and describe the variances between budgeted and actual data that require further investigation. (CCT)

Review the management process: planning, organizing, directing, controlling, and decision making. The control aspect of the management process compares actual reports to original plans or budgets. One of the manager's tasks is to control operations and ensure that actual results meet the budget.

A performance report compares budget amounts and actual results. Variances are the differences between actual and budgeted results. Why may there be variances?

They may occur as a result of a manager's performance or because of product/market/economic conditions.

Other possible causes of variances:

- skill of workers
- cooperation of workers
- poor supervision
- rate paid to workers
- improperly set equipment
- overtime required/paid
- faulty equipment
- work interruptions.

A guest from the community may be invited to the class to speak on budgeting and variances from budgeted amounts. The speaker may be able to relate real-life situations to the students which may help the students to internalize the complexity that could be present in the business world.

Which variances should concern managers?

- a variance equal to a standard percentage of the budget such as a variance of five percent from budget (under or over budget). For example, an advertising expense which is five percent less than the budgeted amount may be damaging to profits
- a variance which recurs
- variances out of the control of the manager such as utility rates and taxes. These variances will require adjustments to the budget
- some items such as repair and maintenance cost variances may produce short-run savings but cause long-range loss of profitability and as such have a low investigation standard.

Corrective action which may be undertaken may be discussed. This discussion may include the following actions: adjusting the budget, adjusting the labour force, controlling purchasing, selling more, adjusting the price, or doing nothing.

Learning Objectives**Notes**

3.23 To compare and outline the differences between a master budget and a flexible budget. (TL)

Review aspects of the master budget. It is a budget that projects only one level of activity -- sales or units of production -- where actual costs are compared against budgeted costs.

Define a flexible budget and discuss steps in preparing one.

If spreadsheet software is available, setting up a budget is a good application to be completed on the computer. Students must set up cells, input formulas, and observe changes as budgeted figures are revised. Observe changes in net income/loss at each level. Simple variations may include: selling price, fixed costs, variable administration expenses, etc.

Module 3E: Financial Statement Analysis

Suggested time: 5-8 hours

Level: Advanced

Prerequisites: Modules 2, 3D

Learning Objectives

Notes

3.24 To examine and outline the purpose of financial statement analysis in management accounting.

Review the functions of financial accounting (reports what happens -- historical data) and management accounting (uses financial data to aid in making day to day operating decisions). Review objective 3.3 in this module, if necessary. Management accounting depends to some extent, on financial accounting data. The purpose of this last foundational objective in Module 3 is to show specifically how prepared financial data can be used for management decisions.

Financial statements are one of the instruments that help guide business decisions. The two financial statements used at this level are the Balance Sheet and the Income Statement.

Someone reading financial statements for analysis purposes must understand accounting, terminology, and the meaning of each component of the statements. As an informed reader of financial statements, a student will be able to determine the actual amount of income/loss, and realize that generally accepted accounting principles have been applied if statements have been audited or otherwise verified. From this, students will be able to design and run a series of tests, the result of which will be of aid to insiders and outsiders in decision making.

Analysis establishes relationships and points out changes and trends. The analysis section in this guide will include two components: comparisons and ratios.

Analysis techniques can be applied to the financial statements of aboriginal ventures such as the Kitsaki Development Corporation Annual Reports.

Other sources of information include:

- SaskNative Economic Development Corporation (SNEDCO)
- Federation of Saskatchewan Indian Nations (FSIN) affiliates.

Learning Objectives

Notes

- 3.25 To review what financial statements do and do not say and to whom financial statements may be of use.

Step 5 of the Accounting Cycle in Modules 1 and Module 2 outlined to students what financial statements do and do not say. Before beginning financial statement analysis, a review of what financial statements say and for whom may be completed in the classroom.

The Income Statement lists sources of revenue and expired costs or expenses. It matches revenue to expenses for the period of time. It does not predict future profitability, but it may be used for comparison purposes. Net income/loss is only an approximation and does not infer cash availability.

A balance sheet gives the reader a detailed summary of assets, liabilities, and owners' equity on a specific date. Each category may be used for further analysis. The balance sheet does not show how profits were made or where they may have been distributed.

- 3.26 To analyze financial statements and express trends and changes using comparisons. (CCT)

Comparisons are one of the tools used for financial statement analysis. Primary users of comparisons are insiders (managers, owners, controllers, and others). Comparisons focus on trends and percentage changes. They may compare stages within one company's life or they may compare one company to another, etc. They may also focus on trends in revenue and expenses. Comparisons may be shown in graphical or numerical format.

Comparisons to be included:
Comparative Balance Sheets, Comparative Income Statements, and Common-Size statements. (A common-size statement shows separate items as a percentage rather than in dollar amounts.)

What are the base amounts? What is the purpose of a common-size statement? What is revealed? How would various insiders use some of the comparison data? For example, how should a manager interpret a slight increase in net sales from one month to another? Is it caused by an increase in the number of units sold? An increase in the price? A decrease in sales returns and allowances? Are there any other causes? How has technology and the use of the computer affected the financial analysis of a company? Discuss how a spreadsheet or an accounting software package (for example, general ledger, accounts payable, accounts receivable, and others) can assist in financial analysis. What types of information can the software provide?

Once students have learned the techniques of comparative analysis, they should be able to suggest reasons why the deviations may have occurred.

Learning Objectives

Notes

- 3.27 To analyze financial statements and express the strengths and weaknesses of a business using **ratios**.

Managers (internal users) are the prime users of comparison analysis while creditors and external users tend to be the prime users of ratio analysis. External users may include creditors, investors, government agencies, etc. Only elementary analysis will be introduced here.

Teachers could build a file of sample financial statements collected from the community to make student activities seem more realistic.

In pairs or small groups, students may be given samples of financial statements from different organizations in the community or from other resources. As the students are introduced to each of the ratios, they may perform the test on their small business. At the end of this unit, students may prepare a journal writing in which they may be asked to predict the future of their business or make recommendations.

A ratio is a comparison of one component to another. Therefore, ratio analysis is the comparison of one aspect of a financial statement to another; for example, comparing the amount of cash to total assets.

Suggested ratio techniques to be introduced to students may include:

Short-term indicators (usually a year):

- **Current Ratio:** How is it calculated? Why is it important? What is an approximate good or poor ratio for a range of businesses? How does one resolve a poor ratio?
- **Quick Ratio or Acid Test Ratio:** What are quick assets? What is the purpose of calculating quick assets? What is considered a short period of time for creditors to receive money? How is the ratio calculated? What is a desirable/undesirable ratio? What can be done to improve a poor ratio?
- **Inventory Turnover:** What is inventory turnover? What is a reasonable expected turnover for various products; for example, a can of tomato soup versus a diamond necklace. What is the purpose of calculating turnover? How is the ratio calculated? What are the implications of a product that does not turn over often, of a product that has not turned over as often as last year, etc.?

Accounts Receivable Collection Period: How is it calculated? What is a reasonable collection period: compare various types of businesses (farm machinery sales versus stationery supply company); relate to terms on invoice (2/10, n/30); and, others. What is a usual rule of thumb (1 ½ times the usual credit period)? What are the implications of not receiving payments of accounts receivables on time? What is the appropriate approach to handling companies who do not pay promptly?

Long-Term Indicators (usually longer than a year):

- **Debt and Equity Ratios:** What is a debt? What is the proportion of total debt (liabilities) to total assets? How is the debt calculation completed? What is equity? How is the equity calculation completed? What portion of assets have been bought using borrowed money? What portion of the assets belong to the owners? What is a desirable/undesirable ratio? Can owners start and operate businesses without accumulating debt? What parties would be interested in debt and equity ratios?
- **Return on Owner's Equity:** A business is an investment as any other. What are the interest rates on various savings accounts at the bank? What is the rate of return on the business investment (owner's equity)? How is it calculated? What is a reasonable rate of return? What was the rate over several years of business? Does the state of the economy affect the rate of return (several types of businesses may be used for comparison; for example, a real estate business versus a food store)? Can a business just take the Capital or Owner's Equity out of a business?
- **Markup:** What is markup (average markup for all goods sold)? Where is it shown on the Income Statement (Gross Margin/Sales)? What does Gross Margin/Sales mean (net sales - cost of goods sold but before expenses)? How is markup calculated? What types of firms is this applicable to? Before students can make a judgement, they should know the proportion of gross margin that goes to expenses and that which remains for net income.
- **Return on Net Sales:** What is rate of return (net income) and what are net sales? How is it calculated? Why is the rate of return more significant than the total amount of net income over several time periods? How does this calculation affect the rate of return on owner's equity calculation?

In pairs or small groups, students may be given samples of financial statements from different organizations in the community, or from other sources. As students are introduced to each of the ratios, they may perform the test on their sample business. At the end of the unit, students may prepare a journal writing in which they may be asked to predict the future of their business or make recommendations.

Learning Objectives

Notes

3.28 To examine the financial analysis techniques and describe how the analysis may support management decision making. (CCT)

As a summary to this module, students may review the management accounting concepts presented and describe how applicable financial analysis techniques may assist in that particular process.

For example, when reviewing the functions of management accounting (planning, organizing, directing, controlling, and decision making), students may suggest an analysis that may support that function.

When reviewing budgeting, two questions that students may be asked are:

- How can trends or percentage changes help with the preparation of budgets?
- Of what use can a comparison of the actual financial statement to the projected budget for the same period be?

Concept mapping: Students may map the terminology, concepts, financial analysis, etc. to the functions of management accounting. Students may generate the items to be included in their maps or the items may be given to the students on a sheet. If desired, the items may be placed on slips of paper and students could put their map together like a puzzle. Teachers may assess the content of the map noting the relationships students have chosen. Did the student understand the concepts? Did the student understand the process?

To summarize student learning in this module, the teacher may guide students by asking questions structured to determine their level of understanding of the content within this module. For example, students may be required to develop and support explanations on how the inventory turnover ratio may assist the controlling aspect of management or how trends may help with budgets.

Module 4: Banking and Cash Control (Optional)

Foundational Objectives

- To utilize basic banking functions effectively for business or personal banking decisions.

Common Essential Learnings Foundational Objectives

- To develop an understanding that technology both shapes the world of banking and is shaped by the business world. (TL)
- To strengthen students' understanding within accounting through applying knowledge of numbers and their interrelationships. (NUM)
- To develop an understanding of how knowledge is created, evaluated, refined, and changed within the area of cash control in accounting. (CCT)
- To develop compassionate, empathetic, and fair-minded students who can make positive contributions to society as individuals and as members of groups. (PSVS)

Module 4A: Banking

Suggested time: 7-9 hours

Level: Introductory

Prerequisite: None

Learning Objectives	Notes
4.1 To explain the purposes of banking and describe the services and banking costs associated with fulfilling those purposes.	<p>Students should realize the purposes of banking include the safekeeping of money, transfer of funds between individuals or businesses, lending of money to individuals and businesses, handling foreign currencies, and others.</p> <p>Describe generic services provided by banking institutions. The costs associated with each of these services should be related to the service. Are the services provided to businesses or for personal banking (chequing or current account)? What are the similarities? Why do businesses prefer banking to cash transactions?</p> <p>Students may complete forms that simulate opening a chequing or savings bank account (signature cards, and other banking forms). An activity where students role play customers and bank staff can be done.</p> <p>Chart the kinds of accounts available for personal money management and those available for business money management.</p> <p>Students may research types of accounts available in the financial institutions in their community, including chartered banks, credit unions and trust companies if possible.</p>
4.2 To become aware of and knowledgeable about the role of technology in banking. (TL)	<p>The technological services may have been discussed in the generic services objective above. Items that students should be aware of may include:</p> <ul style="list-style-type: none">• electronic transfer of funds• automatic tellers• bank cards• a description of daily clearing procedures between financial institutions• telephone banking• internet banking.

Learning Objectives

Notes

		<p>A field trip to a financial institution may be arranged to witness some of the technological advances in banking.</p>
4.3	<p>To examine the proposition that money transfers handled electronically increases white collar crime. (TL)</p>	<p>Using the library and/or the Internet, students may research instances where crime has increased using electronic banking devices. If time does not permit a research project, a class discussion focused on values, demonstrating fairness, truthfulness, and sincerity in the workplace could take place.</p> <p>The local RCMP may be a resource concerning computer crime related to banking or money scams.</p>
4.4	<p>To become familiar with the terminology of the banking industry. (COM)</p>	<p>These terms include: deposits, cheques, loans, money order, traveller's cheques, non-sufficient funds, stop-payments of cheques, certified cheques, post-dated articles, debit and credit memos, drawer, drawee, payee, blank and restrictive endorsements. The services of the safety deposit box, personal charge cards, and the function of magnetic ink character recognition (MICR) could be discussed.</p>
4.5	<p>To formulate a working definition of a chartered bank, a credit union, a trust company and other financial services in the community.</p>	<p>From describing the differences in origin, in services and in rates, these definitions should be synthesized by the students.</p> <ul style="list-style-type: none">• chartered bank• credit union• trust company• other. <p>The Internet could be useful in finding historical information on the beginnings of various financial institutions in Saskatchewan and Canada. Students should understand the differences among each of the institutions.</p>
4.6	<p>To describe cheques, debit cards, and deposits, and the procedures involved in working with each as a method of cash control.</p>	<p>This section may include cheque details such as:</p> <ul style="list-style-type: none">• definition• procedures for writing cheques and cheque stubs• balancing a cheque book• realization that cheque stubs and deposit slips are source documents for journal entries• blank and restrictive endorsements, the differences• preparation of deposit slips• preparation of deposits for business or for an organization (include preparing the money, rolling coins, sorting currency, listing cheques, etc.). <p>Discuss the processing of deposits by financial institutions. Students may examine the preparation for depositing funds after banking hours.</p>

Learning Objectives

Notes

- Some financial institutions have materials available for classroom use.
- Discuss debit cards and how they work.
- 4.7 To explain the purpose of the bank reconciliation as a method of cash control and to examine the routine procedure and vocabulary of preparing a bank reconciliation and updating accounting records after reconciliation.
- A bank reconciliation may determine why the bank statement from an independent source does or does not match the internal depositor's records on a certain date.
- In explaining the preparation of the bank reconciliation as a process, it should be related to its placement on the accounting cycle. The bank reconciliation becomes the source document for journal entries; therefore, this procedure involves steps 1 and 2 in the accounting cycle.
- The steps may include:
- Materials needed to begin: last bank reconciliation, bank statement with enclosures, general ledger cash account, cash journals and/or combination journal, and completed cheque stubs for the past period
 - Terminology associated with the bank reconciliation may include: outstanding cheques, cancelled cheques, deposits in transit, dishonoured cheques, bank memo, and service charges, etc.
 - A technique to assist in the formal preparation may be to prepare a rough draft by dividing a sheet of paper in half: one half for the bank's record, the other for the company's cash records. Divide each half into a "+" section and a "-" section and begin identifying discrepancy items. When the balances at the bottom of each column are equal, a formal bank reconciliation statement may be prepared following a recommended format.
- Once the discrepancies are identified, students should decide what changes should be made to the depositor's accounts. When the accounts are identified, the journal entries will be made to correct the depositor's books.
- 4.8 To compare a business reconciliation to a personal situation. (CCT)
- Students should realize that the need for a personal reconciliation is as important as that for a business. Although the number of transactions would be reduced, the process would be the same.
- 4.9 To identify the need for a set of internal cash control procedures to protect against theft, waste, and to insure accurate data.
- Control procedures for cash receipts may include:
- depositing cash intact on a daily basis (deposit slip becomes source document, record deposit on cheque stub)
 - separating the handling and recording of cash (one person may count the cash while another records the amounts in journals and ledgers)
 - insuring the safekeeping and accountability for the cash (daily cash proof)
 - using the cash register as a means of cash control (prepare a cash proof using the audit slip as a source document)

Learning Objectives

Notes

- using an expense account called Cash Short and Over to record daily differences
- when receiving cash in the mail, realize that cash discounts may be given for prompt payment
- using prenumbered source documents (sales slips, remittance slips, etc.)
- realizing the advantages of using restrictive cheque endorsements
- using proper procedure when receiving cash by mail (make list, supporting documents become source documents, cash received must be deposited daily, add deposit to cheque stub, etc.).

Control procedures for cash payments may include:

- making all payments by cheque (prenumber, fill out stub before cheque)
- each cheque must be authorized by a person other than the one completing the cheque;
- when paying an account, a cash discount may be deducted for prompt payment
- the person writing the cheque should not be the same as the one recording the entry into the journals and ledgers
- a petty cash imprest system should be used for small payments.

Guests or students may be invited to share their experiences with cash control principles at their work.

4.10 To examine and express one's own beliefs, values, and attitudes when handling ethical and unethical situations relating to cash and business practices. (PSVS)

Students should be given opportunities to examine differing situations with teacher guidance. Students should know the values that are expected and accepted in handling cash in business practice.

If students have not had much experience in the "work world," they may be given case studies to discuss. For example: a case study involving an employee who is asked to perform an illegal or unethical procedure in the work place. Teachers may assess the content and application of student responses.

Students may be divided into groups to role play unethical or illegal practices. Students may then prepare a journal writing outlining what is "right". Situations students may be asked to role play may include: charge an amount to a wrong account to cover an unapproved purchase, remove a small amount of cash for a personal expenditure, and others.

Students may brainstorm or use focused imaging to generate ethical and unethical situations for discussion or to role play.

Learning Objectives**Notes**

4.11 To realize that because of the frequency of cash transactions, a cash receipts journal, cash payments journal, or a synoptic/combination journal may be used as the book(s) of original entry.

Cash Receipts and Cash Payments journals are introduced in a working manner in Module 2. However in this module, the special journals used to handle cash transactions should be introduced as an important element of cash control in a larger company. Students should realize, however, that cash receipts and cash payments may be handled quite adequately by having special columns in a synoptic/combination journal in a smaller business.

Module 4B: Petty Cash

Suggested time: 4-6 hours
Prerequisite: Module 4A

Level: Introductory

Learning Objectives

Notes

4.12 To define and determine the advantages of establishing an imprest petty cash system and to calculate and record small disbursements of cash using a petty cash control system. (CCT)

What is petty cash? To understand how the petty cash system is established, the students should understand that an **imprest system** is an amount of cash "borrowed" from the regular cash account. A cheque is written, cashed, and is set aside from which small cash payments may be taken.

Although all cash disbursements should be made by cheque, small payments such as postage, express charges, small supplies, etc. should be made from petty cash to avoid the expense of cheque writing.

The following steps may be followed to ensure control of the petty cash:

- establish the format of petty cash vouchers and prenumber vouchers
- establish format for petty cash book
- cash the cheque from the regular cash system
- record the initial amount of petty cash in the petty cash book and set the money in a safe place
- record information on voucher before disbursing cash when a small payment is necessary
- transfer information from vouchers to petty cash book at regular intervals
- replenish the fund when the balance of the petty cash fund is low or at pre-established regular intervals
- to replenish the fund: prove the petty cash book, verify total cash on hand with cash column in petty cash book, and verify total cash on hand with the total of the paid out vouchers
- issue a cheque from the regular cash account to replenish the fund to the original amount
- record the petty cash replenishment transaction in the general journal or in the cash payments journal (if Module 2 has preceded this module).

Students may establish a petty cash fund and role play transactions and the proper procedures of petty cash.

4.13 To demonstrate how a petty cash system can be adapted to different organizations.

The important aspect of petty cash is its size. Suitable amounts of petty cash should be discussed. The limiting factors may include having too much cash on hand (encourages theft) to having too little cash on hand requiring frequent replenishment of the fund which may be time consuming. Petty cash funds should be large enough to last from two weeks to a month.

Learning Objectives**Notes**

4.14 To summarize and explain good cash control procedures within personal, community, and business situations.

In this summary exercise, students should refer to:

- banking procedures and accounts that may be open
- bank reconciliations and who prepares the statement
- cash control procedures within an organization
- petty cash procedures and amounts.

A written report may be assigned and a performance test carried out.

Module 5: Payroll and Taxation (Optional)

Foundational Objectives

- To recognize the importance of payroll functions within the business environment.
- To develop an understanding of personal and business taxation.

Common Essential Learnings Foundational Objectives

- To support students in coming to a better understanding of the personal, moral, social, and cultural aspects of accounting. (PSVS)
- To support the development of a positive disposition to life-long learning, as it pertains to the changing economic structure of our society. (IL)
- To strengthen students' understanding within accounting through applying knowledge of numbers and their interrelationships. (NUM)

Module 5A: Payroll

Suggested time: 7-10 hours

Level: Introductory

Prerequisite: Module 1

Learning Objectives	Notes
5.1 To define and determine why detailed payroll records must be maintained. (COM)	<p>Canada Customs and Revenue Agency publishes <i>Teaching Taxes Program</i> each year that provides useful information for this module.</p> <p>Payroll records are required by law, specifically, Canada Customs and Revenue Agency. There are federal and provincial laws governing the paying of employees of which students should be aware.</p> <p>Discussion should include some of the consequences of not reporting all earned income to Canada Customs and Revenue Agency and what happens when an employer does not report or submit employee deductions and taxes.</p>
5.2 To examine the collection of data necessary to process payroll for employees.	<p>Examine the social insurance card and the forms needed to apply for the card.</p> <p>Examine the TD-1 form to be filled out by each new employee to establish the net claim code so that income tax may be deducted from pay.</p>
5.3 To define and process various methods of gross pay. (COM)	<p>Discuss the various methods by which employees are paid: for example, hourly, monthly, commissions, combination salary and commission, piece-work compensation, etc. Give examples of a workplace where the various methods may be used.</p> <p>Employees may be paid weekly, bi-weekly, monthly, semi-monthly, etc.</p>

Learning Objectives

Notes

Calculate gross pay of hourly-paid employees using time cards. Give an appropriate example of limitations within the workplace (preferably one from the local community). For example, an employee may be docked 15 minutes if arriving 1 minute after the hour.

Calculate the gross pay of an employee on straight commission, salary plus commission, and piecework arrangements. Examples from the community would be best for students.

5.4 To examine compulsory and voluntary employee deductions from gross pay.

Identify compulsory deductions required by law in Canada, briefly stating the benefits derived from each and the approximate yearly maximum and minimum contributions.

- Canada Pension Plan (CPP). What is its purpose? (pension due to retirement, death, orphan's benefits, or disability). **Note:** Treaty and Status Indians working in reserve-based businesses are not required to pay CPP as it is based upon Taxable Income. There are conditions for these individuals to contribute to CPP on a voluntary basis. In such cases the employer would make application to Canada Customs and Revenue Agency for coverage under CPP, and would make the deduction from the employee's pay and remit it to Canada Customs and Revenue Agency just as any other business. If this process is followed, all the Status and Treaty Indian employees in the reserved-based business must participate.
- Employment Insurance (EI). What is its purpose? (benefits for regular or special job loss, maternity leave, parental leave, some benefits for sickness). Discuss the term Insurable Earnings.
- Income Tax Purpose: to raise money for federal and provincial governments. What do they use the money for? Review and discuss the need to know the net claim code of the employee when deducting income tax.
- Garnishment: What is a garnishment? What are the limits? What is the responsibility of the employer?

Identify voluntary deductions (employee must authorize the deduction) and those that may be required by collective bargaining. Give a brief description of each.

5.5 To examine the effect of payroll regulations and *The Labour Standards Act*

Students should be aware of the deductions which may be affected by *The Labour Standards Act* and the provisions for minimum employment standards. Some deductions that are affected are union dues, group insurance, employee purchase plans, and health insurance.

For more information on *The Labour Standards Act*, consult the Saskatchewan Labour website (readyforwork.sk.ca).

Learning Objectives	Notes
5.6 To become familiar with the format and purpose of the payroll register and to perform routine numerical calculations. (IL)	<p>To understand how the payroll cycle fits into the accounting cycle, students should realize that the payroll register is the source document for payroll journal entries to be made in the general journal or the cash payments journal.</p> <p>Transfer relevant data to employees' earnings records. Transfer gross pay to the payroll register. Also, transfer relevant individual payroll information from the employees' earnings record (net claim code, employee number, etc.).</p> <p>Using Canada Customs and Revenue Agency charts, where applicable, obtain net pay for each employee listed on the register. Students must be aware that certain items must be deducted from gross pay (taxable earnings) before income tax is transferred from charts. These items include registered pension plans, union dues, and company group RRSP plans.</p>
5.7 To calculate employer's expenses resulting from payroll (NUM).	<p>Identify CPP and EI as being compulsory employer contributions. Employers may also match or contribute to other deductions such as: registered pension, health benefits, group insurance, etc.</p> <p>Workers' Compensation should be introduced here as being solely the financial responsibility of the employer -- realizing the benefit employees may derive. Types of coverage could be discussed. Some examples of rates may be given.</p>
5.8 To establish a procedure to journalize and post the payroll to update general ledger accounts. (IL)	<p>Record the journal entry (general or synoptic/combination journal) resulting from a payroll register (gross pay = salaries/wages expense and establish current liabilities).</p> <p>Record the journal entry resulting from the employer's contributions to payroll (payroll tax expenses or individual expenses).</p> <p>Record the payment of the employees in a journal (general/combination or in a cash payments journal if students have studied a cash payments journal by this time).</p> <p>Is money paid to employees taken from a regular cash account or is an imprest system (money removed from regular cash account to another account) established strictly for payroll? What are the advantages? How do these types of chequing accounts affect cash control?</p> <p>Discuss how the employees may be paid: cheque or bank transfer. What are the advantages and disadvantages of each?</p> <p>In the general, synoptic/combination or cash payments journal, record the entries necessary to remit employee benefits to various agencies. Businesses remit CPP, EI, and Income Tax to Canada Customs and Revenue Agency. At what intervals is this remittance made? Where can the bill be paid? What information is recorded on the remittance form (PD7AR) ?</p>

Learning Objectives

Notes

Up-to-date information on source deductions may be obtained from the website of Canada Customs and Revenue Agency:
Ccra-adrc.gc.ca

5.9 To recognize the relevance of payroll information in the preparation of year-end summaries and in the preparation of Records of Employment for employees leaving the workplace.

Students should be aware of the employer's responsibilities. By law they must prepare a T4 for each employee by the last day in February immediately following the taxation year (the T4 may be prepared directly from the Employee's Earnings Record) and prepare a T4-T4A Summary for Canada Customs and Revenue Agency. After the year-end data is taken from the Earnings Record, balances should be returned to zero.

A Record of Employment must be completed when an employee leaves a place of employment. Information from the Employees' Earnings Record can be transferred to this form. The students should be familiar with the process for correct completion of the form.

5.10 To realize that payroll is a routine, time-consuming activity and may be completed more efficiently using other tools, namely, a one-write system or a software application on the computer. (TL, IL)

If time permits and resources are available, student may work through a payroll application. This application may be:

- a manual practice set
- a one-write payroll practice set
- an accounting software package with a payroll application
- a payroll exercise using spreadsheet software.

If students are using the one-write system, the advantages of preparing the cheque and the register at the same time should be identified. If students are using a spreadsheet application, formulas present in the application greatly reduce the time spent on routine payroll preparation. If students are using an accounting package, they should consider at what point is it cost efficient to purchase expensive software?

Students should realize that banks and other firms will process payroll for a fee. Analyzing the pros and cons of having an outside agency do payroll is a worthwhile activity.

5.11 To summarize the payroll procedure by describing an efficient system.

After working through the step-by-step payroll procedure, students may: conceptualize the importance of correct payroll procedures in business; list government regulations that affect payroll procedures; and relate an efficient payroll system to overall cash control.

Module 5B: Taxation

Suggested time: 7-10 hours
Prerequisite: Module 1, 5A

Level: Introductory

Personal Income Tax

It is not the intent here for students to become proficient in completing and filing their own income tax return. The purpose is general knowledge and understanding of personal income tax and its process. No more than five hours should be spent on personal income tax at this level. Correlate with Mathematics 20.

Learning Objectives

Notes

5.12 To establish a relationship between income taxes, the cost of government services, and the Income Tax Act. (CCT)

Students should be aware of some highlights:

- The definition of income tax
- Included in income tax are both provincial and federal taxes
- Income tax is deducted by the employer but is assessed by each taxpayer on a yearly basis
- Income Tax returns must be filed by midnight, April 30 of each year
- A self-employed person has the sole responsibility of forwarding income tax to Canada Customs and Revenue Agency
- What are taxes used for (provincially and federally)?
- Under the Income Tax Act, Canada Customs and Revenue Agency has the power to prosecute tax evaders and tax avoiders through legal means
- The history of tax in Canada may be delved into if time permits
- What are the current federal rates of income tax?
- What are the current provincial rates of income tax? These amounts change yearly. A chart of provincial tax rates may interest students.

All students should understand that the treaties between the Crown and the First Nations established a special status for Treaty Indians. The fact that tax exemption was agreed upon as part of the compensation for ownership of most of the land in Saskatchewan should be explained. The Office of the Treaty Commissioner, Federation of Saskatchewan Indian Nations, and Tribal Councils are a good source for further information and resources.

5.13 To become familiar with the components of the personal income tax form and its terminology. (IL)

When looking at the personal income tax return that a secondary student may complete, identify the major components:

- calculation of total income
- calculation of taxable income
- calculation of total non-refundable tax credits
- self-employment sections
- personal amounts
- tax payable.

Terms to note may be: employment income, interest and other investment income, moving expenses, registered pension plan, registered retirement savings, dependents, non-refundable tax credits, tuition fees, education amount, taxation year, T4 slips, and personal amounts.

Learning Objectives

Notes

The “Teaching Taxes Program” available from Canada Customs and Revenue Agency (CCRA) is very useful here. It is a free resource from CCRA, Ottawa ON, K1A 0L8

- 5.14 To demonstrate the preparation of a personal income tax return for a Secondary level student. (TL)

Students prepare personal income tax returns based on problems provided in Teaching Taxes, student workbooks or realistic simulations provided by teacher.

Simulations should be based on the student experiences (part-time jobs, those considering post-secondary education, single parents, etc.).

- 5.15 To summarize and explain the need for income tax to be collected both provincially and federally.

Students may summarize the need for income tax. Where is the money spent? What is their responsibility to pay? How does each individual benefit from the collection of income tax?

Municipal Property Taxes

- 5.16 To express the need for and the purpose of property tax.

Property tax, which is a tax on land, is a source of revenue for municipal governments and school boards. A definition of land may include real property-land, buildings, and related local improvements such as sidewalks, etc. Property owned by churches, hospitals, government agencies, and crown corporations may be exempt from property tax.

All revenue required by cities, towns, rural municipalities, and school boards over and above the amount of grants received must come from property taxes and/or business taxes.

All reserve land is held in trust by the Federal Government for the benefit of Indian people and is exempt from property taxation as stipulated by the *Indian Act*, sections 87 and 89.

- 5.17 To identify and define the formula required to calculate property taxes.

The components of the property tax formula are as follows:

Total Property Tax = Assessed Value x Mill Rate of Land

Discuss assessed value and the method of determining the tax rate.

The mill rate is determined by the municipal council preparing a budget and the school boards preparing a budget. The shortfall from grants for the two parties must be made up from property taxes and business taxes.

Note: Municipalities cannot deficit budget as provincial and federal governments can. They must "0" balance budget or surplus budget; however, in a surplus budget, taxpayers may question why the surplus is accumulated.

General information on property and business taxes may be obtained from the Saskatchewan Government website and the Saskatchewan Assessment Management Agency website.

Through accounting procedures including all expenditures and sources of revenue, the municipality or school board determines the amount of money that must be raised through property taxation. The property tax system shares this cost in proportion to the value of each piece of property in the municipality or school division. For example, if property A is assessed to be three times more valuable than property B, then the owner of property A will pay three times as much property tax. Properties are assessed by the Saskatchewan Assessment Management Agency from time to time.

The property tax formula would be developed as follows:

$$\text{Property tax rate} = \frac{\text{amount of money to be raised}}{\text{assessed value of all property in municipality}}$$

Because the property tax rate is a small decimal value, a unit called the mill is used for simplicity and property tax rate is usually called the mill rate. 1 mill = 0.001 cent. A property tax rate of 0.0074 would be a mill rate of 74.

$$\text{Mill rate} = \frac{\text{amount of money to be raised}}{\text{assessed value of all property in municipality}} \times 1000$$

The mill rate is applied to calculate the tax due for each piece of property.

$$\text{Tax due} = \frac{\text{assessed value of the property} \times \text{mill rate}}{1000}$$

Another way to calculate the tax due is that the mill rate is the amount of tax due for each \$1000 of assessed value of a property.

In Saskatchewan, municipalities and school boards calculate their mill rates separately and they are combined on the tax notice that is sent to each property owner by the municipalities. Municipalities collect the taxes and give the school division(s) portion to them.

Adjustments are made to this basic system to make taxation as fair as possible. A visit from or to a tax person from the municipality could be a good experience for the students.

Learning Objectives**Notes**

- 5.18 To perform numerical calculations for a property tax. (NUM)

Mathematical calculations are performed and/or reinforced in the Mathematics 20 program. Ensure that the instruction in Mathematics and this module complement student learning.

Have students calculate property taxes from given information, preferably from their own locality, following an example like the one shown below:

A sample of a property tax calculation might be:

Assessed value of land	\$12 000
Assessed value of improvements	<u>\$52 000</u>
Total assessment	\$64 000

Improvements means buildings on the property

Municipal mill rate	15
School division mill rate	17

Municipal tax due	$(\$64000 \times 15)/1000 = \$ 960$
School tax due	<u>$(\\$64000 \times 17)/1000 = \\1088</u>
Total tax due	\$2048

A few sample questions for students to calculate is all that is necessary at this level.

- 5.19 To prepare and record the journal entries for the liability and the payment of property taxes.

The source document for the journal entries would be the tax notice from the local municipality office. The general, synoptic/combination or cash payments journal may be used to record the entries. Is this entry recorded yearly or is a portion of it recorded at the end of each accounting period (Matching Principle)?

Students may be aware of local discounts or penalties for early or late payments. They may be included in the entries.

Business Taxes

- 5.20 To identify and describe the Business Tax as being another means by which resources are raised in communities.

The business tax is calculated essentially the same way as property tax. The property tax and the business tax are added together to meet the expected shortfall predicted by the municipal councils and the school boards.

Learning Objectives

Notes

- 5.21 To identify and define the formula required to calculate business taxes. (NUM)

The components of the business tax formula are:

$$\text{Business Tax} = \text{Business Assessment} \times \text{Mill Rate}$$

In most municipalities, assessment is determined from the amount of floor space occupied by the business and how the space is used.

Students could check with their municipal officials to see how business tax is assessed and calculated in their community. They should explore the variations of assessment for different types of business.

Students should be aware of how business tax differs from property tax. Many small business owners have strong opinions about business tax. Students could interview business owners and municipal officials and represent different opinions in a debate.

- 5.22 To prepare and record the journal entries for the liability and the payment of business taxes. (IL)

The source document for the journal entries would be the tax notice from the local municipality office. The general, synoptic/combination, or cash payments journal may be used to record the entries. Is this entry recorded yearly or is a portion of it recorded at the end of each accounting period (Matching Principle)?

Students may be aware of local discounts for early payments, and penalties for late payments. These may be included in the entries.

Provincial and Federal Taxes

Learning Objectives

Notes

- 5.23 To interpret the meaning of provincial and federal taxes on goods and services. (CCT)

The Goods and Services Tax (GST) is a tax on the sale of both goods and services. It is monitored by Canada Custom and Revenue Agency (CCRA).

The Saskatchewan tax is called the Provincial Sales Tax (PST) and is monitored by the Department of Finance, Government of Saskatchewan.

Students should understand the need for and the purpose of provincial and federal sales taxes. The sales taxes are a main source of revenue for the governments.

Status and Treaty Indians are exempt from paying provincial sales tax however they are not exempt from paying GST. Contact the FSIN or Canada Custom and Revenue Agency for more information regarding GST and Status and Treaty Indians.

Learning Objectives**Notes**

5.24 To determine the significance of provincial and federal taxes on the sale of goods and services.

Students should be able to give concrete examples of where the revenue from taxation is used both federally and provincially and if possible in order of priority or usage (e.g., Provincially: health, education, social programs, highways. Federally: social programs, defence, etc.)

Students should be aware of what is and what is not taxed in Saskatchewan. What is Saskatchewan's current rate of taxation? A summary of provincial taxes across Canada may be valuable in comparing geographic areas, economic conditions of provinces and the effect on taxation, and other relevant concepts.

5.25 To summarize and explain the key aspects of the provincial sales tax. (CCT)

Provincial taxes are usually not "hidden". They are paid by the consumer at the time of purchase and are collected by the retailer for the province. The retailer receives a commission for collecting the tax.

Calculations of tax on articles purchased may be completed by students. Student exercises may contain taxable items and non-taxable items. To determine the provincial sales tax exempted items and the commission rate, contact the Department of Finance, Government of Saskatchewan.

5.26 To calculate and prepare journal entries using various types of taxes. (TL, NUM)

Suggested entries may be:

Goods and Services Tax:

GST charged on Sales	\$97.15	
GST Paid on Purchases		\$84.60
Cash		12.55

Property or Business Tax:

Property/Business Tax Expense	\$19 380	
Property/Business Tax Payable		\$19 380

5.27 To summarize the purpose of municipal, provincial, and federal taxes.

In summary: Who pays the taxes? What are the taxes? Where does the money go? Could municipalities, provinces, and Canada exist without these taxes? How does an individual benefit from taxation?

Module 6: Synoptic/Combination Journal and One-Write System (Optional)

Foundational Objectives

- To develop shortcuts that may make the recording of traditional accounting more efficient.

Common Essential Learnings Foundational Objectives

- To develop students' abilities to meet their own learning needs. (IL)
- To enable accounting students to use language and documents for differing audiences and purposes that are relevant to the students and to accounting. (COM)
- To promote both intuitive, imaginative thought, and the ability to evaluate ideas, processes, experiences, and transactions in meaningful contexts. (CCT)

Module 6A: Synoptic/Combination Journal

Suggested time: 7-10 hours

Level: Introductory

Prerequisite: Module 1

Learning Objectives	Notes
6.1 To identify the synoptic/combination journal and the one-write system as being shortcuts to traditional accounting methods.	<p>Students may be introduced to this module by recognizing that both methods (synoptic/combination journal and the one-write system) fit within the traditional accounting cycle and that the purpose of each is to provide shortcuts in recording accounting data within the Generally Accepted Accounting Principles. There are many other shortcuts (journal-less bookkeeping, ledgerless bookkeeping, etc), but the two offered in this module are relevant to this level of study.</p> <p>Shortcuts may be manual or computerized. If a business is computerized, entries may be made directly into the computer at the point of entry.</p>
6.2 To identify and describe the function and the characteristics of the synoptic/combination journal. (COM)	<p>The word synoptic means "presenting a general view".</p> <p>Although the structure of the synoptic/combination journal is generic, students should be made aware that there is no "one" synoptic/combination journal. A synoptic/combination journal is created specifically to match the needs of the specific business or organization. Its function is to satisfy the needs of the small organization or business that would have no need for a more complex system.</p> <p>When analyzing the format of the synoptic/combination journal, students should observe the following points:</p> <ul style="list-style-type: none">• it is multi-column• it is used in businesses that have a relatively small number of transactions in a month or accounting time period• it combines five special journals into one (mention particularly if students have completed Module 2 in which five special journals are utilized)• the columns created are the most frequently used columns for transactions in the business.

Learning Objectives

Notes

The synoptic/combination journal can be easily accommodated by using spreadsheet software. A business using a five-journal system may find using accounting software more beneficial than that system, however, students should be aware that due to cost and other factors, a synoptic/combination journal may be chosen instead.

6.3 To analyze and journalize transactions in the synoptic/combination journal after following given examples. (CCT)

Students should work through the technical aspects of the synoptic/combination journal. Textbook examples and exercises may be used. Items that students should be aware of include:

- columns should be created for Provincial Sales Tax (PST) and the Goods and Services Tax (GST)
- the number and type of columns vary from business to business
- there must always be columns for post reference and document reference where applicable
- posting procedures for daily and monthly amounts
- procedures for carrying forward balances and dealing with balance brought forward amounts (pinhead totals).

The following objectives are intended to be completed as the students perform a simulation.

6.4 To design and present column headings for a synoptic/combination journal after analyzing a set of transactions for key accounts (column headings). (IL)

This simulation may use 7 or 8 class hours. Some textbooks include simulations or students may be given the choice to design a synoptic/combination journal for an organization or business of their choice. Some suggestions may be for their home, organization of interest such as a hockey or baseball team, computer club, church youth group, student representative council (SRC), school store, or other school-related area.

6.5 To open general and subsidiary ledger accounts from the accounts identified for use with the synoptic/combination journal.

The students will classify transactions into assets, liabilities, owner's equity, revenue and expense accounts. The most frequently used accounts (key accounts) will become column headings on the synoptic/combination journal. The account titles should be broad as opposed to narrow in description to allow for several transactions to be accommodated within that account; for example, utilities expense versus power expense.

6.6 To analyze and record transactions into the synoptic/combination journal. (CCT)

Subsidiary ledgers may or may not be needed depending on the previous knowledge of the student and on the complexity of the transactions the students are completing.

6.7 To balance and post transactions to the general and subsidiary ledgers.

Teachers should try to include as many steps and elements of the accounting cycle as possible.

Learning Objectives

Notes

6.8 To organize and prepare an explanation of how the synoptic/combination journal may be utilized including its advantages and disadvantages. (IL)

Students should reflect on the processes they have completed in a simulation. The characteristics and function of the synoptic/combination journal recognized at the beginning of the module should be reaffirmed at this time. The explanation should be generic in description. The students may wish to give examples of how the synoptic/combination journal may be used in other applications.

There are many advantages of using the synoptic/combination journal:

- requires one/fewer lines to record an entry
- requires fewer postings
- may only post totals at the end of the month
- involves less chance of error
- saves time
- is easy to view (transactions are recorded in one place)
- one person can handle the journal
- is adaptable for a small business
- is suited for manual or electronic spreadsheet applications.

There are some disadvantages of the synoptic/combination journal:

- frequency of error increases due to the number of columns
- the journal may be physically large and cumbersome
- recorded transactions may require more than one line if column headings are not accommodating
- internal cash controls may be violated as one person could handle all the entries and also handle the cash.

Module 6B: One-Write System

Suggested time: 7-10 hours
Prerequisite: Module 1, 6A

Level: Introductory

Learning Objectives

Notes

6.9 To identify and describe the function and characteristics of the one-write method of recording accounting data. (COM)

What is a one-write system of recording data? Discuss the purpose of the one-write as being a shortcut method, particularly of manual accounting. The one-write system allows the user to prepare more than one accounting document and record in one step. It covers the first three steps of the accounting cycle: originating data, journalizing, and posting to a ledger. The journal portion of the one-write is very similar to that of the synoptic/combination journal. Most technical aspects of the one-write are similar to those learned with the synoptic/combination journal.

When the package is assembled, the person originating the data records on the source document while the information is simultaneously recorded on the journal and ledger card. The type of entries found in the one-write system are routine, repetitive entries, such as payroll, accounts receivable (credit sales), and accounts payable (payments on account) entries.

Businesses which have one source of revenue often use a one-write system. Some businesses use the one-write system for payroll purposes as the employer is required by law to provide the employee with a payroll voucher as well as the cheque to inform the employee of deductions. Using the one-write system, the voucher may be written at the same time as the cheque and recorded simultaneously into the journal and employees' earnings record. Some examples of where one-write systems are used may include dentists, accountants, lawyers, and small business (mainly payroll).

The advantages of the one-write system may include many of those identified for the synoptic/combination journal. One of its major advantages is convenience. The one-write system reduces the time to record entries, may reduce the number of errors, and reduces the time to post to ledgers.

Some disadvantages of the one-write system are the cost of the system, the availability of the system, and the fact that the system may not be tailored to suit the specific requirements of all businesses.

6.10 To analyze and record transactions into the one-write system.

After a demonstration of how the pegboard may be assembled, students should work through a simulation.

Simulations should be used for this portion of the module. The pegboards may be used repeatedly. Some companies provide free pegboards with the purchase of a number of practice sets.

Learning Objectives**Notes**

If the simulations are not purchased, the teacher may provide instruction sheets, transactions, source documents, journal, and ledger cards for student use. Carbon paper must be provided.

6.11 To complete steps two and three of the accounting cycle using the one-write system.

Some technical aspects for students to consider are:

- how to correct an error using the one-write system. (Students should be reminded to cross out the error using a line and write the correct amount above. This may be difficult using the one-write system but correct procedures should be reinforced.)
- how to use pinhead totals (balance carried forward, balance brought forward)
- posting column totals at the end of the period.

6.12 To review the purpose of shortcuts in the accounting cycle. (COM)

To clarify the purpose of shortcuts, students should review the generic purposes of both the synoptic/combination journal and the one-write bookkeeping system.

Module 7: Calculator and Business Applications (Optional)

Foundational Objectives

- To perform basic business calculations with speed and accuracy.
- To recognize technology as a tool to aid in the accounting process.

Common Essential Learnings Foundational Objectives

- To strengthen students' knowledge and understanding of **how** to compute, measure, estimate, and interpret numerical data, **when** to apply these skills and techniques, and why these processes apply within the particular framework of accounting. (NUM)
- To develop students' appreciation of the value and limitations of technology within society. (TL)
- To contribute to the development of "strong sense" critical and creative thinkers. (CCT)

Module 7A: Basic Calculator Operations

Suggested time: 10-20 hours

Level: Introductory

Prerequisite: None

Learning Objectives	Notes
7.1 To develop and identify the advantages and disadvantages of using the calculator or mathematical keypad on a computer. (CCT, TL)	<p>Just as the computer and software are tools to assist in accounting or word processing, so is the calculator (stand-alone or on the computer).</p> <p>As the computer performs routine operations quickly and efficiently, the calculator performs +, -, x, and / and related functions quickly and efficiently as well. Another advantage may be that the calculator provides a paper tape to allow for cross checking without having to perform the function a second time.</p> <p>A disadvantage of the calculator (stand-alone or on the computer) is much the same as for a computer. The technology will only do what the user asks it to do and the user can use it to its fullest potential only if the technology is fully understood and utilized. Garbage in - garbage out (GIGO) may occur on the calculator as well as the computer.</p>
7.2 To identify and set the features of the calculator before calculations begin. (TL)	<p>Students should select:</p> <ul style="list-style-type: none">• print/or no print• the rounding desired• the number of decimals desired• consider whether the Grand Total (GT) needs to be turned on. <p>To correct errors, students may use the clear/clear entry keys. Students should be aware of the difference.</p> <p>Most business calculations are in dollars and cents. Thus, the most common settings may be print, (to check answers without recalculation) and round decimals at two places. The grand total is not usually turned on unless the exercise is a large cross-checking exercise.</p>

Learning Objectives

Notes

7.3 To integrate and utilize the strategies and skills of estimation when performing calculations using the electronic calculator or a mathematical software program.

There are a number of estimation strategies that students may use. These include:

- estimating using front end digits
- compensating
- using compatible numbers
- using special numbers
- clustering
- rounding.

Review each of the estimation strategies and **encourage students to use an estimation strategy before performing a calculation** using technology. Because technology is capable of performing calculations very efficiently, once an answer is computed, students should be able to compare their estimated value to the one calculated and evaluate its appropriateness immediately. This process will be developed as estimation skills become reasonably secure.

Consult resources for activities.

7.4 To perform basic calculations (+, -, x, and /) using the touch method with complete accuracy. (NUM)

When using a full-size keypad such as the ones found on a printing calculator or the numeric keypad on a computer, students should be encouraged to practise entering numbers by touch. They should know that fingers may be placed on home row (4, 5, 6) with the other numbers requiring upward and downward reaches. The 5 key may be depressed or raised so that it may be quickly located. Using correct fingering, all nine number keys as well as the zero key (0) and the decimal key (.) can be used by touch.

In practising touch keying skills, students may be given a series of exercises that involve keying numbers by touch. The exercises may begin with entering numbers requiring only the use of home row numbers and progressively introducing the other numbers and decimals. Speed performance tests on the calculator may be used to increase touch skill and for assessing student skill improvement.

Using a keypad, students should complete exercises involving columns of addition and subtraction progressing to multiplication and division. The exercises should begin with the use of whole numbers progressing to those involving decimals.

7.5 To perform basic calculations using the percentage, constant, and non-add features of the calculator and explain under what circumstances each feature may be used.

After the mechanical process of using the percent key has been learned, students may complete several problems using various decimal settings and various applications so that the students may see the advantage of such a feature. For example, the students may complete a problem using the basic mathematical functions of multiplication, subtraction, addition, or division and then they may perform the same problem using the percentage key.

Learning Objectives

Notes

The students should understand the purpose of the non-add key, such as its use to identify a paper tape by number, department, or date. Students may use the feature when performing their calculations.

After the mechanical process of using the constant feature has been learned, students may complete several problems using the constant with multiplication and division, with and without decimals. Students should realize the advantages of using the constant feature; for example, two students may perform the same calculations, one using the constant feature and the other entering each number of the calculation.

7.6 To complete basic calculations using all aspects of the memory feature on the desktop calculator explaining under what circumstances each aspect could be used. (NUM)

After the mechanical processes of:

- memory +
- memory -
- memory subtotal
- memory total
- memory clear

have been learned, the students may complete several problems using various applications. Again, the main advantages of the memory is speed and accuracy of performing long calculations.

Module 7B: Calculator Applications (Optional)

Suggested time: 7-8 hours
Prerequisite: Module 1, 7A

Level: Introductory

7.7 To perform calculations using the desktop calculator utilizing the features that best suit the application with speed and accuracy.

The suggested types of calculations may include:

- problems which result in a credit balance
- problems where a balance may have to be calculated, for example, the value of items in an inventory including the unit price of each, the number of items on hand, and the total value (subsidiary ledger cards used for perpetual inventory)
- balancing a bank chequebook stub into which students must record deposits and cheques
- balancing a family budget form for income and expense transactions
- problems associated with a change fund (e.g., petty cash) where a cash report form may report coins, currency, and even cheques
- simulated sales invoices in which the PST, GST, and the grand total may be calculated
- an employee's time card where students may need to calculate regular and overtime hours and regular and overtime pay to determine the gross pay earned by each employee
- an incomplete worksheet where students may use the calculator to find totals or extensions and prove net income/loss
- a payroll register or payroll journal where students may determine the gross pay, deductions (read tables to enter the CPP and UI before finding the base amount upon which to look up the income tax for each wage earner, as well as other deductions), and net pay
- problems that involve the calculation of commissions
- problems that require calculations of interest earned where amounts of money on deposit in savings accounts may have different rates of interest
- problems that require calculations of interest to be paid on money borrowed at different rates of interest for different time periods
- problems involving the calculation of unit costs where various consumer products fulfil the same general purpose but are of different price and quantity; for example, the price of a soda at 450 ml, 500 ml, 1 L, or 2 L
- problems where a sales discount period and sales discount amount may need to be calculated
- problems in calculating the markdown and sale price of items;
- simulated balance sheets and income statements in which students must calculate totals, owner's equity, and net income/loss
- other business applications.

Module 8: Partnerships and Corporations (Optional)

Foundational Objectives

- To understand the organizational and legal differences of sole proprietorships, partnerships, and corporations (including cooperatives) and their applicable systems.

Common Essential Learnings Foundational Objectives

- To support students to achieve a better understanding of the personal, moral, social and cultural implications of forms of business ownership. (PSVS)
- To enable students to use language (listening, speaking, reading, recording, reporting) for differing audiences and purposes which are relevant to partnerships and corporations and to students. (COM)
- To promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences and transactions in meaningful contexts. (CCT)

Module 8A: Comparison of Partnerships and Corporations

Suggested time: 7-9 hours

Level: Intermediate

Prerequisites: Modules 1 and 2

Learning Objectives	Notes
8.1 To identify and list the various forms of business ownership. (COM)	<p>Caution should be taken when using key resources. Partnership and Corporate accounting may be taught at the same time as a merchandising business. This may be confusing for the students. The teacher will have to carefully choose the sections from a resource that match the objectives of this module. Concepts should not be confused; for example the concept of a partnership is not necessarily related to a merchandising business.</p> <p>In Module 1, students were asked to list and briefly discuss the different forms of business ownership (sole proprietorship, partnership, and corporation including cooperatives). This material should be reviewed or extracted from resources available in the classroom if needed. The topic of corporation may be expanded to include a discussion on cooperative and crown corporations. What are cooperatives and crown corporations and how do they relate to the corporate form of ownership?</p> <p>Why are other types of business ownership other than the sole proprietorship needed? Joint ventures (special form of partnership) may be discussed.</p> <p>When discussing corporations and cooperate structures, the teacher may use synectics: How is a corporation like a democratic government structure such as a city/town council, provincial government or federal government? For example, a city council may be equated with the board of directors (both levels may have senior and middle management), employees of the corporation may be equated with city employees, and shareholders may be equated with the citizens of the city/town.</p>

Learning Objectives

Notes

- 8.2 To identify and outline certain characteristics of partnerships and corporations.
- Two of the characteristics students may find are the number of owners and the type of business each form of ownership tends to own. Observe partnerships and corporations including cooperatives in the community to see if the characteristics fit. Students may be able to find other characteristics. The class may discuss the contributions that these different business organizations have made to Saskatchewan.
- 8.3 To identify the reasons why partnerships and corporations are formed and to outline how each is formed.
- Some of the reasons these different businesses are formed are to pool financial resources, to bring the skills and knowledge of individuals together in a business situation, to supply additional manpower or to reduce the amount of risk for the owner(s).
- Status and Treaty Indians forming partnerships or corporations will receive some tax exemptions depending on certain conditions. As suitable to the classroom situation, students may briefly discuss the impact of the forms of business ownership for these people.
- Students should briefly describe the process for forming a partnership or corporation. Partnerships are formed by a formal or informal partnership agreement. Corporations must go through a much more lengthy and costly procedure. Consumer and Corporate Affairs, Canada handles federal incorporation. The Saskatchewan Department of Justice, Corporations Branch, deals with provincial incorporation and cooperatives. Remind the students that corporations can be formed federally and provincially and are governed under specific business Acts.
- 8.4 To associate and use vocabulary and terms distinctive to partnerships. (COM)
- What is a partnership? The following terms should be defined and used within the students' assignments: limited liability, unlimited liability, mutual agency, partnership act, limited partnership, and others.
- 8.5 To formulate and assemble a simple partnership agreement based on an example given from classroom resources. (IL)
- What is a partnership agreement?
- Partnership agreements are not a simple matter. Students should know that legal advice should be obtained when a partnership agreement is to be prepared.
- Some details which are included in partnership agreements are:
- the business's name and address
 - the names and addresses of the partners
 - the nature of the business
 - the date on which the partnership was formed
 - the amount of capital invested by each partner
 - how the income or loss is to be shared
 - any salaries that are to be paid.
- Students may draw up a partnership agreement for an area of interest to them.

Learning Objectives**Notes**

		<p>A number of different sample partnership agreements may be distributed to cooperative groups. Each group would examine the agreements and determine specific information as outlined by the teacher.</p>
8.6	<p>To associate and use vocabulary and terms distinctive to corporations, Crown corporations, and cooperatives.</p>	<p>The following terms should be defined and used within the students' assignments: limited, incorporated, public corporation, private corporation, prospectus, shareholders, shares, stock/share certificate, stockbroker, board of directors, limited liability, corporations act (federal and provincial), dividends, retained earnings, shareholders' equity, dividends, and others.</p>
8.7	<p>To formulate and assemble simple articles of incorporation for a corporation based on an example given from classroom resources.</p>	<p>If students are able to see an example of some articles of incorporation that are in acceptable federal or provincial format, they may draw up some articles for some area of interest to them. Examples may be a simulated corporation within the school, community, etc.</p>
8.8	<p>To list and compare the advantages and disadvantages of partnerships and corporations. (CCT)</p>	<p>Some advantages and disadvantages include the following:</p> <ul style="list-style-type: none">• partnerships are easy to form• both forms of business ownership bring together sufficient capital to carry on a business, but corporations provide limited liability to all owners whereas only limited partners are provided with limited liability in a partnership• a partnership has a limited life whereas a corporation is a separate legal entity• partnerships have less government regulation• corporations enjoy ease of handling ownership and no mutual agency.
8.9	<p>To examine the partnership and the corporation to express the legal responsibilities of each owner.</p>	<p>For each form of business ownership, a comparison of organizational costs, rights of owners, ease of formation, ease of accumulating capital, life of ownership, taxation, management of form of business, limited/unlimited liability, mutual agency, and ownership of property and income may be discussed.</p>
8.10	<p>To develop and present a purpose for sole proprietorships, partnerships, and corporations from the information accumulated.</p>	<p>Some of the purpose statements may be taken from the information brought forth in other learning objectives. If that is the case, have the students prioritize the purposes to decide which best characterizes the business form. For example, the main purpose of corporations is probably to raise large amounts of capital for risky and costly ventures. Other characteristics may not be deemed as important as this one.</p>

Module 8B: Partnerships Accounting (Optional)

Suggested time: 5-8 hours

Level: Intermediate

Prerequisites: Modules 1, 2 and 8A

	Learning Objectives	Notes
8.11	To calculate and prepare journal entries for a partnership. (NUM)	The journal entries may include the ones required for the formation of a partnership and the distribution of net income. Adjusting and closing entries will complete Step 6 of the Accounting Cycle.
8.12	To prepare financial statements for a partnership.	The financial statements for a sole proprietorship are similar to those for a partnership. The income statement for a partnership is prepared in the usual way. The balance sheet for a partnership is the same as for a sole proprietorship except for the equity section.

Module 8C: Corporate Accounting (Optional)

Suggested time: 5 - 8 hours

Level: Intermediate

Prerequisites: Modules 1, 2 and 8B

8.13	To calculate and prepare journal entries for a corporation.	The journal entries may include the formation entry of a corporation where shares are sold and recorded into the capital stock/shares equity account, the movement of net income into retained earnings, the declaration of a dividend, and the payment of a dividend. Adjusting and closing entries will complete Step 6 of the Accounting Cycle.
8.14	To prepare financial statements for a corporation. (NUM)	The names of new accounts may be reviewed before the preparation of the financial statements. When preparing the income statement for a corporation, federal income tax paid should be added. How does the tax affect Net Income? A statement of shareholders' equity and a balance sheet for a corporation should be prepared.

Module 9: Asset Analysis (Optional)

This optional module may be chosen to complement and extend the analysis of assets briefly introduced in Module 2: Accounting Cycle: Merchandising Firm. Teachers may choose to integrate concepts from Module 9 and Module 2 through the course content.

Foundational Objectives

- To develop an understanding of profit planning and how it may be used as a tool in management decisions.
- To analyze and use financial statements effectively when making management decisions.
- To demonstrate accounting procedures for a business.

Common Essential Learnings Foundational Objectives

- To contribute to the development of "strong sense" critical and creative thinkers through developing insight into the analysis of assets. (CCT)
- To develop students' understanding of the uses and abuses of mathematical concepts and how statistical information can lead to seemingly different conclusions. (NUM)

Module 9A: Bad Debts (Optional)

Suggested time: 4-6 hours

Level: Intermediate

Prerequisites: Modules 1 and 2

Learning Objectives

Notes

9.1 To recognize that bad debts, depreciation, and inventory valuations assist in assuring that assets are represented as accurately as possible on financial statements.

Students may be introduced to this module by recognizing the purpose and function of each of the three asset valuations that will be performed in this module. A general statement on why the accurate calculation of assets is important on financial statements may be helpful. Who is interested in the accurate calculation of assets? Some examples may be: owners, creditors, Canada Customs and Revenue Agency (CCRA), auditors, investors, managers, and others. Students should explore reasons why each may be interested.

In the GAAP, the Matching Principle, matches revenue and expenses to the period in which they are incurred. The cost of bad debts and depreciation should be estimated as closely as possible to each accounting period.

The GAAP, particularly Full/Adequate Disclosure and Consistency Principle, are reflected in the valuation of inventory. Students should realize that all information that may affect decisions must be reported on financial statements. The Consistency Principle requires the organization to report financial information using the same method from period to period. Thus in this module, it is important for students to realize that businesses cannot change the method of calculating bad debts, depreciation, or inventory without the approval and awareness of all internal and perhaps external parties (e.g., Canada Customs and Revenue Agency).

Learning Objectives

Notes

- 9.2 To review and describe the function of bad debts and the journal entries presented in Module 2.
- Students may review and discuss issues associated with bad debts. Topics may include:
- Should credit sales be extended?
 - What amount of uncollectibles is acceptable?
 - How can we avoid them?
 - Should we aim for no bad debts at all?
 - Others.
- What does Canada Customs and Revenue Agency say about the amount of bad debt a company may claim?
- Review the journal entry to record the adjustment for bad debts. The purpose and placement (on which financial statement) of each account (Bad Debts Expense and Allowance for Bad Debts) should be reviewed. Allowance for Bad Debts is a contra account to what account?
- 9.3 To differentiate and explain the differences between the estimation and direct write-off methods of analyzing accounts receivable. (CCT)
- Should bad debts be directly written off as they occur or should an amount be estimated as being uncollectible (allowance) from which a bad debt may be written off when it occurs? Students may discuss the advantages and disadvantages of each method. It is the intention of this module to show two methods of estimating write offs (aging and percentage of net sales) and the journal entries for estimation and direct write off.
- 9.4 To compute the amount of estimated bad debt and prepare adjusting entries using the aging and percentage of net sales methods.
- How is the amount of bad debt estimated (when an allowance account is established)? Two common methods are aging accounts receivable and percentage of net sales (sales minus sales returns and allowances and sales discounts). Perform numerical calculations for each method. Compare and contrast the methods. What if the estimation for the Allowance account has been too great or too little for a number of years? What action may be taken? Remind the students that there may be flexibility within a company. If the fund has a large balance after four or five years, perhaps the percentage of net sales should be decreased or perhaps the company is too lenient in its credit extension policy.
- How can a computerized accounting system assist with these calculations? Is an aging feature built into Accounts Receivable software?
- Prepare matching (adjusting) entries for both methods of estimating bad debts. When the expense account is debited, what does that mean? When the allowance account is credited, what does that mean?
- DR. Bad Debts Expense
CR. Allowance for Bad Debts

Learning Objectives

Notes

9.5 To compare and explain the result of a write-off from an allowance account and from a direct write-off.

Review the placement of each account on financial statements. Which account is real and which is nominal? By estimating a write-off, has there been any change to an account receivable account? Has an actual write-off occurred?

Prepare a write-off of an accounts receivable account from an allowance account. When the allowance account (contra account) is debited, what does that mean? Students should realize that the allowance is being used up. Posting must occur both to the general ledger and to the subsidiary ledger.

A direct write-off occurs when no estimation of uncollectible accounts receivable has occurred, thus, no adjusting entry has been made, no allowance account has been established, etc. A direct write-off may be used when a company has few accounts receivable accounts or when the company uses a cash basis instead of an accrual basis.

Prepare the journal entry for a direct write-off.

DR. Bad Debts Expense
CR. Name/Accounts Receivable

What are the implications of a direct write-off? Students may be given the example of an accounts receivable incurred last year and yet written off this year. What implications does that have for the balance sheet for the two consecutive years and for the income statement (expense account) for the two consecutive years?

9.6 To develop and explain when the estimation and the direct write-off methods may be used.

After working through the technique of estimating bad debts and direct write-off, students may be able to reflect and clarify the questions asked at the beginning of this unit: should bad debts be written off as they occur or should an amount be estimated as being uncollectible (allowance) from which a bad debt may be written off when it occurs?

Under what circumstances might each method be suitable?

Module 9B: Depreciation

Suggested time: 5-7 hours

Level: Intermediate

Prerequisites: Modules 1, 2 and 9A

Learning Objectives	Notes
9.7 To review and describe the function of depreciation and the journal entries presented in Module 2.	The students should review the meaning of depreciation as discussed when the adjusting entries were prepared in Module 2, objective 2.20.
9.8 To analyze and describe how the accounting for depreciation affects fixed assets. (CCT)	What is a fixed asset? How does the adjusting entry relate to fixed assets? What does the GAAP, the Cost Principle, say? Students should be aware that the cost of the fixed asset is to be allocated over the estimated life of the asset. The estimation of depreciation matches the allocated cost of the fixed asset for one period to the revenue earned in that period. On which financial statement does each account appear? Accumulated depreciation is a contra account to what general ledger account? Which account is nominal and which account is real?
9.9 To compute the amount of estimated depreciation expense and prepare adjusting entries using the straight-line and the capital cost allowance (CCA) methods of depreciation. (NUM)	How is the amount of depreciation calculated? Review the straight-line method of depreciation. Students should realize there are two estimated amounts: years of life of the fixed asset and salvage value. Review the CCA of depreciation which is required by Canada Customs and Revenue Agency. The rates that are used are prescribed by Canada Customs and Revenue Agency and should be used in this module. Students should prepare adjusting entries for both methods. An expense and allowance account is usually open for each fixed asset.
9.10 To prepare journal entries for the disposal of a fixed asset which has an accumulated depreciation account.	After journalizing and posting the adjusting entry, students may analyze and record the disposal of a fixed asset. Situations to consider may be the disposal/sale of an asset for the book value of the fixed asset (cost minus accumulated depreciation); for more than the book value; for less than the book value; and, for no value. New income and expense accounts may be encountered (gain and loss on fixed assets). Their placement on financial statements should be indicated. GST may be collected and recorded on the sale of fixed assets.

Learning Objectives**Notes**

9.11 To compare and describe the similarities and differences between the two methods of estimating depreciation.

Students may do calculations on one asset using both methods. What do the differences in yearly depreciation mean? Does an asset depreciate equally each year? What are the implications for yearly net income?

Why would a company use the straight-line method of estimating depreciation for financial statements for insiders and use the capital cost method of estimating depreciation for outsiders and Canada Customs and Revenue Agency? Are varying audiences receiving varying messages?

A guest such as an accountant may be invited to speak and discuss the two different methods for estimating depreciation.

Module 9C: Inventory Valuation

Suggested time: 5-8 hours

Level: Intermediate

Prerequisite: Modules 1 , 2 and 9B

Learning Objectives	Notes
9.12 To distinguish between periodic and perpetual inventory and explain the conditions under which each type of inventory may be advantageous.	<p>Students should review the aspects of merchandise inventory presented in Module 2:</p> <ul style="list-style-type: none">• What is merchandise inventory?• What is physical, periodic, and perpetual inventory? <p>Students may give examples of both periodic and perpetual inventory usage. What types of items may be recorded using each method?</p> <p>Perpetual inventory may use a subsidiary ledger. The subsidiary ledger may be a card or computer record for each inventory item.</p> <p>Discuss the advantages of periodic and perpetual inventory regarding such issues as cost, ease of handling, computerization, labour hours involved, etc. Results of the analysis should determine that perpetual inventory is a much more expensive method that still requires a physical inventory at the end of the period.</p>
9.13 To review and summarize control aspects associated with merchandise inventory.	<p>The following questions may be asked:</p> <ul style="list-style-type: none">• on what financial statements is merchandise inventory placed?• how is a Cost of Goods Sold section prepared and what is the role of inventory?• what is the meaning of each line in the Cost of Goods Sold section?• what closing entries involve Merchandise Inventory?• into what account is it closed?• how does this affect net income/loss?
9.14 To calculate and describe four methods of valuing merchandise inventory to match costs with revenues despite the actual flow of goods. (NUM)	<p>After a physical inventory is completed, costs must be assigned to the inventory. This cost will become the ending inventory for one accounting period and the beginning inventory for the next period. The amount will be used in the Cost of Goods Sold section of the Income Statement and on the Current Assets section of the Balance Sheet.</p> <ol style="list-style-type: none">1. Specific Identification: Inventory valued would be identified by a code number indicating the cost of each item as it was received into the place of business. This method could be easily used if a computerized identification system were employed. A printout of the inventory identified as being left on the shelves could easily show the cost of each item when it was received. An example may be a clothing store or a hardware store.

Learning Objectives

Notes

Students may not complete exercises using specific identification but should realize that with optical scanning devices, this method may be easily employed. Businesses, however, may not wish to use this method to value inventory even if the technology is available.

2. **First-In, First-Out (FIFO):** Define the method. Perform calculations.
3. **Last-In, First-Out (LIFO):** Define the method. Perform calculations.
4. **Weighted Average:** Define the method. Perform calculations.

9.15 To compare and describe the differences between the four methods for valuing inventory when reporting net income and total assets.

It would be advantageous for the students to work through one problem using three or all four methods (FIFO, LIFO, and weighted average and specific ID if the data is available) to see the actual differences in the ending inventory amount.

Using the three or four different ending inventory amounts, students may take the calculation further to complete the Cost of Goods Sold section and Net Income on the Income Statement and to complete the Total Assets and Balance Sheet.

Further analysis may include:

- Describe some advantages and disadvantages to each method.
- How does the difference in ending inventory affect the amount of income tax paid? LIFO cannot be used for income tax purposes, thus it cannot be used to value inventory on the financial statements.
- What method might a company choose to report inventory differently to varying audiences, such as creditors, potential investors, shareholders, Canada Customs and Revenue Agency, etc.?

In small groups, students could be given a case study to examine and discuss the method of inventory valuation that a company may use. Each small group may be given different audiences to which they would be presenting the inventory information. Teachers may ask the reporter from each group for the group's response and after discussion, summarize the findings. Teachers may wish to distribute further case studies for discussion and vary the audiences for the groups of students.

Module 9D: Asset Analysis Example

Suggested time: 3-4 hours

Level: Intermediate

Prerequisite: Modules 1, 2 and 9C

Learning Objectives

Notes

9.16 To design and illustrate an example of how the value of one or all examples of the three asset classifications (accounts receivable, inventory, and fixed assets) may be altered to satisfy varying audiences. (IL)

The students may have completed a similar assignment in one of the three units. The purpose of this objective is for synthesis. Why did we learn these mathematical calculations? What relevance does a particular method have to varying audiences? The process of matching the calculation to the business and/or audience is the object of this final assignment.

Module 10: Agricultural Accounting (Optional)

Special farm programs continually change. They may be added, deleted, or changed over time. Students should be aware that special farm programs may exist. Teachers are encouraged to use the most current resources.

Foundational Objectives

- To develop and use accounting procedures that suits the needs of the agricultural sector.

Common Essential Learnings Foundational Objectives

- To promote both intuitive, imaginative thought and the ability to evaluate ideas, processes, experiences and objects in meaningful contexts. (CCT)
- To use a wide range of language experiences for developing students' knowledge of accounting. (COM)
- To develop students' abilities to meet their own learning needs. (IL)

The essence of this module is to explain to students that a farm is a business. Essentially the accounting rationale and procedures used in this module are an application of some of the techniques learned in earlier modules. This module has been designed to move students from setting up a set of books for a farming situation to the preparation of financial statements (Step 4) in the Accounting Cycle. This module may be completed through the use of a practice set or simulation. Time permitting, students may complete an entire accounting cycle.

Students should have:

- knowledge of a synoptic/comparison journal
- knowledge of computer literacy, keyboarding, and spreadsheet software, if the exercises are to be completed on the computer.

Module 10A: Agriculture Record Uses

Suggested time: 2-4 hours

Level: Intermediate

Prerequisites: Modules 1 and 2

Learning Objectives

Notes

- 10.1 To formulate and propose the reasons why farm records are required. (CCT)

Students should realize a farm is a business similar to other businesses. Students should be able to transfer knowledge learned in earlier modules and arrive at a list of reasons farm records specifically are needed. Students may think of the various agencies with whom a farmer communicates and think of reasons why the farmer communicates with those agencies.

The reasons farm records are needed may include:

- to analyze farm records in order to make business decisions to obtain credit
- to summarize income and expenses for the business
- to indicate a person's share of assets, liabilities, and owner's equity
- to evaluate fairness of operating arrangements
- for income tax purposes
- for applying for government programs
- to decide what to grow and when; to settle estates; to determine payroll deductions; to record production, and many more reasons.

Learning Objectives

Notes

- 10.2 To develop a list of the parties who use farm records and propose how each party may use accounting information. (COM)

If students have had experience with farm life and have been involved in that life, they may find this objective much easier than those students who have not been involved. Terminology and purpose of each of the agencies may have to be clarified for students. Some parties that use farm records may include:

- The farmer and the farmer's family
- Insurance agencies
- Canadian Wheat Board (a federal crown agency established to market grain for export or human consumption in Canada)
- Special Programs
- Canada Customs and Revenue Agency
- Financial and Lending Institutions.

The farmer and the farmer's family keep records:

- To analyze farm records to make management decisions such as credit, government programs, what to grow and when, record production, to diversify production, etc.
- To identify objectives (may need to determine short-term goals, intermediate-term goals, long-term goals, and the priorities in each category)
- To list assets and liabilities, to indicate each person's share of assets or to evaluate the fairness of operating arrangements.
- To analyze alternate courses of action and to choose the best alternatives for the family when considering:
 - changes in tax laws and government programs
 - inter-generational transfers
 - changes in family structure including marriage, birth of a child, retirement, death, divorce, etc.
 - fairness to children, spouse, and others involved in estate planning
 - marketing and production alternatives
 - to use estate planning tools such as pension plans, savings plans, life insurance plans, etc.
 - to make decisions for capital asset replacement.

Insurance Agencies

Producers may need several kinds of insurance to protect farm investment and to avoid severe losses.

- Insurance to cover losses on stock, and inventories such as grain, chemicals, etc.
- Crop Insurance: The Government of Saskatchewan through the Saskatchewan Crop Insurance Board operates an all-risk crop insurance program with assistance from the Federal Government, against crop loss caused by any uncontrollable natural hazards such as drought, flood, hail, frost, fire, excessive rain, snow, hurricane, wind, wildlife, insect pests, and plant diseases.
- Yield Insurance: Special yield insurance programs may be available. Special programs are subject to addition, change or deletion. Teachers are encouraged to use the current information.

Learning Objectives

Notes

10.2 To develop a list of the parties who use farm records and propose how each party may use accounting information. (COM) (cont'd)

- Hail Insurance: To cover losses from hail damage including those losses not covered by crop insurance.
- Property insurance: To cover losses from hazards such as fire, hail, wind, water, explosion; livestock insurance.
- Liability insurance: To cover the risk of injury to employees or public.
- Sickness and accident insurance: To pay limited costs resulting from accidental loss of life or impairment of body which may provide benefits for the loss of time.

Canada Customs and Revenue Agency

Taxation and financial management should maximize profit and minimize taxes payable on profit earned by utilizing current tax laws.

Taxation plays an important part in estate planning, to provide adequate income during retirement and to transfer property to chosen successors as efficiently as possible.

CCRA requires that an income statement or statement of income and expenses be filed yearly with the income tax return. Accounting records provide basic records for filing income tax returns, for inspection in an audit by CCRA to indicate the financial position of the farm before year-end, to make income tax planning more effective.

Financial and Lending Institutions

Borrowed funds are often needed for capital expenditures such as land, buildings, breeding stock, and equipment and for operating funds which may be needed to bridge the gap between the time expenditures are made, to the time income is generated. Guidelines for lending may request a financial plan anticipating credit needs and profit expectations, past financial statements, a partial budget, changes in operation, etc.

The institutions available for farm credit include:

- Chartered banks (for all farm needs, the amounts depend on the ability to pay)
- Credit unions (for all farm needs, the amounts depend on the ability to pay)
- Saskatchewan Economic Development Corporation (loans for intensive livestock operations)
- Federal Business Development Bank (for purchase of fixed assets and capital expenditures where funds are not available from other sources at reasonable rates -- for all Canadian businesses not just agricultural)
- Farm Credit Corporation (Federal Government initiative to provide long-term mortgage credit for developing, viable farm units)
- Farm Syndicates Credit Act (loans to syndicates of three or more farmers for capital expenditures)

Learning Objectives

Notes

- Agricultural Credit Corporation of Saskatchewan (for purchase of livestock and livestock related capital expenditures, if the applicants have a net worth of less than \$450 000 and earning less than \$45 000/year)
- Farm Improvement Loans (government guaranteed loans related to the improvement of capital assets)
- Finance companies, dealers, merchants, etc. (credit for purchase of equipment, supplies, etc. -- high interest rates).

Status and Treaty Indians may qualify for grants and loans from:

- Federation of Saskatchewan Indian Nations (FSIN) affiliates like Saskatchewan Indian Agriculture Program (SIAP), Saskatchewan Indian Equity Foundation (SIEF), and Saskatchewan Indian Loan Company (SILCO).
- Provincial programs through the Saskatchewan Indian and Native Affairs Secretariat: Indian Economic Development Program, Native Business Development Program and Special Agricultural and Rural Development Agreement (ARDA).

For Métis and Non-Status Indians, loans and grants may be available from:

- SaskNative Economic Development Trust
- SaskNative Economic Development Corporation (SNEDCO).

For all Aboriginal peoples, loans and grants may be available through the Canadian Aboriginal Economic Development Program or Strategy (CAED) which is a federal program through Industry Science and Technology Canada, Indian and Northern Affairs Canada, and Employment and Immigration Canada.

10.3 To apply the structure of the sole proprietorship, partnership, and corporation (cooperative) to the farm application and present situations where each form may be suitable. (CCT)

Students should refer to resource materials for a review of generic advantages and disadvantages of each form of business. Each form may have a particular farm application. Students should be able to give examples of each form of ownership within their own community. Some specific agricultural advantages and disadvantages of each may be as follows:

Sole Proprietorships (SP): SPs are easy to organize, but the biggest advantage is that the owner has complete control of the business and receives direct rewards for good management. Disadvantages may be that the owner has sole responsibility for debts (unlimited liability) and for raising capital. Most farming operations are sole proprietorships. Perhaps this area can be discussed at length.

Partnerships: Principles of a general business partnership relate to the farming operation. The Partnership agreement becomes a necessity in the farm application for distribution of profit, etc. The most common partnerships may be father/wife/son/daughter, brother/brother, sister/brother operations. There is nothing different in an agricultural partnership than in any other partnership

Learning Objectives

Notes

operation other than tax deferrals between parent, spouse, or child. The Income Tax Act considers each partner as a separate person, and the partnership itself is not subject to income tax.

Farm Corporations: As with all corporations, the company is formed by either provincial or federal governments. Advantages: income tax advantage, persons may combine funds, special skills, abilities, and labour to manage farms which are becoming "big business" in light of current capital expenditures. The rollover of farms from father/mother to son/daughter may be completed by the selling or transferring of shares. The disadvantages are the same as for other business organizations, the main one being the cost and complexity of organization.

Cooperatives: Farming cooperatives have been created for a number of reasons across Saskatchewan. Students may think of examples in their community. (Fuel cooperatives, machinery cooperatives, dairy cooperatives, etc.).

Module 10B: Agricultural Accounting Procedures

Suggested time: 2-4 hours

Level: Intermediate

Prerequisites: Modules 1, 2 and 10A

Learning Objectives	Notes
10.4 To review cash control principles and give examples of how those principles may be used wisely in a farm setting. (IL)	<p>How does a farmer or any other small business person keep records, in particular, cash records? A farming operation depends upon cash transactions for most of its source documents. A synoptic/combination journal seems to best suit the cash flow needs in an agricultural setting. Two synoptic/combination journal formats may be prepared. One for cash inflow (cash receipts) and the other for cash outflow (cash disbursements/payments).</p> <p>Good cash control procedures may be reviewed from Module 4 or through resource materials. Items to be stressed may be:</p> <ul style="list-style-type: none">• record all cash and deposit all farm business income in the bank• make all payments by cheque, develop a habit of regularly updating cash records• follow complete and proper procedures to write cheques and deposits -- entering from source documents the complete information which may be date, quantity, weight, description, and the name of the person with whom you deal• prepare bank reconciliations, and reconcile bank statements• cash records and synoptic/combination journals are essential each month.
10.5 To distinguish between a synoptic/combination journal in an agricultural setting and a synoptic/combination journal created in a general business setting and describe the similarities and differences between these two books of original entry.	<p>Although the synoptic/combination journal is most popular in the agricultural setting, it is not the only means of record keeping. A regular journal/ledger accounting system may be employed or a computerized system may be used. Remind students that they must understand the manual system to use an automated system.</p> <p>The students should realize that the synoptic/combination journal may be used in exactly the same way as it is in a general accounting system noting the following similarities:</p> <ul style="list-style-type: none">• it is a double-entry accounting system• the source document number, description, quantity, and date are entered for each item• columns are designed to fit the specific needs of the business/farm• at the bottom of each journal page and at the end of the accounting period, cross balancing/footing of each journal page is completed• the balances are forwarded to a new cash inflow or cash outflow page after balancing• at the end of the period, journal totals will be posted to appropriate ledger accounts and/or used for financial statement preparation• the farm journal may or may not have a post reference column depending on the number of general ledger accounts open.

Learning Objectives

Notes

- 10.6 To recognize cash and accrual methods of accounting and describe the circumstances under which each may be used. (CCT)

Cash System of Accounting: When using a cash system, the income is recorded in which cash is received. This may or may not correspond to the time when this income is earned. Expenses are recorded in the year in which they are paid e.g., payments for fertilizer, seed, or repairs.

Most producers use this system, as it is flexible, and they are able to use income tax management schemes. Farm businesses are one of the few in Canada who are able to report income on a cash basis. Producers are allowed to use the cash basis of accounting because inventories may be held for several years, and it would be unfair to tax producers on production that has not sold. This method is popular because the *Income Tax Act* allows its use for producers and also because it is a major purpose for record keeping for most businesses.

Advantages: Flexibility in the timing of the recognition of income and expenses; requires simpler records than the accrual system; farmer may have cash available to pay expenses instead of having to use credit; promotes cash control; and avoids the necessity of adjusting entries other than depreciation.

Disadvantages: Expenses are not deducted until cash is paid, thus not allowing a clear picture of profitability; does not represent a true result of operations; inventory adjustments may have to be made to portray true income statement and balance sheet information; and income may be erratic.

Accrual System of Accounting: Most businesses in Canada use the accrual system. It matches expenses with the income it helped to earn, regardless of when payment is received or expenses are paid. (GAAP: Matching Principle) It matches expenses to the year in which they are incurred, whether paid or not.

This is the method of accounting used in Modules 1 and 2 where adjustments were performed at the end of the year. An income statement prepared by the cash basis may be adjusted to an accrual system by including changes in the values of farm inventories and credit accounts for the beginning and the end of the year. Depreciation would also be adjusted. If students have covered a number of adjustments in Module 2, they may be reviewed at this time. If not, the example of depreciation is sufficient.

Advantages: Gives a realistic picture of profitability of a business in each accounting period.

Disadvantages: Records are more complex and adjustments are more difficult to understand. There may be other considerations.

Module 10C: Agricultural Accounting Set Up

Suggested time: 2-4 hours

Level: Intermediate

Prerequisite: Modules 1, 2 and 10B

Learning Objectives

Notes

10.7 To distinguish and sort farm financial information into business information and personal information in preparation for journalizing.

A list of many types of transactions should be made available to students. These transactions should include both farm business and personal exchanges. Although actual farm records may sometimes include both personal and business transactions, it is not recommended practice.

This objective will **emphasize the segregation of business and personal activities**. This objective should make students aware of this segregation. The transactions should be classified as to whether they should or should not be recorded in farm accounting records and whether they may or may not be added or deducted from net income or net loss for the period of time.

Some items of **farm business income** to consider:

Transactions to be included: sales from crops, government payments, subsidies, custom work income, refunds, goods sold (examples: livestock, grain), cash rent received, crop and hail insurance proceeds, livestock products (examples: eggs, milk), capital sales (examples: machinery, equipment), etc.

Transactions to be excluded: wages, salaries, investments, oil and gas royalties, mineral leases, etc., sale of machinery (assets), interest received, rental income from houses, sale of crop shares, non-taxable income such as gifts, inheritances, etc.

The general requirement for an expense in farming:

- is used for the purpose of gaining or producing income from farming
- the amount is reasonable
- the timing of the expense must be appropriate for the farming year
- the expense must be for the purpose of farming.

Some examples of potential farm business expenses are given. Discussion of whether they should be considered as farm expenses should take place.

- receipts for the purchase of seed used in farming
- an amount paid for hiring machinery to carry on the farming operation
- premiums paid for insurance on assets used in the farm business
- a percentage of utility bills that is attributable to farm business use
- hired labour costs
- repairs and maintenance to assets used in the farm business
- interest paid on debt used to carry on farm business
- feed for livestock, fertilizer and chemicals

Learning Objectives

Notes

- machine rent
- supplies
- breeding feeds
- veterinary costs
- fuel and oil, storage
- feeds
- taxes paid for farm business
- property taxes
- groceries
- utilities for the home
- income taxes
- life insurance premiums
- personal auto expenses
- household expenses
- travel to a non-farm job
- investment costs
- gifts
- fines
- hobbies
- principal paid on debt
- Goods and Services Tax (GST). Students should look closely at the items on which farms pay GST and those that are exempt.

Some zero-rated items include:

- large farm tractors
- bulk fertilizer
- livestock raised as food or to produce food for human consumption
- educational tax
- insurance premiums for amounts used in farm business
- cash rent
- freight and trucking costs
- conservation and land clearing
- miscellaneous costs
- items purchased for resale, etc.

While discussing GST, students should be aware that First Nations farming practices are the same as any other. However, Bands are exempt from GST for on Reserve purchases of goods and for off Reserve purchases of goods **only** if the vendor delivers the goods to the Reserve. Services purchased off reserve are exempt from GST if the purchase is in respect of Band management or in connection with real property located on Reserve. Students will need to use current GST information and decide whether a GST would or would not be an expense for farming or personal use.

Learning Objectives

Notes

10.8 To constitute and outline some guidelines for ethical and fair accounting decisions in an agricultural application.

The type of guidelines students arrive at may include those which deal with:

- reporting all income
- developing a habit of keeping the record system up-to-date
- entering complete information for each transaction including names, dates, descriptions, etc.
- identifying deposits and withdrawals from accounts so that they may be readily identifiable as being farm or personal transactions
- keeping adequate records so as to evaluate the fairness of operating arrangements (partnerships, crop sharing, etc.)
- keeping good records to enable owners to make planning and management decisions for credit, government programs, crops to grow, etc.
- setting goals (short, intermediate, and long-term) to save in the "good" times to cover the "bad" times.

Special issues may be relevant in a community and may be discussed.

Module 10D: Agricultural Accounting Practice

Suggested time: 10-13 hours

Level: Intermediate

Prerequisite: Modules 1, 2 and 10C

Learning Objectives	Notes
10.9 To design and present column headings for the cash inflow and cash outflow synoptic/combination journals given transactions. (IL)	Using a set of farm-related transactions, students should be given opportunity to categorize the transactions into types and assign cash inflow and cash outflow column headings. A review of double-entry bookkeeping, posting procedures, and balancing (balance forward) procedures should take place.
10.10 To analyze and record transactions related to an agricultural setting into cash inflow and cash outflow synoptic/combination journals.	Students should be encouraged to realize the efficiency in recording if accounts may be combined and yet are still distinguishable for expense or income analysis purposes.
10.11 To balance and post column totals of completed synoptic/combination journals to general and subsidiary ledger accounts. (NUM)	Many subsidiary ledgers may be established. Some of the ledgers established in previous modules included accounts receivable, accounts payable, and payroll (employees earnings records). The inventory subsidiary ledger may be used frequently in a farm business application. These inventories may include: livestock, grains, feed grains, etc. Subsidiary ledgers may be maintained for land owned, buildings and improvements, machinery and equipment, farm supplies, long-term loans, intermediate-term loans, operating loans, charge accounts, Canadian Wheat Board advance payments, etc.
10.12 To prepare a Cash Statement of Farming Income and Expenses (Income Statement), a Statement of Net Worth (Balance Sheet), and an Accrual Income Statement from ledger accounts and the synoptic/combination journals. (IL)	When students used the Records Planning Charts, these types of decisions may have been made. Review the format of the balance sheet, and income statement. If time permits, students may prepare a specialty format of the worksheet that changes the cash income statement to the accrued income statement.

Module 11: Computerized Application for a Service Firm (Optional)

Suggested time: 7-15 hours

Level: Introductory

Prerequisite: Module 1

Foundational Objectives

- To recognize technology as a tool to aid in the accounting process.
- To become accustomed to and adept at the use of accounting software and understand its strengths and limitations.

Common Essential Learnings Foundational Objectives

- To provide opportunities for students' active involvement in decision-making and problem-solving related to technological developments in Accounting. (TL)
- To develop students' abilities to access knowledge by planning, managing, and evaluating their learning. (IL)
- To promote intuitive, imaginative thought and the ability to evaluate ideas and processes in Accounting. (CCT)

This module can be completed in the time allowed with a ratio of students to computers of 1:1 or 2:1. The guidelines in this module are developed so that the teacher or the school division may use the hardware and software (General Ledger Accounting Software/ Spreadsheet Software) that suits their needs.

Learning Objectives	Notes
11.1 To recognize the use of computers in business. (TL)	The computer should be viewed as a tool in the accounting process that performs routine clerical functions. Examples may be given to students.
11.2 To describe the data processing cycle and determine how data is processed by a computer.	Students should be aware of the cycle through which data is processed (source document preparation, input, processing, output, and using the output for analysis). They may relate this cycle to the documents and procedures used in the accounting cycle for the service firm. Students should be aware that computer programs are written in languages that have been created to streamline the process of giving instructions to a computer. At the operation level, a computer requires very explicit, simple instructions which are very tedious for humans to create. Computers are very fast. Compare batch processing and on-line processing as it may be used in accounting. Examples of each type of processing is necessary for a complete explanation.
11.3 To define software and explain the various types and purposes of accounting software. (TL)	There may be several elements to an accounting package including payroll, inventory, accounts receivable, and accounts payable. These elements may be purchased separately or may be built in as part of an entire package. It may support journalizing, updating ledgers, invoicing, customer statements, generating periodic reports, etc.

Learning Objectives

Notes

Specific uses of a spreadsheet include forecasting, modelling, and planning. Students may experience spreadsheet software applications through examining the different effects of sales prices, sales volumes, costs, etc.

Word Processing may be used to generate financial reports or for general accounting correspondence.

Data bases can be used in accounting for: mailing lists, personnel data, employee earnings records, inventory records, etc.

Communications packages can be used in accounting for general information exchange between branches or suppliers. Mention the power of tapping into a data base which may give cost prices, interest rates, potential suppliers, etc.

11.4 To identify the key issues to be aware of when dealing with software copyright and site licensing.

The power of graphics in accounting is to supply illustration charts and graphs.

Many guidelines will be in the software materials or manuals. Students should be aware of site licensing and penalties for infringement of copyright.

11.5 To examine the importance of restricting entry to data by using a password / security system.

Students should realize that passwords are a method of internal control. Many large businesses may also restrict employee access to certain areas to certain times during the day. Any area where money is transferred electronically is a potential environment for white collar crime.

A guest from the community may be invited to discuss computer security and the restricting of information within their organization. Alternatively, students may visit a business/institution and experience some of the security measures that are enforced.

In pairs, students may research and prepare five-minute oral reports on fraud and embezzlement cases that have made the headlines. A discussion could follow on how these cases could be avoided by the organizations concerned. For a variation to this activity, students may imagine themselves in the organization(s) involved. What would they do to prevent further problems? Students may respond in a memo or journal writing.

11.6 To recognize the order and sequence necessary to start up a computer system, load and access software, and end a computer session. (IL)

Students should be familiar with the procedures of booting (starting) the machine or starting up a network, loading and accessing a software application, and safely ending a session.

Menus and sub menus should be explained. How does the user of the software move or access each menu? A template or help function may assist.

Learning Objectives

Notes

- This objective may be accomplished in several ways. To become familiar with the operations of the software package, the student may work through a directed example with the help of the teacher, may follow a prepared example from a manual, or may work through a tutorial.
- 11.7 To become familiar with the step-by-step procedure necessary to process the accounting cycle of a service firm. (CCT)
- The focus should not be on acquiring new accounting knowledge, but on becoming familiar with the software.
- The procedures for operating a general ledger program may include the following:
- configure and enter company data
 - enter chart of accounts
 - code and create accounts
 - make opening entries
 - code and journalize transactions on various menus and make back-up copies
 - print reports and make back-up copies
 - post to ledger(s) and make back-up copies
 - carry out end-of-the-period reports, print reports, and make back-up copies.
- 11.8 To review the accounting cycle of a service firm relating manual activities to those that may be performed using an accounting package.
- As the students review the accounting cycle, they may decide which activities can be performed by the software package. The students should understand that the computer performs routine clerical functions.
- 11.9 To design an accounting system for a service firm using General Ledger Accounting software as a tool. (CCT)
- This objective may be accomplished by using a textbook project, a practice set, or a teacher-created simulation. Current source documents should be used whenever possible.
- Students should design the accounting system using software, analyze transactions, prepare all statements, and follow control procedures. Students should strive to input transactions directly into the computer; however, an input form may be completed to help organize transaction information. A sample of a general input form that may be used is given in Appendix C.
- The source documents and simulations should reflect the background of the students. For example, if this module is being taught in rural Saskatchewan, source documents should be applicable. If students are of aboriginal backgrounds, suitable transactions should be supplied.

Learning Objectives

Notes

- 11.10 To examine computerized accounting systems in the community to find which steps in the accounting cycle are being computerized. (TL)

Students should be shown how to make corrections on the computer when errors are made. One of the main purposes of this exercise is to enable students to examine their own work and make decisions when a problem arises. Students must realize that real problems in offices do not have "ready-made" solutions. Encouraging process skills is a major focus of this instructional objective.

Students may find computerized accounting systems in the community that control inventory, process accounting data, process payroll, and others.

Why is the computer used? What are the advantages or disadvantages? Is the cost of the hardware and software justifiable?

A research project, student activity or classroom discussion should aim to summarize this module and make the students more aware of how the computer is used as a tool to aid the accounting process.

Module 12: Computerized Application for a Merchandising Firm (Optional)

This module may be completed in the time allowed with a 1:1 or 2:1 ratio of students to computers. The guidelines in this module are developed so that the teacher and the school may have the flexibility to choose the software General Ledger or Spreadsheet, and hardware that best suits their needs.

Basic objectives related to learning Accounts Receivable, Accounts Payable and Payroll components are included in this module. Although Module 5 is not listed as a prerequisite, it may be difficult for students to understand the payroll component of the software package without an understanding of payroll.

If time does not permit instruction on all three components, it is strongly recommended that a minimum of 8 - 10 hours of the module be spent on a project where the student designs an accounting system using a practice set and the learned components of the accounting software. An exercise employing independent learning and critical and creative thinking skills would be of higher priority than completing all of the software components.

Foundational Objectives

- To recognize technology as a tool to aid in the accounting process.
- To become accustomed to and adept at the use of accounting software and understand its strengths and limitations.

Common Essential Learnings Foundational Objectives

- To provide opportunities for students' active involvement in decision-making and problem-solving related to technological developments in accounting. (TL)
- To develop students' abilities to access knowledge. (IL)
- To promote both intuitive, imaginative thought and the ability to evaluate ideas and processes in accounting. (CCT)

Module 12A: Computerized Set Up and Practice

Suggested time: 5-8 hours

Level: Intermediate

Prerequisites: Modules 2, and 11

Learning Objectives	Notes
12.1 To review the accounting cycle of a merchandising firm.	Students should review the additional accounts of a merchandising firm (sales, purchases, contra accounts, inventory, etc.) The extent of this exercise will depend on the time elapsed since Module 2 was covered.
12.2 To demonstrate the proper handling of software and hardware and the ability to load and operate General Ledger accounting software.	Students should be made aware of the fact that the general Ledger component cannot handle a large number of Accounts Receivables and Accounts Payable.
12.3 To determine the advantage of integrating an Accounts Receivable module and an Accounts Payable module to the General Ledger accounting software. (CCT)	The accounts receivable and accounts payable modules are essentially subsidiary ledgers. Why do we need subsidiary ledgers in a manual system? Reasons may include that the general ledger and all financial statements would become too lengthy or that it would be impossible to determine individual amounts from one balance in a control account. What advantages are there to having subsidiary ledgers in General Ledger Accounting Software? Some advantages of subsidiary ledgers and the accounts receivable and accounts payable computerized modules may include being able to keep track of individual balances owing, dates and amounts of individual invoices, and payment due dates.
12.4 To become familiar with the step-by-step procedure necessary to process accounts receivable and accounts payable data using integrated accounting software modules. (IL)	Again this may be accomplished in several ways. The students may work through a directed example with the help of the teacher, may follow a prepared example from a manual, or may work through a tutorial. The focus should be on becoming familiar with the software and not acquiring new accounting knowledge. The procedure may include being able to: <ul style="list-style-type: none">• enter new dates• enter company information• delete or add accounts receivable and accounts payable components• establish accounts receivable and accounts payable as control accounts in the General Ledger• enter "customer" information into the accounts receivable component• enter "vendor" information into the accounts payable component• print copies of customer and vendor information• enter transactions on input forms and have them checked by the teacher before being entered into the computer• post to the ledgers• print reports• make a back-up of all files and understand the importance of doing so in a regular, systematic way.

Module 12B: Payroll Integration

Suggested time: 3-5 hours

Level: Intermediate

Prerequisites: Modules 2, 11 and 12A

Learning Objectives	Notes
12.5 To determine the advantage of integrating a payroll component to accounting software.	<p>What is the purpose of payroll software? Some items that may be listed are accumulating data for individual employees, to produce employee pay cheques, to summarize employee deductions, and to generate reports for management.</p> <p>Students should understand how the payroll component communicates with the general ledger component of accounting software. At what point is it cost beneficial to buy or use the payroll component? Students should realize it is not always cost effective to purchase or use a payroll module for a small number of employees. Businesses can have payroll sent out to an outside agency such as a bank that provides the service.</p>
12.6 To become familiar with the step-by-step procedure necessary to process payroll data using integrated accounting software modules. (IL)	<p>The procedure may include being able to:</p> <ul style="list-style-type: none">• enter payroll software information/defaults necessary to process data• enter employee information and back-up all files• print an employee summary• write payroll entries on input forms and then place these in a payroll journal and back-up all files• post payroll information• print payroll reports• make a back-up of all files.

Module 12C: Designing a Computerized Accounting System

Suggested time: 8-10 hours

Level: Intermediate

Prerequisites: Modules 2, 11 and 12B

12.7 To design an accounting system for a merchandising firm using General Ledger, Accounts Receivable, Accounts Payable, and Payroll software. (CCT)

This objective may be accomplished by using a textbook project, a practice set, or a teacher-created simulation. Current source documents should be used. If the practice set/project used as a student activity is prepared by a publisher, an audit test may be available.

Students will design the system complying with software requirements, analyze transactions, prepare all statements and reports, and follow control procedures.

This exercise should be a higher priority than covering all three additional software components.

Module 13: Career Opportunities in Accounting (Core)

Suggested time: 2-5 hours

Level: Introductory

Prerequisite: None

Foundational Objectives

- To be aware of the careers and employment opportunities in the field of accounting that exist in Saskatchewan and other provinces.
- To increase awareness of employability skills as they relate to the work environment.
- To become aware of the post-secondary programs offered in the province that are related to the field of accounting.

Common Essential Learnings Foundational Objectives

- To identify personal interests and aptitudes in order to initiate career exploration. (IL, PSVS)
- To evaluate ideas related to career choices. (CCT)
- To develop technological skills to access career information. (TL, IL)

Learning Objectives

Notes

13.1 To summarize and describe briefly the possible professional designations in accounting.

Discuss the professional accounting designations such as Certified General Accountant (CGA), Chartered Accountant (CA), Certified Management Accountant (CMA), etc. as well as the difference between accountants, controllers, auditors, bookkeepers, accounting clerks, office clerks, etc.

The three main fields of accounting include: public accounting, private accounting, and government accounting. Under government accounting, discuss accounting for Indian Bands, providing a brief overview of Funds Accounting.

The Internet can be used to explore the sites for these organizations. Resource people with the various designations are available to speak in the classroom. (IL)

- Auditing
- Environmental Accounting
- Forensic Accounting
- Information Technology
- International Services Accounting
- Tax Planning
- Personal Financial Planning
- Corporate Finance
- Internal Auditing
- Not-for-Profit Accounting
- Government Accounting
- Management Consulting Services.

Learning Objectives	Notes
13.2 To develop a list of career opportunities related to the field of accounting. (COM, IL)	<p>Students may list the many different career opportunities in the professional, semi-professional, and skilled trade areas related to the field of accounting. They should begin by listing all of the guest speakers who have made presentations throughout the course, then list workers within the field of accounting in the community. Students are encouraged to use a variety of sources of information such as guidance counsellors, career software packages, personal interviews, and websites.</p>
13.3 To explore opportunities that are available for training as an accountant.	<p>Students should be aware that there are a number of avenues for acquiring training as an accountant, depending on the designation desired. Students should investigate the opportunities that are offered as full time programs at universities, business schools, technical institutes such as SIAST. They should also explore programs offered by the Certified General Accountants and the Certified Management Accountants which allow you to be employed in an accounting firm while studying part time through distance education to achieve designation as a CGA or CMA.</p> <p>Students could interview a variety of people in the accounting profession to discuss the training they achieved and the advantages or disadvantages they see of each form of training.</p>
13.4 To identify personal skills and interests that may lead to a career exploration.	<p>Ask each student to create an inventory of favourite activities and interests. Have students examine their lists to determine how these activities and interests might be job related. This task of creating an interest inventory may be done using a variety of computer program software packages or the Internet. Once students have determined areas of interest related to accounting, they should research the career using available resources in the library, community or Internet. (PSVS)</p>

Learning Objectives

Notes

13.5 To determine skills and interests that would enhance career choices. (CCT)

Using the list created, students may select two choices of possible careers for further research.

Investigate the career choices including:

- description of work duties
- personal qualities an individual must possess to succeed in the career
- process to become certified within the career/trade
- length of education and training
- school locations
- cost of education and up-grading
- trends within the business or career
- successes and challenges of the job
- beginning salary
- opportunities for advancement.

If a work study will be done, the student may investigate career links within the community for possible work study placement. The student may interview the professional/tradesperson within the community as part of the career research.

A class presentation may be done by students, if time permits.

For more information, consult the career hotline:

sasknetwork.gov.sk.ca

Module 14: Departmentalized Accounting (Optional)

Module Overview

This module will connect accounting concepts, principles and practices to a departmentalized merchandising business organized as a corporation.

Foundational Objectives

- To demonstrate accounting procedures for a business.
- To understand the basic operations of a merchandising firm.

Common Essential Learnings Foundational Objectives

- To use a wide range of language experiences for developing knowledge of accounting. (COM)
- To develop appreciation of the value and limitations of technology within business and society. (TL)
- To strengthen knowledge and understanding of how to compute, measure, and estimate and interpret mathematical data, when to apply these skills and techniques, and why these processes apply within the particular framework of accounting. (NUM)

Module 14A: Purchasing and Cash Payments

Suggested time: 5 to 8 hours

Level: Intermediate

Prerequisites: Modules 1 and 2

	Learning Objectives	Notes
14.1	To define accounting terms related to departmental purchases and cash payments. (COM)	An accounting system showing accounting information for two or more departments is called a departmental accounting system. In this type of system, gross profit is calculated for each department; therefore, the general ledger must include a number of separate departmental accounts. Examples of firms that are commonly organized on a departmental basis are department stores and stores that specialize in items such as shoes, furniture, computers and sporting goods.
14.2	To identify accounting concepts, principles, and practices related to departmental purchases and cash payments.	
14.3	To record departmental purchases, purchase returns and allowances, and cash payments including GST. (IL)	If the GST Charged on Sales is greater than the GST Paid on Purchases, a payment must be made to Canada Customs and Revenue Agency. Payments are generally made monthly, quarterly or annually depending upon the volume of sale by a business.
14.4	To identify banking practices and reconcile a bank statement.	

Module 14B: Sales and Cash Receipts

Suggested time: 5-8 hours

Level: Intermediate

Prerequisites: Modules 2 and 14A

Learning Objectives	Notes
14.5 To identify and use accounting terminology associated to departmental sales and cash receipts.	Any analysis of departmentalized accounting information for decision-making requires the use of gross profit on sales from business operations. Another term used for gross profit on operations is gross margin on operations which relates to a company's profit and is more suitable in generally accepted accounting principles.
14.6 To journalize sales, sales returns and allowances, and cash receipts transactions of a departmentalized nature. (IL)	The sales revenue from each department minus the cost of goods sold for each department is referred to as the gross profit or gross margin. By using this decision-making method, each department can then be analyzed to determine whether it is earning an appropriate share or not. In order for management to compute gross profits by department, they must set up their accounting system to identify each department at the time the transaction is recorded. Departmental balances must be known for merchandise inventory, purchases, sales, returns and allowances, cash payments and receipts. There are five classifications of the GST: <ol style="list-style-type: none"><li data-bbox="618 1031 1466 1186">1. Tax-exempt – GST Exempt goods and services include most educational services (including child day-care services), financial services, health and dental services, services by government and other specified public bodies, and residential rents and the sale of used housing.<li data-bbox="618 1224 1466 1379">2. Non-taxable – Sellers of goods and services with gross sales less than \$30,000.00 do not have to register for a GST number. Therefore, their goods and services classified as tax-exempt and non-taxable will be able to receive a rebate on the GST paid on their purchases.<li data-bbox="618 1417 1466 1761">3. Zero-rated – Zero-rated items are goods and services that at the time of this publication have the GST percentage set to 0% which seems to be the same thing as GST exempt since there is no charge to the customer. However, sellers of zero-rated goods and services (including any product or service that is exported, most agricultural and fish products, certain major purchases by farmers and fishers, basic groceries, and prescribed drugs and medical devices) will receive a rebate of any GST they paid in acquiring those goods and services from their suppliers. Sellers of GST exempt goods and services whose gross sales exceed \$30,000.00, will not.

Learning Objectives

Notes

The government treats businesses selling tax-exempt and non-taxable goods and services as if they were the final consumers of the goods and services.

4. GST Excluded – The GST is added on at the till and is not included already in the selling price as with GST Included. If the GST is not included in the selling price, retailers must indicate it on the sales slip. Businesses that include the GST in the selling price should check with Canada Customs and Revenue Agency for current regulations.
5. If a business calculates that its tax paid on goods and services (GST Paid on Purchases) is greater than its tax collected through the sales of merchandise (GST Charged on Sales), a refund will be sent by Canada Customs and Revenue Agency. When a sale is made to a customer and GST is applied, the liability account, GST Charged on Sales, is increased on the credit side.

When a purchase is made by the retailer and GST is applied, the contra-liability account, GST Paid on Purchases, is decreased on the debit side. If the GST Paid on Purchases account is greater than the GST Charged on Sales, the retail outlet will receive a refund from the federal government.

14.7 To prove the equality of debits and credits in the special journals and cash.

14.8 To recognize the order of posting of the special journals. (IL)

The recommended order for posting departmental journals is:

- Purchases journal
- Purchases returns and allowances journal
- Sales journal
- Sales returns and allowances journal
- General journal
- Cash receipts journal
- Cash payments journal.

Module 14C: Departmental Payroll

Suggested time: 1-3 hours

Level: Intermediate

Prerequisites: Modules 2 and 14B

14.9 To understand accounting terminology related to departmental payroll.

14.10 To relate accounting concepts, principles, and practices to departmental payroll systems. (CCT)

Timecards and/or commissions records show the total earnings to be charged for each employee of a departmental organization. These earnings are entered in columns of the payroll register according to the department in which the employee works. Non-sales employees' salaries, such as accounting department employees are entered in an administration salaries column.

Module 14D: Departmentalized Financial Reporting

Suggested time: 4-6 hours

Level: Intermediate

Prerequisite: Modules 2 and 14C

Learning Objectives

Notes

14.11 To define accounting terms related to departmentalized financial reporting.

14.12 To understand concepts, principles, and practices related to departmentalized financial reporting.

14.13 To prepare interim and end-of-fiscal-period work for a departmentalized business. (IL)

14.14 To analyse departmentalized financial statements using performance ratios. (CCT)

Module 15A, B: Work Study Preparation and Follow-up Activities (Optional)

This module is used to prepare students for work study placement. Foundational Objectives include pre-placement information, preparation for interviews, and expectations for the workplace experience.

Suggested time: 5-10 hours

Level: Intermediate and Advanced

Foundational Objectives

- To integrate classroom learning with work-related learning.
- To increase awareness of employability skills as they relate to the work environment.

Common Essential Learnings Foundational Objectives

- To foster an effective use of communication skills in the workplace. (COM)
- To engage in a work study experience and develop entry level workplace skills that may lead to sustainable employment. (PSVS)
- To expand career research beyond the classroom setting. (IL)

Learning Objectives

Notes

15.1	To become aware of the expectations of each of the partners in the work study component. (PSVS)	<p>In order to establish a successful working relationship with all of the partners involved in the workplace, it is important to define the expectations of each partner.</p> <p>Refer to Guidelines for Work Study, a section of the <i>Practical and Applied Arts Handbook</i> for the expectations of business, student, teacher monitor, and school.</p>
15.2	To determine factors that would affect the student contribution in the workplace. (CCT)	<p>The students may formulate a list of what they can bring to the workplace and how each may impact on their jobs:</p> <ul style="list-style-type: none">• school subjects• past experiences• self-concept and personality• needs, values and interests• knowledge, skills and attitudes• career goals and plan. <p>Ask students to do a self-assessment of skills using the influences in the above list as a guide. Students should identify strengths they can offer community partners. Try to incorporate the value of communication and teamwork in the discussion.</p>
15.3	To foster an awareness of building good communication in the workplace. (COM)	<p>Discuss verbal and non-verbal communication. List some ways in which negative non-verbal communication may be displayed. Encourage students to role play ways of demonstrating effective techniques of verbal communication on the job when giving or receiving instructions, and resolving conflict. With the use of case studies, divide the students into groups and role play to show how effective use of communication can resolve conflict on the job.</p>

Learning Objectives	Notes
15.4 To develop a résumé that may be forwarded to a potential employer. (IL)	<p>The student will develop a résumé using the correct format.</p> <p>The résumé may be used to introduce the student to the employer of a workplace site prior to an interview. Teachers are encouraged to work with other staff members to ensure résumé preparation is taught. Résumé writing is suggested in <i>English Language Arts 20 and A30, Information Processing 10, 20, 30, and Career and Work Exploration 20</i>.</p> <p>Students should save the résumé on a computer disk and update it, as changes need to be made and references are added.</p>
15.5 To determine student guidelines in preparation for an interview. (COM)	<p>Through class or small group discussions, students may list guidelines for an interview. The instructor may add missing items to the list.</p> <p>Outline and describe the three stages of an interview. Point out to the students at what stage of the interview each of the guidelines previously discussed will be used.</p> <p>The greeting involves an introduction between the student and employer. Discuss or demonstrate how this should be done.</p> <p>The exchange is the longest part of the interview where the employer asks a series of questions and engages in a dialogue with the student about information on the resumé and other matters relating to the job.</p> <p>The parting provides closure to the interview and may be just as important as the greeting. Explain how this may be done.</p> <p>Provide the students with a list of questions frequently asked by employers or ask students to make a list. Students may role play the stages of the interview.</p>
15.6 To discuss the post interview.	<p>After the student has completed the interview with the employer, do a follow-up activity. Review the interview with the student using the three stages above as points for discussion.</p>
15.7 To develop a procedural guide for the work site.	<p>Discuss the following work site items with students:</p> <ul style="list-style-type: none"> • Transportation • hours of work • absence and tardiness • procedures for conflict resolution • role of the student, teacher, and work place supervisor • dress code • job description • school and employer expectations.

Learning Objectives

Notes

15.8 To relate feedback from the work placement.

Students provide feedback about work placement including: where they were placed, type of business, duties, most rewarding experience, most difficult situation, and how they handled it.

Note: It is recommended that each student send a thank you note or card to the employer upon the completion of each work placement. If more than one placement has been made in the course, follow-up activities must be completed after each placement.

Ensure that students understand these guidelines by asking students to describe each of these items.

Note: Look for opportunities to introduce and reinforce ideas about Labour Standards, Occupational Health and Safety, and Workplace Hazardous Materials Information System (WHMIS). Use the *Career and Work Exploration Curriculum Guide*, the *Practical and Applied Arts Handbook*, the Saskatchewan Labour website readyforwork.sk.ca, and other recommended resources.

Module 16A, B, C: Work Study (Optional)

Suggested time: 25-50 hours

Level: Intermediate and Advanced

Prerequisites: 15A, B

Foundational Objectives

- To integrate classroom learning with work-related learning.
- To increase awareness of employability skills as they relate to the work environment.

Common Essential Learnings Foundational Objectives

- To engage in a work study experience and develop entry level workplace skills that may lead to sustainable employment. (PSVS)
- To expand career research beyond the classroom setting. (IL)

For more information about implementing work study in schools see the Work Study Guidelines for the Practical and Applied Arts included in the *Practical and Applied Arts Handbook*. Teachers need to use or design appropriate learnings objectives for this module; for instance, to demonstrate ability to follow a “Training Plan”.

Note: Consult the renewed/new *Career and Work Exploration Curriculum Guide* and the Department of Labour for content about Labour Standards, Occupational Health and Safety, and WHMIS. If you offer several work studies during grade 11 or 12 in a course series, add more depth to the next experience.

For more career information and labour market information, consult: sasknetwork.gov.sk.ca

Module 99: Extended Study (Optional)

Note: The extended study module may be used only once in a pure or survey course. It is important to record the title of the extended study module on the recordkeeping chart. Record 99A for the first extended study module offered in the course series, 99B for the second extended study module offered, etc.

Suggested time: 5-20 hours

Level: Introductory/Intermediate/Advanced

Module Overview

Evolving social and personal needs of students, advances in technology, and demands to solve current problems require a flexible curriculum that can accommodate new ways and means to support learning in the future. The extended study module is designed to provide schools with an opportunity to meet current and future demands that are not provided for in current modules in the renewed PAA curriculum.

The flexibility of this module allows a school/school division to design **one new module per credit to complement or extend the study of pure core and optional modules** configured to meet the specific needs of students or the community. The extended study module is designed to extend the content of the pure courses and to offer survey courses beyond the scope of the available selection of PAA modules from the pure courses.

The list of possibilities for topics of study or projects for the extended study module approach is as varied as the imagination of those involved in using the module. These optional extended study module guidelines should be used to strengthen the knowledge, skills, and processes advocated in the Practical and Applied Arts curriculum.

For more information on the guidelines for the Extended Study module see the *Practical and Applied Arts Handbook*.

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Appendix A: Sample Module Recordkeeping Charts

Accounting 10

Student name: _____

School name: _____

Module code	Modules	Core or Optional	Date	Teacher Initial
ACCT101	Module 1: Accounting Cycle: Service Firm	C		
ACCT104	Module 4: Banking and Cash Control	O		
ACCT105	Module 5: Payroll and Taxation	O		
ACCT106	Module 6: Synoptic/Combination Journal and One-Write System	O		
ACCT107	Module 7: Calculator and Business Applications	O		
ACCT108	Module 8: Partnerships and Corporation	O		
ACCT109	Module 9: Asset Analysis	O		
ACCT110	Module 10: Agricultural Accounting	O		
ACCT111	Module 11: Computerized Application for a Service Firm	O		
ACCT112	Module 12: Computerized Application for a Merchandising Firm	O		
ACCT113	Module 13: Career Opportunities in Accounting	C		
ACCT114	Module 14: Departmentalized Accounting	O		
ACCT115	Module 15: Work Study Preparation and Follow-up Activities	O		
ACCT116	Module 16: Work Study	O		
ACCT199	Module 99: Extended Study	O		

Sample Module Recordkeeping Charts
Accounting 20

Student name: _____

School name: _____

Module Code	Modules	Core or Optional	Date	Teacher Initial
ACCT102	Module 2: Accounting Cycle: Merchandising Firm	C		
ACCT104	Module 4: Banking and Cash Control	O		
ACCT105	Module 5: Payroll and Taxation	O		
ACCT106	Module 6: Synoptic/Combination Journal and One-Write System	O		
ACCT107	Module 7: Calculator and Business Applications	O		
ACCT108	Module 8: Partnerships and Corporation	O		
ACCT109	Module 9: Asset Analysis	O		
ACCT110	Module 10: Agricultural Accounting	O		
ACCT111	Module 11: Computerized Application for a Service Firm	O		
ACCT112	Module 12: Computerized Application for a Merchandising Firm	O		
ACCT114	Module 14: Departmentalized Accounting	O		
ACCT115	Module 15: Work Study Preparation and Follow-up Activities	O		
ACCT116	Module 16: Work Study	O		
ACCT199	Module 99: Extended Study	O		

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Sample Module Recordkeeping Charts Accounting 30

Student name: _____

School name: _____

Module Code	Modules	Core or Optional	Date	Teacher Initial
ACCT103	Module 3: Introductory Management Accounting and Financial Statement Analysis	C		
ACCT104	Module 4: Banking and Cash Control	O		
ACCT105	Module 5: Payroll and Taxation	O		
ACCT06	Module 6: Synoptic/Combination Journal and One-Write System	O		
ACCT107	Module 7: Calculator and Business Applications	O		
ACCT108	Module 8: Partnerships and Corporation	O		
ACCT109	Module 9: Asset Analysis	O		
ACCT110	Module 10: Agricultural Accounting	O		
ACCT111	Module 11: Computerized Application for a Service Firm	O		
ACCT112	Module 12: Computerized Application for a Merchandising Firm	O		
ACCT114	Module 14: Departmentalized Accounting	O		
ACCT115	Module 15: Work Study Preparation and Follow-up Activities	O		
ACCT116	Module 16: Work Study	O		
ACCT199	Module 99: Extended Study	O		

Note: When the Extended Study, Work Study Preparation and Follow-up Activities, and Work Study modules are studied for the first time, record the module number and the letter A (Extended Study Module 99A). If the module is used at another level, the module is recorded using the letter B (Extended Study Module 99B).

All recordkeeping charts should be copied to school letterhead.

Appendix B Career Research Interview for Module 13

Interview someone who currently works in this career.

The assignment may be completed independently, in pairs, in small groups, or by whichever method is chosen by the student(s) and teacher. The teacher should encourage students to use a variety of resources to gather information about the career that they are researching. Student may use letters, the Internet, phone or a personal interview to gather information.

After the students have discussed different career paths, they may prepare a short journal writing explaining why they are interested in the career area they are about to investigate.

Students may proceed to develop a list of questions to collect the information they require to help them understand more about the career area they have chosen.

The following list of questions may be included in the students' interview project.

1. What is the title of your job?
2. What are your normal duties on the job?
3. What are some of the things that you enjoy about your job?
4. Are there any things about your job that you dislike? What are those things?
5. Does your company have a dress code for employees? What is considered suitable?
6. How often is working overtime required in your job?
7. Do you have to work nights or weekends?
8. What aptitudes and abilities are needed to succeed in your career?
9. What are the post-secondary education and training requirements to enter and advance in your career?
10. Can you give an approximate starting salary for someone just starting out in your occupation? How much does the average person earn after five years? After ten years? What types of employee benefits, such as sick leave or dental plans, do workers in your career usually receive?
11. Do you think the demand for workers in your career will increase or decrease over the next five years? Why?
12. What changes have you seen over the past 5-10 years in this career?
13. What are the advantages and disadvantages of entering and being in your career?
14. Is there any advice you would give to a young person just making a career choice?

After the interview session, students may summarize the information they received and draw a conclusion as to whether they would like to learn more about this career. They may also determine whether they would like to join that organization based on their experience.

Students may brainstorm different ways to present their career research to the class. Presentation ideas may include:

- Oral presentation
- PowerPoint presentation
- Written report
- Creating a website with links to career information
- Role playing a student interviewing a career professional
- Role playing a professional promoting his/her career at a career fair.

Appendix C: Mixed Cost Analysis Example

Suppose the following observations are made by Flag-it; a merchandising firm.

Month	Units Shipped	Shipping Expense	
June	25	\$55	High Activity
July	17	\$40	
August	22	\$50	
September	20	\$45	
October	15	\$35	Low Activity
November	18	\$40	
December	23	\$50	

- Using the high-low method, determine the cost formula for the shipping expense.

Solution:

$$\text{Variable cost per unit} = \frac{\text{change in cost}}{\text{change in activity}}$$

$$\frac{\$55 - \$35}{25 \text{ units} - 15 \text{ units}} = \frac{\$20}{10 \text{ units}} = \$2/\text{unit}$$

Let F = fixed costs per month

Total shipping costs = fixed shipping cost + variable shipping costs

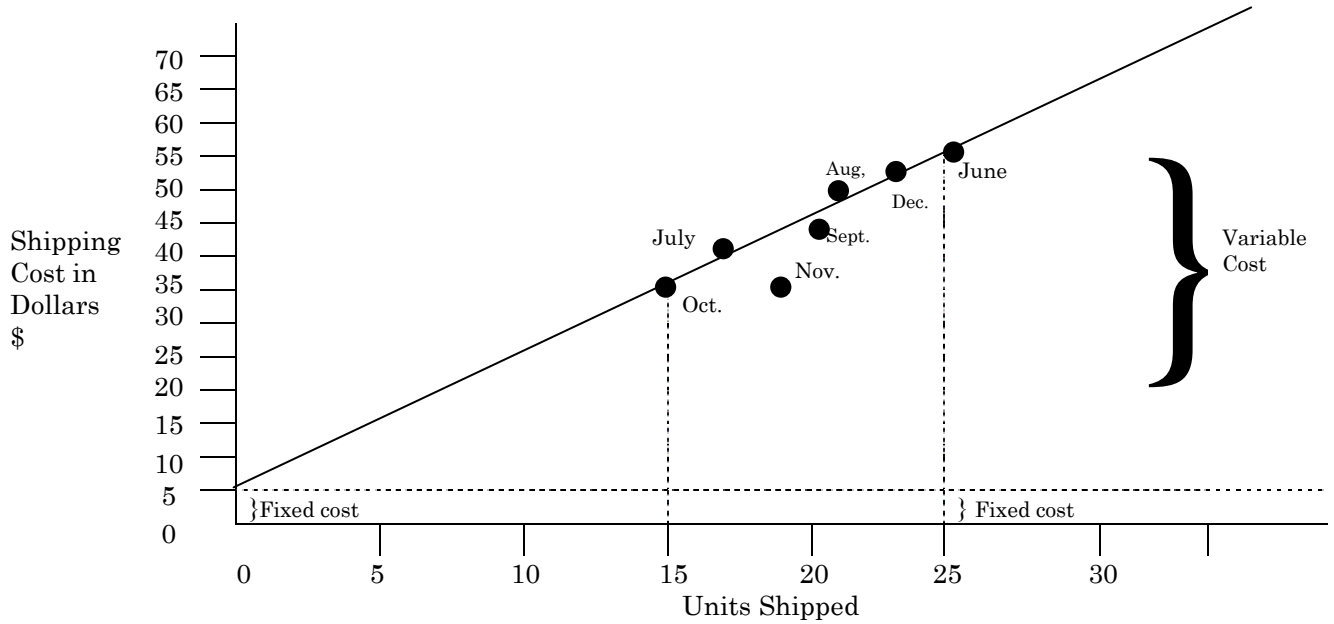
In June 25 units are shipped at a total cost of \$55

$$\begin{aligned} \$55 &= F + (25 \times \$2) \\ \$55 &= F + \$50 \\ \$5/\text{month} &= F \end{aligned}$$

Cost formula for shipping cost = \$5 fixed costs + \$2 per unit shipped per month.

2. Prepare a scattergraph of the data given. Plot units shipped on the horizontal axis and total shipping cost on the vertical axis. Fit the best line to the data by visual inspection. Use your scattergraph to produce a cost formula to determine shipping costs.

Solution:



$$\text{Variable costs per unit} = \frac{\$55 - \$35}{25 \text{ units} - 15 \text{ units}} = \frac{\$20}{10 \text{ units}} = \$2/\text{unit}$$

Fixed shipping cost per month = \$5/month

Cost formula: shipping costs = \$5 + \$2 per unit shipped per month.

Appendix D: Cost-Volume-Profit Analysis – Sample Case Study

Note: The following case study may be adapted for classroom use. If desired, teachers may present cost-volume-profit analysis closely following the developmental progression in this case study.

Wonderful Wally's Widget Wholesale (WWWW)

Wally Walker recently began a business which he calls Wonderful Wally's Widget Wholesale (WWWW). Wally has asked for advice regarding the relationships between the cost of his product (a widget), other expenses, the volume of sales, and his profit levels.

Wally's business is a simple one. He purchases a partially complete widget (called a pre-widget) from a local manufacturer for \$5.00 each. This price includes the cost of the widget and delivery to Wally's warehouse. Wally then hires local students to make some minor modifications to the pre-widget using simple tools like pliers and screwdrivers. The students receive \$2.00 for each widget that they complete. The students are too young to pay Canada Pension Plan (CPP), and do not work enough to pay Unemployment Insurance (UI), and receive no other benefits from WWWW so the \$2.00 is the entire labour cost of the modifications. The modifications also require some parts. These additional parts cost \$1.00 per widget.

Wally has only two other expenses: Rent is \$6,000 per year (\$500 per month) and interest expenses are \$4,000 per year.

Wally can sell all the widgets he can modify as soon as they are complete so there is never any inventory of finished widgets on hand. Customers purchase the finished widgets at the warehouse so there are no delivery expenses. The suppliers of the pre-widgets will also deliver at any time. WWWW does not need to keep a supply of pre-widgets or materials on hand.

1. What is the **variable cost** of one widget?

Pre-widget	\$5.00
Labour (modifications)	2.00
Additional materials	<u>1.00</u>
Variable cost per widget	\$8.00

2. What is the **contribution margin** per unit?

Selling price	\$12.00
Variable cost	<u>8.00</u>
Contribution margin per widget	\$ 4.00

3. What is WWWW **total fixed cost** for a year?

Rent	\$ 6,000.00
Interest	<u>4,000.00</u>
Total Fixed costs per year	\$10,000.00

Break-even Analysis

How many widgets must WWWW modify and sell to break even?

Let x = the number of widgets WWWW must modify and sell to break even.

sales revenue	-	variable cost	-	fixed costs	=	profit (break even)
\$12x	-	\$8x	-	\$10,000	=	\$0
		\$4x	-	\$10,000	=	\$0
				\$4x	=	\$10,000
				x	=	2,500

WWWW must modify and sell 2,500 widgets per year to break even.

4. Target Net Income

How many **widgets** must WWWW modify and sell to earn an annual profit of:

a) \$20,000.00?

Let x = number of widgets WWWW must modify and sell to earn a profit of \$20,000

sales revenue	-	variable cost	-	fixed costs	=	profit
\$12x	-	\$8x	-	\$10,000	=	\$20,000
		\$4x	-	\$10,000	=	\$20,000
				\$4x	=	\$30,000
				x	=	7,500

WWWW would need to modify and sell 7,500 widgets per year to make an annual profit of \$20,000.

b) Let x = number of widgets WWWW must modify and sell to earn a profit of \$50,000

\$12x	-	\$8x	-	\$10,000	=	\$50,000
				x	=	15,000

WWWW would need to modify and sell 15,000 widgets per year to make an annual profit of \$50,000.

c) Let x = number of widgets WWWW must modify and sell to earn a profit of \$100,000

\$12x	-	\$8x	-	\$10,000	=	\$100,000
				x	=	27,500

WWWW would need to modify and sell 27,500 widgets per year to make an annual profit of \$100,000.

5. Change in Variable Costs

Suppose Wally found some students that were willing to modify the pre-widgets for \$1 per widget. All other costs and the selling price are expected to remain the same as given in the original data.

Pre-widget	\$5.00
Labour (modifications)	1.00
Additional materials	1.00
Variable cost per widget	<u>\$7.00</u>

How many widgets must WWWW modify and sell to:

- a) break even for the year?
- b) earn an annual profit of \$20,000?
- c) earn an annual profit of \$50,000?
- d) earn an annual profit of \$100,000?

Solutions:

- a) Let x = number of widgets WWWW must modify and sell to break even.

sales revenue	-	variable cost	-	fixed costs	=	profit (break even)
\$12x	-	\$7x	-	\$10,000	=	\$0
		\$5x	-	\$10,000	=	\$0
				\$5x	=	\$10,000
				x	=	2,000

WWWW would need to modify and sell 2 000 units to break even.

- b) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$20,000

\$12x	-	\$7x	-	\$10,000	=	\$20,000
				x	=	6,000

WWWW would need to modify and sell 6,000 widgets to earn an annual profit of \$20,000.

- c) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$50,000

\$12x	-	\$7x	-	\$10,000	=	\$50,000
				x	=	12,000

WWWW would need to modify and sell 12,000 widgets to earn an annual profit of \$50,000.

- d) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$100,000

\$12x	-	\$7x	-	\$10,000	=	\$100,000
				x	=	22,000

WWWW would need to modify and sell 22,000 widgets to earn an annual profit of \$100,000.

6. Compare your answers in 6 a-d with those of 4 and 5 a-c. What can you conclude about the **effect of a decrease in variable cost** on profits?

Solution: A decrease in variable costs per unit will increase profits if the volume of activity remains constant. 6 a) to d) demonstrates that a decrease in variable cost per unit will mean that less units must be sold to earn a target net income.

7. Change in Fixed Cost

Refer to the original data for WWWW. Suppose that Wally finds a new warehouse that he can rent for \$4,200 per year (\$350 per month). All other cost and the selling price are expected to remain the same as those in the original data.

Rent	\$4,200
Interest	<u>4,000</u>
Total fixed costs per year	\$8,200

How many widgets must WWWW modify and sell to:

- break even for the year?
- earn an annual profit of \$20,000?
- earn an annual profit of \$50,000?
- earn an annual profit of \$100,000?

Solutions:

- a) Let x = number of widgets WWWW must modify and sell to break even.

sales revenue	-	variable cost	-	fixed costs	=	profit (break even)
\$12x	-	\$8x	-	\$8,200	=	\$0
		\$4x	-	\$8,200	=	\$0
				\$4x	=	\$8,200
				x	=	2,050

WWWW would need to modify and sell 2,050 widgets to break even.

- b) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$20,000

\$12x	-	\$8x	-	\$8,200	=	\$20,000
				x	=	7,050

WWWW would need to modify and sell 7,050 widgets to earn a profit of \$20,000.

- c) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$50,000

\$12x	-	\$8x	-	\$8,200	=	\$50,000
				x	=	14,550

WWWW would need to modify and sell 14,550 widgets to earn a profit of \$50,000.

- d) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$100,000

\$12x	-	\$8x	-	\$8,200	=	\$100,000
				x	=	27,050

WWWW would need to modify and sell 27,050 widgets to earn a profit of \$100,000.

8. Compare your answers in 8 a) to d) with those of 4 and 5 a) to c). What can you conclude about the **effect of a decrease in fixed cost** on profits with all other factors remaining constant?

Solution: A decrease in total fixed costs will increase profit if the volume of activity remains constant. 8 a) to d) demonstrates that a decrease in total fixed cost will mean less units must be sold to earn a target net income.

9. **Change in Selling Price**

Refer to the original data for WWWW. Suppose that Wally has found a new market for the widgets which will pay \$13 for each. All costs remain the same as given in the original data.

How many widgets must WWWW modify and sell to:

- a) break even for the year?
- b) earn an annual profit of \$20,000?
- c) earn an annual profit of \$50,000?
- d) earn an annual profit of \$100,000?

- a) Let x = number of widgets WWWW must modify and sell to break even.

sales revenue	-	variable cost	-	fixed costs	=	profit (break even)
\$13x		\$8x		\$10,000		0
		\$5x		\$10,000		0
				5x		\$10,000
				x		2,000

WWWW would need to modify and sell 2,000 widgets to break even.

- b) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$20,000

\$13x	-	\$8x	-	\$10,000	=	\$20,000
				x		6,000

WWWW would need to modify and sell 6,000 widgets to earn an income of \$20,000 per year.

- c) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$50,000

\$13x	-	\$8x	-	\$10,000	=	\$50,000
				x		12,000

WWWW would need to modify and sell 12,000 widgets to earn an income of \$50,000 per year.

- d) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$100,000

\$13x	-	\$8x	-	\$10,000	=	\$100,000
				x		22,000

WWWW would need to modify and sell 22,000 widgets to earn an income of \$100,000 per year.

10. Compare your answers in 10 a) to d) with those of 4 and 5 a) to c). What can you conclude about the **effect of an increase in the selling price** on profits (all other factors remain the same)?

Solution: An increase in selling price will increase profits if the volume of activity remains constant. Question 8 a) to d) demonstrate that an increase in selling price will mean less units must be sold to earn a target net income.

11. Missing Selling Price Given Costs, Volume and Desired Profit

Refer to the original data for WWWW. Suppose that Wally plans to modify and sell 20,000 widgets per year. What price must Wally charge for the widget in order to earn an annual profit of \$50,000 if all costs remain the same as that in the original data?

Let x = selling price required.

sales revenue	-	variable cost	-	fixed costs	=	profit
\$20,000x	-	\$20,000(\$8)	-	\$10,000	=	\$50,000
\$20,000x	-	\$160,000	-	\$10,000	=	\$50,000
				20,000x	=	\$220,000
				x	=	\$11

WWWW must sell the widgets for \$11 each.

12. Missing Variable Cost Given Selling Price, Other Costs, Volume and Desired Profit

Refer to the original data. Suppose that Wally plans to modify and sell 20,000 widgets per year. What is the maximum price that Wally can pay the students to modify each widget in order that WWWW will earn an annual profit of \$50,000 if all other cost and prices remain the same?

Let x = maximum labour cost for 1 widget

sales revenue	-	variable cost	-	fixed costs	=	profit
\$20,000(\$12)	-	\$20,000(\$5 + \$1 + x)	-	\$10,000	=	\$50,000
\$240,000	-	\$20,000 (\$6 + x)	-	\$10,000	=	\$50,000
\$240,000	-	\$120,000 - 20,000x	-	\$10,000	=	\$50,000
	-	20,000x	+	\$110,000	=	\$50,000
			-	20,000x	=	-\$60,000
				x	=	\$3

The maximum that WWWW can pay for labour is \$3 per widget.

13. Calculate Contribution Margin (CM) Ratio

Refer to the original data and calculate the contribution margin ratio:

Selling price	\$12.00	100%
Variable costs	8.00	67%
Contribution margin	\$ 4.00	33%

$$\text{CM Ratio} = \frac{\$ 4.00}{\$12.00} = 33\% \text{ or } 1/3$$

14. Calculate Dollar Sales to Break Even

Refer to the original data. How many **dollars of sales** must WWWW have to break even?

Let x = dollars sales of widgets to break even.

Contribution margin	-	fixed costs	=	profit (break even)
$1/3x$	-	\$10,000	=	0
		$1/3x$	=	\$10,000
		x	=	\$30,000

WWWW must modify and sell \$30,000 of widgets to break even.

Another method

From question 4 we know WWWW must sell 2,500 units to break even.
2,500 widgets @ \$12/widget = \$30,000

Therefore, there are essentially two ways in which one may determine the volume necessary to achieve a target profit – by units or by dollar sales.

15. Refer to the original data. How many dollars of widgets must WWWW modify and sell to earn an annual profit of:
- a) \$20,000?
 - b) \$50,000?
 - c) \$100,000?

a) Let x = dollars sales of widgets required to earn a profit of \$20,000

Contribution margin	-	fixed costs	=	profit
$1/3x$	-	\$10,000	=	\$20,000
		$1/3x$	=	\$30,000
		x	=	\$90,000

WWWW would need to modify and sell \$90,000 of widgets to earn an annual income of \$20,000.

Other method

From 5a) we know that WWWW must sell 7,500 widgets to make an annual profit of \$20,000.
7,500 widgets @ \$12/widget = \$90,000

b) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$50,000

$1/3x$	-	\$10,000	=	\$50,000
		x	=	\$180,000

WWWW would need to modify and sell \$180,000 of widgets to make an annual profit of \$50,000.

Other method

From 5b) we know that WWWW must sell 15,000 widgets to make an annual profit of \$50,000.
15,000 widgets @ \$12 = \$180,000

c) Let x = number of widgets WWWW must modify and sell to earn an annual profit of \$100,000

$1/3x$	-	\$10,000	=	\$100,000
		x	=	\$330,000

WWWW would need to modify and sell \$330,000 of widgets to earn an annual income of \$100,000.

Other method:

From 5c) we know that WWWW must sell 27,500 widgets to make an annual profit of \$100,000.
27,500 widgets @ \$12/widget = \$330,000

Summary

Changes (with all other variables remaining constant)	Effect on Income
Increase selling price	Increase
Decrease selling price	Decrease
Increase variable cost per unit	Decrease
Decrease variable cost per unit	Increase
Increase in fixed cost	Decrease
Decrease in fixed cost	Increase
Increase in sales volume	Increase
Decrease in sales volume	Decrease

Appendix E: Budgeting Exercise

Jake Eagles is trying to budget the cost of seeding his farm. He anticipates that there will only be four types of input costs -- seed, fertilizer, herbicides and fuel. He has 600 acres of land, half of which will be seeded and the other half will be summerfallowed. All of the land being seeded will be in wheat. Students are to research the cost of seed, fertilizer, herbicide, and fuel to fill in the blanks below.

Seed

Seed is applied at the rate of 15 kg per acre. Registered seed has been selling for \$_____ per kg.

Fertilizer

The latest price on fertilizer is \$_____ per tonne. Fertilizer of this type is applied at the rate of 0.04 tonnes per acre (40 kg per acre).

Herbicide

Jake will use the latest all-round herbicide called Laser on the wheat with no chemical on summerfallow. Laser has been selling for \$_____ per 4 litre jug. One jug will cover 20 acres at recommended rates.

Fuel

Diesel fuel is currently selling for \$_____ per litre. Seeding requires about 8 litres for each acre.

Actual Costs

There has been a 10% increase in costs. Increase the researched costs above to fill in the actual costs below.

Jake purchased and used 4 tonnes (4,000 kg) of wheat seed. He paid \$_____ per kg for the seed.

The local cooperative charged Jake \$_____ per tonne for fertilizer. He purchased and used 12 tonnes.

Twelve jugs of Laser were used. The chemical was purchased for \$_____ per jug.

Jake's equipment consumed 2,500 litres of diesel fuel. The fuel was purchased for \$_____ per litre.

Solution:

Jake Eagles **Budgeted** Seeding Costs

For the year ended December 31, year

Acres to be seeded 300 Crop Wheat

Seed:

 15 kg/acre x 300 acres x \$ /kg = \$

Fertilizer:

 .04 tonnes/acre x 300 acres x \$ /tonne = \$

Herbicide:

(\$ /container x 300 acres)/ 20 acres/container = \$

Fuel

$$\underline{8} \text{ l/acre} \times \underline{300} \text{ acres} \times \$ \underline{\hspace{2cm}} / \text{l} = \$ \underline{\hspace{2cm}}$$

$$\text{Total **budgeted** input costs} = \$ \underline{\hspace{2cm}}$$

Jake Eagles **Actual** Seeding Costs
For the year ended December 31, year

Acres to be seeded 300 Crop Wheat
Seed:

$$\underline{13.33} \text{ kg/acre} \times \underline{300} \text{ acres} \times \$ \underline{\hspace{2cm}} / \text{kg} = \$ \underline{\hspace{2cm}}$$

Fertilizer:

$$\underline{0.04} \text{ tonnes/acre} \times \underline{300} \text{ acres} \times \$ \underline{\hspace{2cm}} / \text{tonne} = \$ \underline{\hspace{2cm}}$$

Herbicide:

$$(\$ \underline{\hspace{2cm}} / \text{container} \times \underline{300} \text{ acres}) / \underline{25} \text{ acres/container} = \$ \underline{\hspace{2cm}}$$

Fuel

$$\underline{8.33} \text{ l/acre} \times \underline{300} \text{ acres} \times \$ \underline{\hspace{2cm}} / \text{l} = \$ \underline{\hspace{2cm}}$$

$$\text{Total **actual** input costs} = \$ \underline{\hspace{2cm}}$$

Jake Eagles Seeding Costs
For the year ended December 31, year

Acres to be seeded _____ Crop _____

Seed:

$$\underline{\hspace{2cm}} \text{ kg/acre} \times \underline{\hspace{2cm}} \text{ acres} \times \$ \underline{\hspace{2cm}} / \text{kg} = \$ \underline{\hspace{2cm}}$$

Fertilizer:

$$\underline{\hspace{2cm}} \text{ tonnes/acre} \times \underline{\hspace{2cm}} \text{ acres} \times \$ \underline{\hspace{2cm}} / \text{tonne} = \$ \underline{\hspace{2cm}}$$

Herbicide:

$$(\$ \underline{\hspace{2cm}} / \text{container} \times \underline{\hspace{2cm}} \text{ acres}) / \underline{\hspace{2cm}} / \text{acres/container} = \$ \underline{\hspace{2cm}}$$

Fuel

$$\underline{\hspace{2cm}} \text{ l/acre} \times \underline{\hspace{2cm}} \text{ acres} \times \$ \underline{\hspace{2cm}} / \text{l} = \$ \underline{\hspace{2cm}}$$

$$\text{Total input costs} = \$ \underline{\hspace{2cm}}$$

Jake Eagles

Variance Analysis - Seeding Costs

For the year ended December 31, year

Input	Budgeted Cost	Actual Cost	Variance	Possible Cause(s)
Seed				Seeded lighter than planned - purchased seed for more than planned.
Fertilizer				Paid \$50.00/tonne more than expected.
Herbicide				Applied at rate lighter than planned.
Fuel				Fuel consumption more than planned but cost was less than planned.
Total				