

# **Adult Basic Education Level II**

# **Program Guide**

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October 1995 Edition

Division of Institutional and Industrial Education  
Department of Education and Training



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Government of Newfoundland and Labrador  
Division of Institutional and Industrial Education  
Department of Education and Training  
P. O. Box 8700  
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# **FOREWORD**

## **ABE Level II Curriculum**

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### **Background to the ABE Level II Program Guide**

#### **ABE Level II Program Guide**

This document presents a Program Guide for the Level II section of the Adult Basic Education (ABE) program for the Province of Newfoundland and Labrador. It is one of a series of three ABE Program Guides prepared under contract for the Division of Institutional and Industrial Education, Department of Education and Training, Government of Newfoundland and Labrador, in 1990 and revised in 1995.

#### **Review of Academic Upgrading**

In June 1988 the Department of Career Development and Advanced Studies established a committee with representatives from the province's community colleges and institutes and the Department to look at all the adult upgrading programs then offered through the colleges and institutes. The Adult Basic Education Review Committee was mandated to examine the Literacy Program, the Adult Basic Education Program, the Basic Training for Skill Development (BTSD) Program and the Academic Support (Concurrent Training) Program, and, through a process of study and consultation, to "recommend any necessary structural adjustments and revisions."

The committee met on a monthly basis and set up local advisory committees to discuss issues and provide feedback. In addition, informal meetings held at each community college provided all those who were interested with the opportunity to meet the committee and present their views.

The final report of the ABE Review Committee, presented in March 1989, recommended a revision of the entire adult basic education system. In October 1989, the Department of Education, which had since assumed responsibility for the community college system, contracted for the revision of the Adult Basic Education program. The objective of the revision, as recommended by the ABE Review Committee, was "to create one provincial program, consisting of Levels I, II and III, to encompass and integrate the Literacy, ABE, and BTSD programs." The Program Guide for Level II is one of three parts of the overall ABE revision.

## **Development of Program Guide 1990**

The ABE Level II Program Guide was developed to a level of general learning objectives in 1990 by a team of experienced adult educators and high school practitioners with the advice and assistance of a Project Management Team representing the Department of Education and Training and a Provincial Advisory Committee representing the Department and each of the provincial institutions involved in the delivery of ABE. The process of developing general learning objectives combined research and consultation. Program outlines and curriculum guides from various provinces of Canada, as well as Britain and the United States, were reviewed and a large body of literature on adult education, national and international, was consulted. At the second draft stage of the development of the guide, copies of the work to date were circulated throughout the Avalon Community College region and to each of the provincial institutions. Adult education practitioners and organizers were invited to submit their views on the work and to make suggestions for changes or additions. A project validation meeting was held prior to the preparation of the final report. Adult education practitioners from the Avalon region and from each provincial institution involved in ABE delivery were invited to participate in the validation process.

## **ABE Program Review and Monitoring (1992-1994)**

In September 1992, two years after the introduction of the new ABE program, the Department of Education and Training and the five regional colleges commissioned a review. An ABE Review Committee representing the five colleges and the Department of Education and Training was mandated to review all aspects of curriculum and delivery. The review included site visits and college-wide surveys. The Committee submitted a Review Report to the regional colleges and the Department of Education and Training in May 1993. The report made recommendations based on the information collected. One of the report's recommendations was that a permanent ABE Monitoring Committee, representing the regional colleges and the Department of Education and Training, be established. The ABE Monitoring Committee was established in September 1993. They were given the authority to recommend program changes and to establish mechanisms for continual program review.

## **ABE Revision (1995)**

In November 1993 the Monitoring Committee conducted a survey of instructors of all ABE delivery sites. Results of those surveys were compiled and distributed to instructors. Instructor Validation Committees were appointed with representation from the five regional colleges. A Department of Education and Training representative also participated in the validation process. Survey results were discussed in each college prior to the April 1994 validation meetings. At these meetings Instructor Validation Committees summarized recommendations for reviews of all sections of the Adult Basic Education program. In October 1994, the Program Monitoring Committee (now the ABE Standing Committee)

assigned specific portions of the review process to the five regional colleges as follows: Cabot College - revising the Level I Program Guide; Eastern College - integrating new Science learning objectives for Levels II and III; Central College - integrating new Communication Skills learning objectives for Levels II and III; Westviking College - integrating new Mathematics learning objectives for Levels II and III; Labrador College - updating course matrices. All revisions were completed in 1995.



# **ACKNOWLEDGEMENTS**

## **ABE Level II Curriculum**

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### **1990 Revision**

ABE Revision Project Coordinator:      Mildred Minty, Avalon Community College

### **Revision Teams**

#### **Mathematics Committee**

Chairperson: Claude Rogers, BTSD, Avalon Community College  
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                 John Penney, Related/ABE, Eastern Community College  
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Chairperson: Rotating Chairperson for Each Course  
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                 Elaine Moores, BTSD, Avalon Community College  
                 Byron Brooks, St. George's High School  
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                 Joan Hiller, ABE, Avalon Community College  
                 Eileen Riche, ABE, Avalon Community College  
                 Clarence Rideout, BTSD/ABE, Avalon Community College  
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                 Otto Pike, BTSD, Avalon Community College

Special thanks to Trudy Brake-Danby, Carmel Ennis-Smith and Barbara Case for their expert advice on several of the General Options courses.

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Kevin Toope, Booth Memorial High School

Special thanks to Dr. M. Collins, Dr. P. Fisher, Dr. A. Kind, Dr. A. Hay, and Dr. H. Weir, who were consulted on several of the science courses.

### **Management Committee**

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Wayne Taylor  
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### **Provincial Advisory Committee**

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Secretary: Wayne Taylor, Department of Education and Training  
Committee: Wayne Watton, Fisher Institute  
Cyril Organ, Western Community College  
Shirley Crewe, Labrador Community College  
John Whelan, Avalon Community College  
Geoff Kelly, Central Community College  
Walter Smith, Eastern Community College

Administrative Support: Carol Ann Hawco

## **1995 Revision**

The Department of Education and Training contracted Cabot College to prepare a camera-ready copy of the 1995 revision of the Adult Basic Education Level II Program Guide. This was completed under the direction of Ruth Benson, Cabot College, and approved by the ABE Standing Committee. Design and formatting were done by Renée Roule, Cabot College.

Thanks to the ABE Review Committee, the ABE Standing Committee, the Instructor Validation Committee and Level II instructors in the five regional colleges for their input into the revision process.

### **ABE Review Committee (1992-1993)**

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Lorraine Baker, Labrador College  
Margaret Bromley, Cabot College  
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### **Level II Instructor Validation Committee (1994)**

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## **Science**

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Marilyn Ryall, Cabot College

# **INTRODUCTION**

## **Level II ABE Curriculum**

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Welcome to Level II of the Adult Basic Education (ABE) Program! The ABE Program comprises provincial guidelines spanning all levels of Adult Basic Education, from literacy to high school equivalency, in an attempt to provide consistent and continuous educational upgrading to the adults of this province. This guide is one of a series of three ABE Curriculum Program Guides prepared by contract for the Division of Institutional and Industrial Education, Department of Education and Training, Government of Newfoundland and Labrador. This document focuses on Level II. Also available are program guides for Levels I and III, and two accompanying Instructor Handbooks, one for Level I and another for Levels II and III combined.

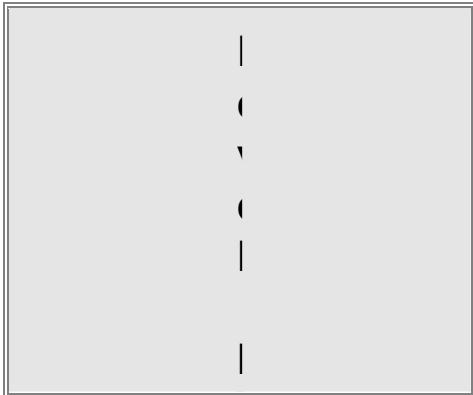
### **Overview of this Guide**

This program guide is divided into three distinct parts for ease of use and reference:

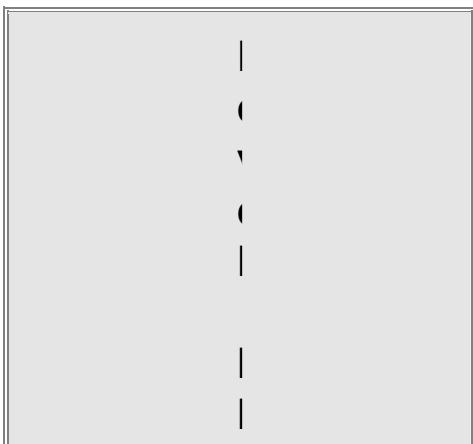
- ☞ Part 1 introduces the program and presents the layout of the document.
- ☞ Part 2 explains how to use this guide.
- ☞ Part 3 states the learning objectives for students in Level II of the ABE Program, suggests useful references and resources to use in facilitating the attainment of those objectives, and briefly annotates the references supplied. Full information for ordering the texts is included in the annotated bibliography sections following each content area.

## ABE Framework

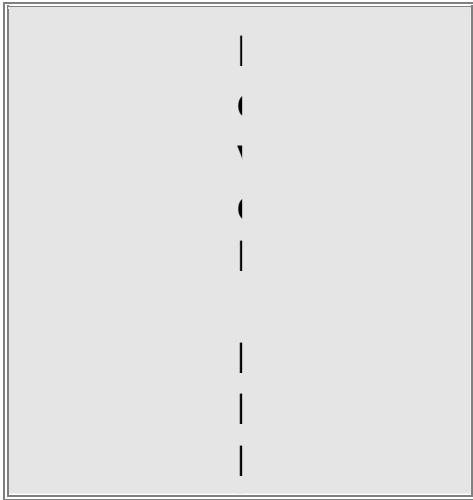
The revised ABE program has three Levels, as indicated in the following framework:



- Communication Skills, including:
  - Reading
  - Writing
  - Oral Communications
- Mathematics
- Science
- General Knowledge



- Communication Skills, including:
  - Reading
  - Writing
  - Spelling
  - Oral Communications
  - Study Skills
- Mathematics
- Science
- Employability Skills (Level III credits)
- General Options (Level III credits)



- ⇒ 36 credits required, including:
  - ⇒ Minimum of 6 Communication Skills
  - ⇒ Minimum of 6 Mathematics
  - ⇒ Minimum of 6 Science
  - ⇒ Minimum of 4 Employability Skills
  - ⇒ Maximum of 10 General Options (may include equivalency and maturity credits)

# USING THIS GUIDE

## ABE Level II Curriculum

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### Purpose of the Guide

This program guide presents learning objectives which are roughly equivalent to those which would be covered in communication skills, mathematics, and science, in grades 7 to 9 in the school system. The Department of Education and Training offers these objectives as a description of the **minimum intended outcomes** which should be attained by students completing Level II of the ABE program. The objectives are stated to provide a **flexible structure** for course design, and to provide administrators and instructors with a planning framework for a variety of delivery methods, while ensuring that institutions in all parts of the province cover the same **minimum content** in their ABE programs. ***Thus, all Level II ABE Programs should cover at least the stated objectives.*** However, instructors, administrators, and program developers need not be limited to covering only those objectives listed. ***Delivery methods are NOT prescribed, and are entirely at the discretion of the institution offering the program.***

### Content Areas

For Level II, courses are outlined in three content areas: Communication Skills, Mathematics, and Science. This represents a departure from Levels I and III. In Level I it is recommended that students acquire the reading and writing skills associated with literacy in the context of several content areas, including general knowledge areas such as government, law, history, and consumer education. Level III also offers courses for credit in General Options, which includes such topics. However, Level II does not include them for a specific purpose. Level II is meant to provide the transition between the literacy skills adults need to function in our society, and those that are associated with high school completion. Level II courses are not credit courses as are those of Level III. For this reason, Level II was not expanded to include general knowledge or employability skills objectives, which would mean that adults in that level would take longer to complete it. Instead, Level II students are permitted to work on Level III General Option courses or Employability Skills courses for credit towards Level III certification while they are enrolled in Level II. Objectives for content areas such as democracy, law, history, and consumer education may be found in the Level III program guide.

### Course Numbers

Courses in both Levels II and III are assigned letters and a four digit number. In order to be consistent with the provincial transfer guide and the new registration system the courses have new six-digit, alpha-numerical listings. All ABE courses now begin with

the letter designation "I".

Subject areas are assigned as follows:

IC represents Communication Skills  
IE represents Employability Skills  
IG represents General Options  
IM represents Mathematics  
IS represents Science  
IB represent Biology  
IH represents Chemistry  
IP represents Physics

The digits in each course number represent:

1st digit indicates level  
2nd digit indicates credit value of the course  
3rd and 4th digits indicate the course number

For example, IC 2013 is a communication skills course in Level II, with no credit value in terms of high school equivalency certification, which has been assigned the course number of 13 to distinguish it from other Level II communication skills courses. In order to avoid confusion with course numbers in the regular high school system, all ABE course numbers begin above the number 10 so that none has the same number as a high school course.

## Resource Materials

The learning objectives for each course are followed by a list of potential references and resources. **Note that references and resources are suggested, rather than prescribed.** Instructors and educational institutions are free to make other choices. Indeed, many learners do not respond well to print as a learning medium, and alternate learning materials would undoubtedly be more appropriate for them. The references listed may serve as starting points. They were never intended to preclude the use of other reference texts or learning resources.

## Instructor Handbooks

There are two Instructor Handbooks which supplement the ABE Program Guides. ABE Level II Instructors will find a wealth of valuable information in both the Handbook for Level I and the Handbook for Levels II and III. The Instructor Handbooks do not contain prescriptive information. They are, however, collections of suggestions which may help you in your delivery of the ABE Program. The Department of Education and Training recommends that all ABE instructors examine both Handbooks before instructing the courses described in the ABE Program Guides.

## Purpose of the ABE Program

The ABE Program was designed with the intent of providing adults who have not completed high school with the opportunity of acquiring a solid, high-quality, educational background to allow them to function in our society, and to access avenues to further education, training, employment, and personal enrichment. It encompasses and integrates the former Literacy, ABE and BTSD Programs into a more consistent and comprehensive curriculum.

## Definition of Terms

The following terms are used in this curriculum according to these definitions:

**Curriculum:** an organized set of formal educational intentions.

**Program:** a set of courses designed to meet the stated aim of a curriculum.

**Course:** a set of topics that have been determined to meet the needs of the learners.

**Topic:** a major subdivision or grouping of the objectives of a course for the purpose of integrated study.

**Learning Objective:** a clear and concise statement of what the participant will be able to do at the end of the learning experience. Conditions may be given or denied as necessary.

**Learning Activity:** the actual learning experience prescribed to facilitate the achievement of a learning objective.

**Credit:** a block of content consisting of a stated range of learning objectives.

Note: A block of content may vary in appearance in terms of the number of objectives used to describe it. Some objectives may be accomplished quickly, with little work. Others may require a great deal of time and practice. However, the expertise of the resource people who proposed the objectives should ensure that the credit blocks require similar amounts of work on the part of the students in order to achieve the objectives. Equivalency credits may be awarded at the discretion of the institution for courses conducted outside the ABE Program. Similarly, maturity credits may be awarded to recognize experiential learning. (See the ABE Instructor Handbook for Levels II and III for further coverage of credit attainment.)



# **Communication Skills**



# **Level II Communication Skills**

## **Introduction**

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Writing, reading, speaking, listening, viewing, vocabulary, study, and all other communication skills are crucial to learning in all content areas. Development of these skills must continue throughout all Levels of the ABE program, in all content areas. Although the objectives are written in a particular order, reinforcement of these skills must be ongoing throughout the program. Because most adults entering Level II will have underdeveloped reading skills, it is imperative that every instructor encourage students to read as often as possible, and as widely as possible. Newspapers, magazines, literary works, job-related publications, and printed matter, in all content areas, should be used to expose adult students to reading opportunities in areas of personal relevance. The ABE Instructor Handbook for Levels I, II and III offer suggestions for teaching strategies.

The objectives in the following Level II courses are intended to be of a practical nature, providing those students who exit at this level with a sound footing in communication skills which will help them function in society, preparing those students who continue into Level III for the courses which equate to a high school level of difficulty, and in general providing an avenue for adults to enrich their lives. The order of the courses is not necessarily meant to be sequential. Development of the skills outlined should happen in an integrated fashion.

Some recommendations for teaching strategies in communication skills are:

1. A journal should be kept throughout the program to develop writing skills. This process should start right at the beginning of Level II, so that the skills can be developed throughout the program. Writing skills and practice should be geared toward the “real world.”
2. Where possible, relevant job-related reading material, vocabulary, and literature should be used to ground the student’s reading experiences in areas of personal interest.
3. Students should maintain a collection of new words.

While there have been some revisions to this section, most have been minor except for the literature course (IC 2014) which is now meant to be a true introductory course which exposes the Level II student to the literary genres. Level II Communication Skills is now comprised of:

IC 2011 Study and Research Skills  
IC 2012 Vocabulary

IC 2013 Reading Comprehension

IC 2014 Literature

IC 2015 Writing Skills



# IC 2011

## Study and Research Skills

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***Recommendation: This course would be most effective if integrated throughout the learner's studies.***

### 1. Introduction to Learning

- 1.1 Identify individual strengths and limitations.
- 1.2 Identify strategies for overcoming limitations.
- 1.3 Identify individual learning styles.
- 1.4 Participate in group discussions.
- 1.5 Examine and discuss the work environment.
- 1.6 Explore and research personal occupational choices.
- 1.7 Identify stress management techniques.

### 2. Information Management Skills

- 2.1 Identify the parts of a book (index, table of contents, etc.).
- 2.2 Use skimming and scanning techniques.
- 2.3 Develop skills in outlining.
- 2.4 Develop skills in memorizing.
- 2.5 Develop skills in taking notes.
- 2.6 Develop skills in summarizing.
- 2.7 Develop study strategies for different content areas.
- 2.8 Develop skills in taking examinations.
- 2.9 Apply time-management and organizational skills.

### 3. Research Skills

- 3.1 Use dictionary or glossary to identify word meanings and confirm spelling.
- 3.2 Use thesaurus to expand vocabulary.
- 3.3 Demonstrate research/library skills.
- 3.4 Identify and locate reference books.
- 3.5 Use reference materials and resources.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Becoming a Master Student (Sixth Edition). Dave Ellis. (1991). College Survival, Inc., carried by McGraw-Hill Ryerson. ISBN: 0-942456-10-6

Building English Skills: Skills Practice Book. (Orange Level). (1985). McDougall, Littell, & Company.

Improving Reading in Every Class. (Abridged 3rd. Edition). Ellen Lamar Thomas and H. Alan Robinson. Allyn and Bacon.

Improving Your Study Skills. Pippin Publishing Ltd. ISBN: MM30250.

Into Studying. Scholastic.

Practical English (Vols. 1 & 2). Career Institute.

Study Skills and Strategies. Media Materials. ISBN: MM250.

The Communications Handbook. Paula Goephert (ed.). (1982). Nelson Canada.

The Adult Back-to-School Book. (1986). Learning Resources Distribution Centre.

Using Textbooks Successfully. Scholastic.

Using Your Perfect Memory. Tony Buzan. (1989). New York: Penguin Books.

Communications Skills for the World of Work. Thomas Cheseboro, Linda O'Connor, Francisco Rios. (1990). Prentice-Hall.

Janus Job Planner: A Guide to Career Planning (2nd edition). Wing Jew & Robert Tong. (1987). Janus Book Publishers, Inc.

Making Career Decisions: A Step at a Time. Books I & II. Marv Collins, Dave Studd, & John Wallace. (1984). Nelson Canada.

Writing for the World of Work. Ellen Kaplan. Educational Design, carried by Monarch Books of Canada, Ltd. ISBN: 0-87694-175-7.

You're Hired! Job Search Strategies for the 90's. George E. Kent. (1993) Copp Clarke Pittman.

Student Course Manuals for Distance Learning. Labrador College of Applied Arts, Technology and Continuing Education. Happy Valley-Goose Bay.

**Audio Visual Materials:** ACCESS Network videos

**On-Line Resources:** Westviking Gopher

# **IC 2012**

## **Vocabulary**

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### **1. Spelling Rules**

- 1.1 Identify basic spelling rules.
- 1.2 Apply spelling rules.

### **2. Word Structure Analysis**

- 2.1 Identify root word, prefix, and suffix.
- 2.2 Show how prefixes and suffixes change the meaning of root words.

### **3. Homonyms, Antonyms, and Synonyms**

- 3.1 Define homonyms, antonyms, and synonyms.
- 3.2 Identify homonyms, antonyms, and synonyms.
- 3.3 Use homonyms, antonyms, and synonyms.

## **Potential Resources**

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Mastering Spelling. Barbara Seiger. Cambridge Adult Education. Prentice Hall Regents, Englewood Cliffs, NJ.

Building English Skills: Skills Practice Book. (Orange Level). (1985). McDougall & Littell.

Practice Vocabulary. Sharon L. Belshaw & Michael E. Goodmer. (1980). Scholastic.

Scholastic Real Life Writing (Canadian Edition). Beatrice Jackson Levin. (1990). Scholastic Canada Ltd. ISBN: 0-590-73473-3.

The Communications Handbook. Paula Goephert (ed.). (1982). Nelson Canada.

Vocabulary Improvement. Sharon L. Belshaw & Michael E. Goodmer. (1979). Scholastic.

Word Resources (3rd edition). Thomas E. Walker. (1979). Bobbs-Merrill Company, Inc.

Student Course Manuals for Distance Learning. Labrador College of Applied Arts, Technology and Continuing Education. Happy Valley-Goose Bay.



**Recommendation:** *Students should read a variety of print material (such as magazines, newspapers, recipe books, comics, shop manuals, textbooks, etc.) in order to complete the following objectives.*

### 1. Reading

- 1.1 Identify reasons for reading and individual reading needs.
- 1.2 Develop reading strategies such as, skimming and scanning, key words, context clues, speed, comprehension, etc..
- 1.3 Identify main subject/topic.
- 1.4 Identify main ideas.
- 1.5 Identify supporting details and sequence.
- 1.6 Interpret meaning intended by the writer (inference skills).
- 1.7 Summarize main ideas.
- 1.8 Paraphrase main ideas.
- 1.9 Make predictions based on personal experience and prior knowledge.
- 1.10 Distinguish between fact and fiction.
- 1.11 Identify cause and effect relationships.
- 1.12 Recognize comparison and contrast.
- 1.13 Examine print media within the context of the above.
- 1.14 Develop reading strategies for different subject areas.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Becoming a Master Student (Sixth Edition). Dave Ellis. (1991). College Survival, Inc., carried by McGraw-Hill Ryerson. ISBN: 0-942456-10-6.

Basic Reading Skills. (1983). Cambridge.

Cambridge Skill Power Series: Skills in Reading 2. Benita Somerfield (ed). (1978). Cambridge.

English [ENG1A-M, ENG1A]. Independent Learning Centre. Kwik-Copy Printing.

English [ENG1G-M, ENG1G-P]. Independent Learning Centre. Kwik-Copy Printing.

Reading and Critical Thinking. Books 1 & 2. Donald Barnes and Arlene Burgdorf. Educational Design carried by Monarch Books of Canada.

Scholastic Real Life Writing (Canadian Edition). Beatrice Jackson Levin. (1990). Scholastic Canada Limited. ISBN: 0-590-73473-3.

Words on Work: An Integrated Approach to Language and Work. Stanley A. Nemiroff, Olivia Rovinescu, Clifton B. Ruggles & David W. Booth. (1981). Globe/Modern Curriculum Press, carried by Prentice-Hall Canada, Inc.

Student Course Manuals for Distance Learning. Labrador College of Applied Arts, Technology and Continuing Education.

# IC 2014

## Literature

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**Recommendation:** *Students should be encouraged to incorporate the skills learned in IC 2013 into the study of literature.*

### **1. Overview of Literature**

- 1.1 Define literature.
- 1.2 Identify and define the FIVE genres of literature.
- 1.3 Define literary terms (plot, character, theme, setting, point of view, etc.) as they apply to these genres.

### **2. Essay**

- 2.1 Read a minimum of TWO essays.
- 2.2 Examine two or three literary devices as they apply to this genre.

### **3. Short Story**

- 3.1 Read a minimum of TWO short stories.
- 3.2 Examine two or three literary devices as they apply to this genre.

### **4. Novel**

- 4.1 Read a minimum of ONE novel.
- 4.2 Examine two or three of literary devices as they apply to this genre.

### **5. Poetry**

- 5.1 Read a minimum of TWO poems.
- 5.2 Examine two or three literary devices as they apply to this genre.

### **6. Drama**

- 6.1 Read a minimum of ONE play.
- 6.2 Examine two or three literary devices as they apply to this genre.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Understanding Literature. Janet M. Davis. (1989). Media Materials, Inc. carried by Pippin Publishing Ltd.

For the Love of Literature. Janet M. Davis. (1989). Media Materials, Inc. carried by Pippin Publishing Ltd.

Exits and Entrances. King, LeDrew, & Porter. (1981). Academic Press Canada.

Focusing on Literature. Caleb E. Crowell & Dana R. Pierson. Educational Design, carried by Monarch Books of Canada.

Scope English: How to Read Literature (Level One). Anne Marie Mueser & John Alan Mueser. Scholastic.

Selected Novels (McGraw-Hill Ryerson carries a large selection of easy-to-read literature as do the department's school supplies division).

Student Course Manuals for Distance Learning. Labrador College of Applied Arts, Technology and Continuing Education.

**On-Line Resources:** Westviking Gopher

# IC 2015

## Writing Skills

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**Recommendation:** *The mechanics of grammar learned in Objectives 1 and 2 will be used in the evaluation of Objective 3.*

### 1. Grammar

- 1.1 Identify and use the parts of speech.
- 1.2 Identify subject and predicate.
- 1.3 Identify complete sentences and write a variety of sentences using different sentence structures.
- 1.4 Employ transitions to link sentences for meaning and relationship of ideas.
- 1.5 Recognize and correct common sentence errors such as run-on sentences, sentence fragments, and incorrect subject-verb agreement.
- 1.6 Identify and write the four basic sentence types.
- 1.7 Identify and use the rules for making plurals.

### 2. Punctuation and Capitalization

- 2.1 Use end punctuation.
- 2.2 Use commas.
- 2.3 Use colons.
- 2.4 Use semi-colons.
- 2.5 Use quotation marks.
- 2.6 Use apostrophes.
- 2.7 Use capital letters.

### 3. Writing

- 3.1 Organize ideas for writing by defining/narrowing a topic, and selecting/ordering topics into an outline.
- 3.2 Arrange sentences into unified, coherent paragraphs.
- 3.3 Employ transitions to link paragraphs for meaning and relationship of ideas.
- 3.4 Utilize the skills learned in Objectives 1 and 2 in various other forms of writing (e.g. letters, essays, etc.).
- 3.5 Edit your work to improve word choice, sentence variety, unification and coherence, spelling, punctuation, and capitalization.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Building English Skills: Skills Practice Book. (Orange Level). (1985). McDougall, Littell, & Company.

Cambridge Skill Power Series: Skills in Language 1 & 2. (Revised edition). (1979).

In Your Own Words: A Writing Program for Adults. (Vol. 2, Paragraph Competency). Cambridge.

Put it in Writing: Using Paragraphs. (1987). Cambridge.

Put it in Writing: Improving Sentences. (1987). Cambridge.

Put it in Writing: Using Words. (1986). Cambridge.

Scholastic Composition (Levels 1-3). Scholastic.

Scholastic Real Life Writing (Canadian Edition). Beatrice Jackson Levin. (1990). Scholastic Canada Ltd. ISBN: 0-590-73473-3.

Scope English: Grammar & Composition. (Levels 1-6). Scholastic.

The Communications Handbook. Paula Goephert(ed). (1982). Nelson Canada.

Watch Your Language (Books 1 & 2). (1984). Cambridge.

Writing Sense. Robert Potter. (1981). Globe/Modern Curriculum Press, carried by Prentice-Hall Canada, Inc.

The Writing Process Wheel. Alan J. Hooper. Educational Design, carried by Monarch Books of Canada. ISBN: 0-87694-333-4.

Student Course Manuals for Distance Learning. Labrador College of Applied Arts, Technology and Continuing Education.

**On-Line Resources:** Westviking Gopher

# Level II Communications Skills

## Annotated Bibliography

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**Note: A plethora of communication skills textbooks exists so this annotated bibliography and the potential resources list should not be construed as exhaustive. Most of the textbooks which you have been using will be equally relevant for this version of the program. You are encouraged to continually seek new or better references.**

**Books listed may not be currently in print. ISBN numbers are listed where available.**

Adrift On An Ice Pan. Sir Wilfred Grenfell. (1992). *Creative Publishers*, a division of *Robinson-Blackmore Printing & Publishing Ltd.* ISBN: 1-895387-13-2  
A Newfoundland novel that may be suitable for a Level II reader.

Basic Reading Skills. (1983). *Cambridge*. ISBN 0842 893261.

*Workbook designed for adults. Covers reading skills at the four levels suggested in our reading comprehension course. Has pretests, posttests, and answer keys included.*

Becoming A Master Student (Sixth Edition). Dave Ellis. (1991). *College Survival, Inc.*, carried by *Mcgraw-Hill Ryerson* ISBN: 0-942456-10-6

*Facilitator's resource material. Although this text was intended for post-secondary level students, it could prove to be a valuable resource for facilitators of Level II and Level III students.*

Building English Skills: Skills Practice Book. (Orange Level). (1985). *McDougall, Littell, & Company*. ISBN 7725-51405.

*Reasonably priced. Good for all of Level II.*

Cambridge Skill Power Series: Skills in Reading 2. Benita Somerfield. (1978). *Cambridge*.  
*Gives lots of practice in applying reading skills in social studies, science, and literature. Individualized, self-paced, with diagnostic tests included.*

Cambridge Skill Power Series: Skills in Language 1 & 2. (Revised edition). (1979).

*Workbook on grammatical usage, sentence structure, spelling, diction, punctuation, capitalization, and pronunciation. Multiple-choice questions, diagnostic tests.*

Communications Skills for the World of Work. Thomas Chesebro, Linda O'Connor, Francisco Rios. (1990). *Prentice-Hall*.

*Workbook coverage of communication, listening skills, sending skills, writing skills, employability skills.*

Critical Reading for Proficiency. (Books 1, 2, & 3). Stuart Margulies. *Educational Design*, carried by *Monarch Books of Canada*.

*Teaches all of the higher-level critical thinking and critical reading skills. Book 1 is at*

*reading level 5-6, book 2 at 7-8, and book 3 at high school level.*

English [ENG1G-M, ENG1G-P]. Independent Learning Centre. *Kwik-Kopy Printing.*  
*A distance education package designed as an equivalency to Ontario grade 9 English at a general level. Covers various aspects of literature and writing. Contains texts, handbooks, and audiotapes.*

English [ENG1A-M, ENG1A-P]. Independent Learning Centre. *Kwik-Kopy Printing.*  
*A distance education package designed as an equivalency to Ontario grade 9 English at an advanced level (for people going on in studying English). Covers various aspects of literature and writing. Package contains texts, handbooks, and audiotapes.*

Exits and Entrances. King, LeDrew, & Porter. (1981). Harcourt-Brace & Company. ISBN 774711949.

*Used in the junior high school system.*

Focusing on Literature. Caleb E. Crowell & Dana R. Pierson. *Educational Design*, carried by Monarch Books of Canada. ISBN 0-87694-328-8.

*Teaches students how to read short stories, poems, novels, essays, speeches, and plays. Contains comprehensive collection of exercises to help students understand the key elements in a piece of literature. Written at 7-10 reading level. Teacher's guide available.*

Improving Reading in Every Class. (Abridged 3rd. edition). Ellen Lamar Thomas and H. Alan Robinson. *Allyn and Bacon.*

*Used in the school system as a teacher's resource (free). Covers vocabulary, comprehension, problem-solving, study skills, and reading in different content areas.*

Improving Your Study Skills. *Media Materials.* ISBN MM30250.

*Offers easy-to-learn steps that aid in the retention of material, speed up note taking, and increase reading rate.*

In Your Own Words: A Writing Program for Adults. (Vol.2, Paragraph Competency). Cambridge.

*Workbook on paragraph writing. Designed for adults.*

Into Studying. Scholastic. ISBN 0590305999. Teacher's Guide ISBN 0590306006.

*Concentrates on study skills using various areas of reading materials. Inexpensive text and teacher's guide.*

Janus Job Planner: A Guide to Career Planning (2nd edition). (1987). Wing Jew & Robert Tong. *Janus Book Publishers, Inc.*

*This workbook is readable at quite a low level, and would probably work for Level I as well as Level II.*

Making Career Decisions: A Step at a Time. Books I & II. Marv Collins, Dave Studd, John Wallace. (1984). *Nelson Canada.*

*Texts employ lower-level writing. Targeted at the junior high level, but quite usable for adults.*

Practical English (vol. 1 & 2). *Career Institute.*

*A complete, self-correcting course, with lots of extra practice.*

Practical Vocabulary. Sharon L. Belshaw & Michael E. Goodmer. (1980). *Scholastic*. ISBN 0590300415. Teacher's edition ISBN 059030044X.

*Workbook which covers most of objectives for the vocabulary unit.*

Put it in Writing: Using Words. (1986). *Cambridge*. ISBN 0842 897178 (text) and ISBN 0842 897208 (workbook).

*Workbook for adults. Covers almost all of the objectives in the Writing Skills unit. Activity book available.*

Put it in Writing: Improving Sentences. (1987). *Cambridge*. ISBN 0842 897186 (text) and ISBN 0842 897216 (workbook).

*Workbook on sentence construction, designed for adults. Activity book available.*

Put it in Writing: Using Paragraphs. (1987). *Cambridge*. ISBN 0842 897194 (text) and ISBN 0842 897224 (workbook).

*Workbook designed for adults, concentrates on paragraphs. Activity book available.*

Reading and Critical Thinking. Books 1 & 2. Donald Barnes & Arlene Burgdorf. *Educational Design*, carried by *Monarch Books of Canada*. ISBN [Book 1]: 0-87694-237-0, ISBN [Book 2]: 0-87694-000-9.

*Book 1 introduces students to fundamental literal, inferential, and evaluative thinking skills at reading level 5-7. Book 2 teaches more advanced thinking skills necessary to understand high school reading matter, at level 7-9. Teacher's guide available.*

Scholastic Real Life Writing (Canadian Edition). Beatrice Jackson Levin. (1990). *Scholastic Canada Ltd.* ISBN: 0-590-73473-3

*A teacher's guide and collection of activity masters that may be used in several Level II courses, including IC 2012 Vocabulary, IC 2013 Reading Comprehension, and IC 2014 Writing Skills. Publisher grants permission to duplicate any, or all, of the masters contained in this resource, provided that the duplicated exercises are for the exclusive use of the learners. Answer key also provided.*

Scholastic Composition (Levels 1-6). *Scholastic*.

*Covers sentence-building exercises, writing different syntactic structures, composition goals, writing assignments, editing. The ISBN for Scholastic Composition (Levels 1-6) are as follows:*

Student Text Level 1: 0590711377

Student Text Level 2: 0590711385

Student Text Level 3: 0590711393

Student Text Level 4: 0590711032

Student Text Level 5: 0590711040

Student Text Level 6: 0590711059

Scope English: Grammar & Composition (Levels One to Six). *Scholastic*.

*Texts, workbooks, teaching guides, answer keys, and anthologies available. Designed for learners having trouble with reading and writing.*

Scope English: How to Read Literature (Level One). Anne Marie Mueser & John Alan Mueser. *Scholastic*.

*Workbook approach to reading literature. Wide variety of samples in each workbook. Six levels in series.*

Study Skills and Strategies. *Pippin Publishing Ltd.* ISBN MM250.

*Prepared to help high school and university students improve their study skills, manage time, prepare for tests, and take notes.*

The Adult Back-to-School Book. (1986). *Learning Resources Distribution Centre*.

*Alberta publication for adults. Inexpensive.*

The Communications Handbook. Paula Goephert (ed.). (1982). *Nelson Canada*.

*Used in schools as a reference book, but contains no practice exercises.*

Understanding Literature. Janet M. Davis. (1989). *Media Materials, Inc.*

*Two-book series, For the Love of Literature: A Survey of Fiction and For the Love of Literature: Reading and Writing Non-Fiction, introduces the terms and concepts necessary for an understanding of both fiction and non-fiction. Provides a collection of high-interest, low-readability level selections in workbook format.*

Using Textbooks Successfully. Scholastic. ISBN 0590341782. Teacher's guide ISBN 0590341820.

*Inexpensive textbook and teaching guide. Covers most of objectives.*

Using Your Perfect Memory. Tony Buzan. (1989). New York: *Penguin Books*.

*Provides practical techniques for helping people capture and retain information.*

Vocabulary Improvement. Sharon L. Belshaw & Michael E. Goodmer. (1979). *Scholastic*. ISBN: 0590300431 (Teacher's Edition ISBN: 05030044X)

*Workbook which covers most of objectives for our vocabulary unit.*

Watch Your Language (Books 1 & 2). (1984). *Cambridge*.

*Instructional books and workbooks with mastery tests and student record-keeping charts.*

Word Resources (3rd edition). Thomas E. Walker. (1979). *Bobbs-Merrill Company, Inc.*

*Contains sections on vocabulary, prefixes, suffixes, heritage, improving speech habits, dictionaries, and special vocabulary.*

Words on Work: An Integrated Approach to Language and Work. Stanley A. Nemiroff, Olivia Rovinescu, Clifton B. Ruggles, & David W. Booth. (1981). *Globe/Modern Curriculum Press*, carried by *Prentice-Hall Canada, Inc.*

*Provides reading practice in a work context.*

Writing for the World of Work. Ellen Kaplan. *Educational Design*, carried by *Monarch Books of Canada, Ltd.* ISBN 0-87694-175-7.

*Covers getting a job, filling out forms, placing orders, and so on, at a 4-7 reading level.*

Writing Process Wheel, The. Alan J. Hooper. *Educational Design*, carried by *Monarch Books of Canada*. ISBN 0-87694-333-4.

*Manipulative, visual tool for helping students improve their writing.*

Writing Sense. Robert Potter. (1981). *Globe/Modern Curriculum Press*, carried by *Prentice-Hall Canada, Inc.*

*The teacher guide is useful.*

You're Hired! Job Search Strategies for the 90s. (1993). George E. Kent. *Copp Clark Pitman*. ISBN: 0773053638

**On-Line Resources:** Westviking Gopher



# **Mathematics**

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# **Level II Mathematics**

## **Introduction**

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Many adult students suffer from a prevalent problem often termed “math anxiety.” They tend to become overly anxious and “freeze” when confronted with theoretical problems.

In order to counteract this phenomenon, mathematics should be taught in a non-threatening environment and should be personally relevant for each student. To achieve this goal, the objectives offered for Level II mathematics are practical and consumer oriented. These mathematics courses were designed not only to prepare students for Level III, but also to be a useful culmination for adult students who do not continue their education. Math anxiety is discussed further in the ABE Instructor Handbook for Levels II and III.

The ABE Mathematics component has been substantially revised as a result of the review process undertaken during 1993-94. The intent of this section is to highlight the key revisions and to provide a brief rationale for the revisions.

Level II Mathematics is now comprised of:

- IM 2011 Whole Numbers
- IM 2012 Fractions
- IM 2013 Decimals
- IM 2014 Percents
- IM 2015 SI Measurement
- IM 2016 Introductory Geometry
- IM 2017 Introductory Statistics
- IM 2018 Introductory Algebra
- IM 2019 Word Problems (optional)

The Level II courses have been streamlined in response to concerns that students were spending a disproportionate amount of time to complete mathematics at this level. Basically, the validation team approached the issue in terms of identifying the content which would be required to prepare students for success in Level III, while eliminating content that was not absolutely necessary. Most Level II courses are now more compact and the Word Problems course is no longer a requirement; the rationale being that word problems were an integral part of all courses in any event. However, the objectives for the course are presented as an option for students who need additional practice in solving word problems.

It should be noted that the former Graphs course has been expanded and is now entitled Statistics; similarly, the Geometry course has been expanded to include more emphasis on constructions; and, the Algebra course now includes content designed to ease the transition to Level III. Overall, these revisions should result in an improved experience for Level II students.



# **IM 2011**

## **Whole Numbers**

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### **1. Place Value**

- 1.1 Select place value.
- 1.2 Write whole numbers in expanded/contracted form.
- 1.3 Rank numbers on a number line.
- 1.4 Convert numbers into words.
- 1.5 Convert words into numbers.
- 1.6 Round off numbers.

### **2. Addition and Subtraction of Whole Numbers**

- 2.1 Define sum.
- 2.2 Add whole numbers.
- 2.3 Define difference.
- 2.4 Subtract whole numbers.
- 2.5 Estimate and compute solutions to consumer-related word problems.

### **3. Multiplication and Division of Whole Numbers**

- 3.1 Identify the parts of multiplication problems.
- 3.2 Identify multiplication symbol.
- 3.3 Multiply whole numbers.
- 3.4 Give the values of the multiplication table to 12x from memory.
- 3.5 Identify the parts of division problems.
- 3.6 Identify division symbol.
- 3.7 Divide whole numbers.
- 3.8 Estimate and compute solutions to consumer-related word problems.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-13-771130-1

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

**On-Line Resources:** Westviking Gopher

# IM 2012

## Fractions

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### 1. Initial Concepts

- 1.1 Define fraction terms.
- 1.2 Write fractions given illustrations.
- 1.3 Express fractions in lowest terms.
- 1.4 Convert improper fractions and mixed numbers.
- 1.5 Write fractions in higher terms.
- 1.6 Write equivalent fractions with different denominators.
- 1.7 Rank fractions.
- 1.8 Find common multiples.
- 1.9 Find lowest common denominator.

### 2. Addition and Subtraction of Fractions and Mixed Numbers

- 2.1 Add fractions and mixed numbers.
- 2.2 Subtract fractions and mixed numbers.
- 2.3 Estimate and compute solutions to consumer-related word problems.

### 3. Multiplication and Division of Fractions and Mixed Numbers

- 3.1 Multiply fractions and mixed numbers.
- 3.2 Divide fractions and mixed numbers.
- 3.3 Estimate and compute solutions to consumer-related word problems.

### Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-07-065229-5

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-394-35454-0

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

**On-Line Resources:** Westviking Gopher



# IM 2013

## Decimals

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### 1. Initial Concepts

- 1.1 Identify and select place value.
- 1.2 Rank decimals.
- 1.3 Round off decimals.
- 1.4 Convert between decimals and fractions.
- 1.5 Identify repeating decimals.
- 1.6 Write repeating decimals using the bar symbol.

### 2. Addition and Subtraction of Decimals

- 2.1 Add decimals.
- 2.2 Subtract decimals.
- 2.3 Estimate and compute solutions to consumer-related word problems.

### 3. Multiplication and Division of Decimals

- 3.1 Multiply decimals.
- 3.2 Divide decimals.
- 3.3 Multiply and divide by multiples of 10.
- 3.4 Estimate and compute solutions to consumer-related word problems.

## Potential Resources

Please refer to the annotated bibliography at the end of this section for a brief description of each resource.

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-13-771130-1

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

**On-Line Resources:** Westviking Gopher



# IM 2014

## Percents

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### 1. Initial Concepts

- 1.1 Define percent.
- 1.2 Convert the following:
  - 1.2.1 Decimals to fractions and fractions to decimals.
  - 1.2.2 Decimals to percents and percents to decimals.

### 2. Calculating Part of a Number

- 2.1 Find a fractional part of a number.
- 2.2 Find a decimal part of a given number.
- 2.3 Find a percent of a given number.
- 2.4 Estimate and compute solutions to consumer-related word problems.

### 3. Calculating a Number When Part of it is Known

- 3.1 Find a number when a fractional part of it is known.
- 3.2 Find a number when a decimal part of it is known.
- 3.3 Find a number when a percent of it is known.
- 3.4 Estimate and compute solutions to consumer-related word problems.

### 4. Calculating What Part One Number is of Another

- 4.1 Find what fractional part one number is of another.
- 4.2 Find out what decimal part one number is of another.
- 4.3 Find out what percent one number is of another.
- 4.4 Estimate and compute solutions to consumer-related word problems.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-13-771130-1

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

**On-Line Resources:** Westviking Gopher

# **IM 2015**

## **Systems International (SI) Measurement**

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### **1. Basic Units and Suffixes**

- 1.1 Identify and write SI base units and their symbols.
- 1.2 Identify and write SI prefixes and their symbols.

### **2. Linear Measurements**

- 2.1 Define linear measure.
- 2.2 Measure using appropriate units.
- 2.3 Convert SI linear measurements.
- 2.4 Estimate and compute solutions to consumer-related word problems.

### **3. Area Measurements**

- 3.1 Calculate the area of given surfaces using appropriate units.
- 3.2 Convert SI area measurements.
- 3.3 Estimate and compute solutions to consumer-related word problems.

### **4. Volume and Capacity Measurements**

- 4.1 Distinguish between volume and capacity.
- 4.2 Calculate volume using appropriate SI units.
- 4.3 Measure capacity of given objects using appropriate SI units.
- 4.4 Convert SI volume and capacity measurements.
- 4.5 Estimate and compute solutions to consumer-related word problems.

### **5. Mass Measurements**

- 5.1 Define mass.
- 5.2 Determine mass using appropriate SI units.
- 5.3 Convert SI mass measurements.
- 5.4 Estimate and compute solutions to consumer-related word problems.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-13-771130-1

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

**On-Line Resources:** Westviking Gopher

# IM 2016

## Introductory Geometry

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### **1. Forms and Figures**

- 1.1 Identify and sketch types of lines.
- 1.2 Identify and sketch rays and segments.
- 1.3 Identify and sketch types of two-dimensional figures.
- 1.4 Identify and sketch types of three-dimensional figures.
- 1.5 Identify and sketch parts of a circle.

### **2. Angles and Triangles**

- 2.1 Define types of angles.
- 2.2 Identify types of angles.
- 2.3 Draw and measure angles using instruments.
- 2.4 Distinguish between complementary and supplementary angles.
- 2.5 Identify and sketch types of triangles.

### **3. Perimeter**

- 3.1 Define perimeter.
- 3.2 Calculate perimeter of circles, polygons, and compound figures.
- 3.3 Solve consumer-related perimeter problems with the aid of a sketch.

### **4. Area**

- 4.1 Define area.
- 4.2 Calculate area of circles, squares, and rectangles.
- 4.3 Solve consumer-related area problems with the aid of a sketch.

### **5. Volume**

- 5.1 Define volume.
- 5.2 Calculate volume of rectangular solids.
- 5.3 Solve consumer-related volume problems with the aid of a sketch.

## 6. Basic Geometric Constructions

- 6.1 Identify and use instruments of construction.
- 6.2 Construct a line segment of given length and bisect it.
- 6.3 Construct a line perpendicular to a given line from (i) a point outside the line, and (ii) a point on the line.
- 6.4 Bisect a given angle.
- 6.5 Construct an angle equal to a given angle.
- 6.6 Construct a line parallel to a given line.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-13-771130-1

Intermediate Technical Mathematics. A. Heywood. Copp Clark Pittman.

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

**On-Line Resources:** Westviking Gopher

# **IM 2017**

## **Introductory Statistics**

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### **1. Reading Graphs**

- 1.1 Identify types of graphs (line, bar, circle).
- 1.2 Read graphs.

### **2. Constructing Graphs**

- 2.1 Construct line graphs.
- 2.2 Construct bar graphs.
- 2.3 Construct circle graphs.

### **3. Practical Applications**

- 3.1 Read scientific data from graphs.
- 3.2 Read business data from graphs.

### **4. Organizing Data**

- 4.1 Define range.
- 4.2 Group data into classes.
- 4.3 Construct frequency distribution tables.
- 4.4 Construct histograms.

### **5. Statistical Measures**

- 5.1 Define the following statistical measures:
  - (a) mean
  - (b) median
  - (c) mode
- 5.2 Calculate the mean, median and mode.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-13-771130-1

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

**On-Line Resources: Westviking Gopher**

# IM 2018

## Introductory Algebra

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### 1. Initial Concepts

- 1.1 Define rational numbers and integers.
- 1.2 Define positive and negative numbers.
- 1.3 Write positive and negative numbers.
- 1.4 Graph positive and negative numbers on a number line.
- 1.5 Identify signs of inequality.

### 2. Operations with Signed Numbers

- 2.1 Add signed numbers.
- 2.2 Subtract signed numbers.
- 2.3 Multiply signed numbers.
- 2.4 Divide signed numbers.
- 2.5 Calculate absolute value.
- 2.6 Define order of operations.
- 2.7 Perform calculations using order of operations.

### 3. Properties of Operations

- 3.1 State the commutative property.
- 3.2 State the associative property.
- 3.3 State the distributive property.

### 4. Algebraic Expressions

- 4.1 Define algebraic expressions including constant, variable, and coefficient.
- 4.2 Evaluate algebraic expressions.
- 4.3 Translate word statements into formulas.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-13-771130-1

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

### On-Line Resources: Westviking Gopher

# IM 2019

## Word Problems

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**Recommendation:** *This is an optional course for students who experience difficulty in solving word problems.*

### 1. Following Directions

- 1.1 Follow one-step directions.
- 1.2 Follow multi-step directions.
- 1.3 Follow conditional one-step directions.
- 1.4 Follow multi-conditional and/or multi-step directions.

### 2. Understanding the Problem

- 2.1 Restate the problem in your own words.
- 2.2 Write out a question that tells what has to be found.
- 2.3 Identify each fact in a verbal problem.
- 2.4 Distinguish between necessary and given information.
- 2.5 Identify problems with sufficient and insufficient data.
- 2.6 Identify what data is insufficient.
- 2.7 Identify hidden data such as different time zones or units of measure.
- 2.8 State facts that are not given, but are known and needed, to solve a problem.

### 3. Solving the Problem

- 3.1 Find the key words and phrases that say how to solve the problem.
- 3.2 Choose the appropriate operation (add, subtract, multiply, or divide).
- 3.3 Make drawings and diagrams.
- 3.4 Write number sentences.
- 3.5 Estimate and compute solution to problem.
- 3.6 Check your arithmetic.
- 3.7 Reread the problem to make sure that your answer is sensible.

### 4. Applying the Problem-Solving Technique

- 4.1 Solve problems involving whole numbers, fractions, and decimals using the technique outlined above.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn and Bacon. ISBN 0-13-771130-1

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5

Basic Mathematics. Marvin L. Bittinger, Mervin L. Keedy. (1995). Addison Wesley.

Fundamentals of Mathematics. Jack Barker, James Rogers and James Van Dyke. (1991). ISBN 0-03-032222-7

**On-Line Resources: Westviking Gopher**

# Level II Mathematics

## Annotated Bibliography

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**NOTE:** *A plethora of mathematics textbooks exists so this annotated bibliography and the potential resource list should not be construed as exhaustive. Most of the textbooks which you have been using will be equally relevant for this version of the program. You are encouraged to continually seek new or better references.*

*You should also note that in some instances new textbooks have been referenced but do not appear in this annotated list. These texts are new on the market and have been unproven in a classroom setting. However, in each instance, the texts address the content of the respective courses and, as such, you might wish to try one or more.*

**All resources may not currently be in print. ISBN numbers are listed where available.**

Basic Skills with Math: A General Review. Jerry Howlett (1984). Cambridge. ISBN 0842-821198

*An inexpensive workbook which covers whole numbers, fractions, decimals, and percent.*

Basic Skills with Whole Numbers: A Step-by-step Approach. Jerry Howlett. (1980). Cambridge. ISBN 0842-821163

*An inexpensive workbook series with lots of practice exercises.*

Basic Skills with Fractions: A Step-by-step Approach. Jerry Howlett. (1980). Cambridge. ISBN 0842-821171

*An inexpensive workbook series with lots of practice exercises.*

Basic Skills with Decimals and Percents: A Step-by-step Approach. Jerry Howlett. (1980). Cambridge. ISBN 0842-821187

*An inexpensive workbook series with lots of practice exercises.*

Contemporary's Number Power 1-6. Jerry Howlett. (1984). Contemporary Books, Inc.

#1 ISBN 0-8092-8011-6, #2 ISBN 0-8092-8010-8, #3 ISBN 0-8092-5714-9, #4 ISBN 0-8092-5517-0, #5 ISBN 0-8092-5644-4, #6 ISBN 0-8092-5750-5

*An inexpensive series written for adults, and offers lots of practice exercises.*

Essential Mathematics with Applications. Lawrence A. Trivieri. (1995). Random House. ISBN 0-07-065229-5.

*Covers all of Level II, all of the algebra courses, most of the geometry, but not business math or trigonometry.*

Intermediate Technical Mathematics. A. Heywood. Copp Clark Pitman. ISBN 0-7730-1463-2

*Contains plenty of exercises with a practical, technical slant.*

Janus Word Problems. Pippin Publishing Ltd. ISBN JB20265, JB20273, JB20281, JB2029X, JB20303, JB20311.

*A series of five consumable workbooks (Math Language, Understanding Word Problems, Using a Calculator, Estimation, Solving Word Problems) designed for adults who need extra help, plus a Teacher's Guide and Resource.*

Mathematics for Technical and Vocational Students. John G. Boyce, Louis Margolis, & Samuel Slade. (1989). John Wiley & Sons. ISBN 0-471-88828-1

*Good coverage of all of Level II, Practical Math I, Geometry I, and Trigonometry I.*

Mathematics Plus! Consumer, Business, and Technical Applications. Bruce R. Shaw, Richard A. Denholm, & Gwendolyn H. Shelton. (1980). Houghton-Mifflin. ISBN 0-395-28730-8  
*Covers all of Level II, plus consumer and business math.*

Mathematics in Life: Skills, Consumer, and Career Applications. L. Carey Bolster & H. Douglas Woodburn. (1978). Gage Educational Publishing Co. ISBN 0-7715-3610-0  
*Usable for all of Level II, Practical Math I, and Trigonometry I.*

Mathematics 3. (1989). Province of British Columbia, Ministry of Advanced Education and Job Training. Provincial Curriculum Publications/Open Learning Agency. ISBN 0-7726-0121-6.

*A distance education package with a workbook, student test pad, instructor's guide, and answer key. Covers whole numbers, fractions, decimals, percent, rounding, problem solving, the metric system, probability, ratio, statistics, basic algebra and geometry.*

Mathematics 2. (1989). Province of British Columbia, Ministry of Advanced Education and Job Training. Provincial Curriculum Publications/Open Learning Agency. ISBN 0-7719-9226-2

*A distance education package with a workbook, student test pad, instructor's guide, and answer key. Covers whole numbers, fractions, decimals, and percent.*

Practical Mathematics. [Math 010]. Lana Chow and Earl Johns. (1988). Open Learning Agency. ISBN 0-86498-269-0.

*A distance education package designed for adults and meant to provide a grade 10 equivalency for students who do not intend to take further mathematics courses. Uses practical situations to illustrate the math in everyday life, and covers whole numbers, fractions, decimals, percent, measurement, basic algebra, and basic geometry.*

Practical Math (7th edition). Claude Irwin Palmer & Leonard A. Mrachek. (1986). Gregg Division, McGraw-Hill. ISBN 0-07-048254-3  
*Usable for all of Level II, Practical Math 1, Algebra I-V, Geometry I, Trigonometry I & II.*

Read It! Solve It!. Pippin Publishing Ltd. ISBN MM40540, MM40550, MM40560, MM40570, MM40580.

*Five workbooks (addition, subtraction, multiplication, division, mixed problems) help students to solve word problems.*

Real-Life Math Video Series. Educational Design, carried by Monarch Books of Canada. ISBN 0-87694-300-8 (Fractions), 0-87694-302-4 (Decimals), and 0-87694-349-0 (Percents).  
*Fractions, decimals, and percents covered in everyday scenes in a restaurant, grocery,*

*office, and home. Interactive exercises. Nine hours total. Accompanying workbook/guides.*

Stein's Refresher Mathematics. Edwin I. Stein. (1989). Allyn & Bacon. Teacher's edition ISBN 0-205-07771-4.

*An excellent text for all of Level II, as well as topics in Level III (squares, measurement, geometry, algebra, graphs, statistics, consumer and business math). Two workbooks also available, as follows:*

Practical Applications in Mathematics. Edwin I. Stein. (1981). Allyn & Bacon. ISBN 0-205-07161-9

*Contains practical, consumer-related applications in calculations and problems.  
Answer book available.*

Refresher Mathematics Workbook. Edwin I. Stein. (1986). Allyn & Bacon. ISBN 0-205-08167-3

*Contains skills worksheets as additional practice to accompany the text. Teacher's edition available.*

Strategies for Solving Math Word Problems. Jerome Kaplan. Educational Design, carried by Monarch Books of Canada. ISBN 0-87694-074-2.

*Covers IM 2014 at reading level 3-5. Teacher's guide available.*

World of Metric Activity Book. Sharon Odegard. (1975). Ginn & Company. ISBN 0-7702-0527-5

*Workbook focused solely on metric system.*



# **Science**

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# **Level II Science**

## **Introduction**

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The objectives offered for Level II science were designed not only to prepare students for Level III, but also to be a useful culmination for adult students who do not continue their education. Their slant, therefore, is practical and related to the needs of adults as responsible parents, consumers, and community members, in both a local and global sense.

Mathematical concepts were avoided as much as possible in Level II Science, to give students a chance to acquire the necessary background skills in mathematics before they are required in science.

Although practical, hands-on experiments are not always specified in the learning objectives, the suggested science texts offer a variety of practical laboratory work which should be used. The experimental work which is done will vary, of course, with the facilities available at the institution offering the program. However, students should appreciate that science is based on experimentation. There should be offered, to the greatest extent possible, a full program of practical work designed to emphasize the important process of problem-solving through experimental science in the laboratory. At the same time, they should learn some important techniques, develop essential skills and abilities, become aware of the need for accuracy and precision, and adopt good working habits in terms of health and safety in the laboratory.

Field work studies and investigations play a vital role in science and should be undertaken with relevance to the subject content. The use of the local environment for field studies and hypothesis testing is recommended. Through their own practical work, students should acquire a good, first-hand knowledge of the materials and methods of science. Students should tackle a wide range of qualitative and quantitative laboratory and field work that should be related to the important scientific concepts specified.

Science, like mathematics, should be portrayed as a subject of practical relevance to the everyday lives of students, rather than as a field surrounded by mystique or suited only to an elite few. Many adults think of sciences as difficult subjects, and approach them with trepidation. Portraying the scientific method as a practical, problem-solving approach, and science as an attempt to explain the world in which we live can help to dispel those fears. Hands-on work, field trips, and the selection of personally relevant examples should be incorporated into the learning activities used to attain the objectives.

The 1995 science curriculum has minor changes. Level II Science is now comprised of:

IS 2011 Introduction to Science

IS 2012 Health  
IS 2013 Matter  
IS 2014 Energy  
IS 2015 The Planet Earth



# IS 2011

## Introduction to Science

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### 1. The Nature of Science

- 1.1 Define science.
- 1.2 Differentiate scientific viewpoint from non-scientific viewpoints.
- 1.3 Describe how scientific knowledge is generated.
- 1.4 Give examples of the impact of science and technology on everyday life.
- 1.5 Recognize the tentative nature of science.
- 1.6 Give an historical account of a change in an accepted theory (e.g., flat earth theory).

### 2. The SI System

- 2.1 Define measurement.
- 2.2 Describe the origins of the metric system and the reasons for using it.
- 2.3 List the three basic units of measurement in the SI system (length, mass, and capacity).

### 3. The Processes of Science

- 3.1 List and explain the parts of an experiment.
- 3.2 From experience or resources make observations.
- 3.3 Given data, classify and compare.
- 3.4 Draw conclusions based on observations.

### 4. Laboratory Skills and Procedures

- 4.1 List rules of laboratory safety.
- 4.2 Identify lab equipment.
- 4.3 Use selected laboratory techniques (including measurement).
- 4.4 Conduct measurements of length, mass, capacity, and temperature using various types of laboratory apparatus.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Mastering Basic Skills in Science. Abramson. (1989) Revised 1992. Pippin Publishing Ltd. ISBN: 0-87720-000-9.

Focus on Physical Science. Heimler & Price (1989). Charles E. Merrill. ISBN: 0-675-03164-8.

World of Metric Activity Book. Odegard (1975). Ginn & Company.

Adult Basic Education (Intermediate Science): Science and Discovery Workbook. Open Learning Institute. VA0055A.

### **Audio Visual Materials:**

Westviking College Level II Science Video Series, vol. 1 - *Science and You/ The Scientific Process*.

Westviking College Science Video Series, vol. 19 - *SI Measurement : Area* (15:00min.) vol. 20 - *SI Measurement: Capacity and Volume* (26:25min.) vol. 21 - *SI Measurement : Length* (26:30min.) vol. 22 - *SI Measurement : Mass* (14:00min.)

**On-Line Resources:** Westviking Gopher

# IS 2012

## Health

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### 1. Basic Health Concepts

- 1.1 Define physical health.
- 1.2 Define mental health.
- 1.3 List basic needs.
- 1.4 List good personal hygiene techniques.
- 1.5 Explain why good personal hygiene techniques help prevent disease.
- 1.6 Describe the importance of exercise to fitness and health.

### 2. Nutrition

- 2.1 Identify and describe six basic food nutrients.
- 2.2 Describe the importance of a balanced diet to good health.
- 2.3 Prepare a menu for a balanced diet for a day.
- 2.4 Record your food intake for a week and determine nutrient content.
- 2.5 Discuss the implications of not eating properly.

### 3. Diseases and Treatments

- 3.1 Define disease.
- 3.2 Differentiate between infectious and non-infectious diseases.
- 3.3 List several infectious diseases, their causes, symptoms, and treatment.
- 3.4 List several sexually transmitted diseases, their causes, symptoms, and treatment.

### 4. Immunity

- 4.1 Define immunity.
- 4.2 Describe types of immunity.
- 4.3 Give examples of immune deficiency syndromes, e.g., AIDS.

### 5. Family Planning

- 5.1 Outline the function of human reproductive systems as related to birth control.
- 5.2 Identify the effectiveness of various methods of contraception.

### 6. Drug Abuse

- 6.1 Define and explain the existence of drug abuse.
- 6.2 Classify commonly abused drugs.
- 6.3 Discuss the harmful effects of drugs.
- 6.4 Outline measures to prevent or terminate drug abuse.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Health A Way of Life. Follock, M.B., et al. (1982). Glenview: Scott, Foresman and Company. ISBN: 0-673-13210-2. (Out of Print)

Literature Catalogue. (1993). Eastern Health Unit. Holyrood, NF.

AIDS, What Young Adults Should Know. Yarber, Dr. W. L. (1991). Vancouver: Douglas and McIntyre (Educational) Ltd. ISBN: 0-920841-53-8.

Biology. Miller, K. and J. Levine (1991). Englewood Cliffs: Prentice Hall. ISBN: 0-13-081241-2.

Nutriscore. Fremers, R. and Dr. Z. Sabry (1981). Toronto: Methuen. ISBN: 0-458-94840-3.

Searching for Structure: Book 2. Cook et al. (1981). Holt, Rinehart and Winston of Canada. ISBN: 0-03-920118-X.

Nutrient Value of Some Common Foods. Canada Health and Welfare (1979). Available from Eastern Health Unit, Holyrood.

ABE Intermediate Science Nutrition Workbook. Open Learning Institute. VA 0067A.

ABE Intermediate Science Disease Workbook. Open Learning Institute. VA 0061A.

ABE Intermediate Science Drugs Workbook. Open Learning Institute. VA 0067A.

Sexuality, A Responsible Approach. Meeks-Mitchell, L. and P. Heit (1989). Toronto: Merrill Publishing Company. ISBN: 0-675-7858-X (Teachers Edition).

Human Sexuality, A Responsible Approach. Berne, L.A. (1988). Glenview: Scott, Foresman and Company. ISBN: 0-673-07858 (Teacher's Edition).

Family Life and Human Sexuality. Bienr, B. K. et al. (1987). Orlando: Harcourt Brace Jovanovich, Publishers. ISBN: 0-15-369501-3 (Teacher's Edition).

### **Audio Visual Materials:**

Westviking College Level II Science Video Series, vol. 2 - *Drug Abuse* (12:30min) vol. 3 - *Family Planning* (28:00/27:00)

Westviking College Science Video Series, vol. 11 - *Vitamin C* (22:38min.) vol. 14 - *Nutrition* (16:00min.)

**On-Line Resources:** Westviking Gopher

# IS 2013

## Matter

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### 1. Structure of Matter

- 1.1 Define matter.
- 1.2 Describe basic atomic theory.
- 1.3 Describe parts of an atom (protons, neutrons, and electrons).
- 1.4 Differentiate between elements, compounds, and mixtures.
- 1.5 Give examples and properties of elements, compounds, and mixtures.
- 1.6 Differentiate between heterogeneous and homogeneous mixtures.
- 1.7 Define solution, solvent, and solute.
- 1.8 Give examples of solutions, identifying the solute and solvent.
- 1.9 Define concentration.
- 1.10 Describe the effect of varying the concentration of solute and/or solvent in a solution.

### 2. Physical Change

- 2.1 Describe kinetic molecular theory.
- 2.2 Define physical change.
- 2.3 Give examples of physical change.
- 2.4 Give properties and examples of solids, liquids, and gases.
- 2.5 Describe changes from solid to liquid to gas.

### 3. Chemical Change

- 3.1 Define chemical change.
- 3.2 Give everyday examples of chemical changes.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Focus on Physical Science. Charles Heimber and Jack Price. Charles E. Merrill.

Modern Chemistry. Holt, Rinehart and Winston. (1990) ISBN: 0-03-014502-3.

Searching for Structure Book 3. James Lyons, James McDowell, Christopher Paige, and Douglas Paul (1982). Holt, Rinehart and Wilson.

Matter, Motion, and Machines. Joan S. Gottlieb (1990). Steck-Vaughn, Pippin Publishing Ltd.

Intermediate Science: Introductory Chemistry Workbook. Open Learning Agency. VA0057A.

Chemistry: A Human Venture. Stan Percival and Ross Wilson (1988). Irwin Publishing. ISBN: 0-7725-1696-0.

### **Audio Visual Materials:**

Westviking College Level II Science Video Series, vol. 4 - 1. *Physical and Chemical Change* (10:35 min) 2. *Elements, Compounds, and Mixtures*. (15:00 min)

**On-Line Resources:** Westviking Gopher

# IS 2014

## Energy

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### 1. Mechanical Energy

- 1.1 Define energy.
- 1.2 Define force and give examples.
- 1.3 Define friction and give examples.
- 1.4 Describe simple machines.
- 1.5 Demonstrate the use of simple machines.
- 1.6 Explain mechanical advantage.

### 2. Heat Energy

- 2.1 Distinguish between heat and temperature.
- 2.2 Describe heat transfer methods.
- 2.3 Describe heat expansion.

### 3. Magnetic Energy

- 3.1 Identify magnetic materials.
- 3.2 Diagram and describe magnetic fields.
- 3.3 State the laws of magnetism.
- 3.4 Identify Earth as a magnet.

### 4. Electrical Energy

- 4.1 Define electrical terms.
- 4.2 Describe electrical safety devices.
- 4.3 Read a household electrical meter and, given a rate, determine the monthly electrical energy cost.
- 4.4 Construct an electromagnet.

### 5. Other Forms of Energy

- 5.1 Describe chemical energy.
- 5.2 Describe nuclear energy.
- 5.3 Describe solar energy and its importance as a major energy source for the earth.

### 6. Transformation of Energy

- 6.1 State the Law of Conservation of Energy.
- 6.2 Define insulation and discuss its importance in everyday life.
- 6.3 Give examples of devices which transform energy from one form to another (e.g. heat engines, motors, etc.).

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Focus on Physical Science. Heimler, Charles H. and Price, Jack (1989). Merrill Publishing Co. ISBN: 0-675-03164-8.

Fundamentals of Physics: An Introductory Course. Martindale, David G., et al., (1987). D.C. Heath Canada Ltd. ISBN: 0-669-95113-7.

### **Audio Visual Materials:**

Westviking College Level II Science Video Series, vol. 5 - *Heat Transfer* (29:57 min) vol. 6 - *Expansion* (34:57min) vol. 7 - *Friction* (18:00min) vol. 8 - *Magnetism and Electromagnetism* (28:04min)

Westviking College Science Video Series, vol. 15 - *Heat and Temperature* (41:30min.)

### **On-Line Resources:** Westviking Gopher

# IS 2015

## The Planet Earth

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### 1. Sun, Moon, and Earth

- 1.1 Draw a map of the solar system and identify the planets.
- 1.2 Identify Earth's position within our solar system.
- 1.3 Apply the concept of revolution time to the planets in our solar system.
- 1.4 Describe the causes of day and night.
- 1.5 Describe the causes of the seasons.
- 1.6 Describe the causes of the tides.
- 1.7 Describe the phases of the moon.

### 2. Composition of Earth

- 2.1 Describe the layers of Earth.
- 2.2 Describe the composition of the atmosphere.
- 2.3 Describe the components of Earth's hydrosphere.

### 3. Weather and Climate

- 3.1 Describe the water cycle.
- 3.2 Distinguish between humidity, dew point, condensation, precipitation, and evaporation.
- 3.3 List the factors affecting weather, such as wind systems, ocean currents, and topography.
- 3.4 Measure temperature, rainfall, and wind direction.
- 3.5 Record weather conditions and air pressure over a period of time.
- 3.6 State the relationship between air pressure and winds.
- 3.7 Interpret weather maps.
- 3.8 Relate the major climatic regions to their indigenous plant and animal species.

### 4. Pollution

- 4.1 Identify human and natural origins of pollution.
- 4.2 Classify waste products as biodegradable or non-biodegradable.
- 4.3 Describe the impact of pollution such as the Greenhouse Effect upon the ozone layer.
- 4.4 Explain how recycling helps to reduce pollution.

## Potential Resources

**Please refer to the annotated bibliography at the end of this section for a brief description of each resource.**

Earth Science. (Canadian Edition). Namowitz and Spaulding (1987). D.C. Health Ltd. ISBN: 0-669-95294-X.

Focus on Earth Science. Hasser and Leach (1988). Merrill Pub. Co. ISBN: (student) 0-675-02671-7, (teacher) 0-675-02672-5.

Investigating the Earth. (Third Edition). Matthews et al. (1981). Houghton Mifflin. ISBN: (student) 0-395-30167-X, (teacher) 0-395-30168-8.

Essentials of Physical Geography. (Fourth Edition). Gabler et al. (1990). Saunders College Pub. ISBN: 0-03-035304-1 and Guide 0-03-054958-2.

Physical Geology. Skinner and Porter (1987). John Wiley and Sons.

Human Geography: Landscapes of Human Activities. (Second Edition). Fellman et al. (1990). Wm. C. Brown Pub.

World Issues in the Global Community. Harchman and Hannell (1989). John Wiley and Sons. ISBN: 0-471-79692-1

Global Science. (Third Edition) Christensen, J.W., (1991) Kendall/Hunt Publishing Company. ISBN: 0-8403-4657-3

Adult Basic Education (Intermediate Science): The Weather Workbook. Open Learning Institute. VA0059A.

**On-Line Resources:** Westviking Gopher

# Level II Science

## Annotated Bibliography

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**Note: A plethora of science textbooks exists so this annotated bibliography and the potential resources list should not be construed as exhaustive. Most of the textbooks which you have been using will be equally relevant for this version of the program. You are encouraged to continually seek new or better references.**

**All resources may not currently be in print. ISBN numbers are listed where available.**

Aids: What Young Adults Should Know. (2nd Canadian edition). Dr. William Goodyear. (1987). *Douglas & McIntyre*, carried by *Nelson Canada*.

*Small booklet which covers the main points about AIDS. Used in school system, but suitable for adults as well. The ISBN is 920841538*

Chemistry at Work. Brenda Shapiro & Stan Shapiro. (1989). *Copp Clark Pitman*.  
ISBN: 0773047301

*A great "hands-on" approach with lots of activities and creative or practical examples. A good teacher's resource.*

Environmental Resource Directory. *Public Focus*.

*Lists, describes and rates environmentally relevant books, periodicals, fact sheets, films, videocassettes, theatrical performances, and games.*

Exploring Your World: The Adventure of Geography. Special Publications Division, *National Geographic Society*.

*Encyclopedia-type reference book on geography.*

Focus on Physical Science. Charles Heimler & Jack Price. (1988). *Charles E. Merrill*. [ISBN: 0675031648]. Accompanied by: Focus on Physical Science: A Learning Strategy for the Laboratory. Annette Saturnelli. *Charles E. Merrill*, carried by *McGraw-Hill Ryerson*. [ISBN: 0675031680]

*Good general level text which covers most of our physical science objectives in Level II.*

Focus on Earth Science. Dale T. Hesser & Susan Leach. (1989). *Merrill Publishing Company*, carried by *McGraw-Hill Ryerson*. [ISBN: 0675026717]

*Useful for earth science sections of Level II.*

Food and Nutrition. Caleb E. Crowell. *Educational Designs, Inc.* carried by *Monarch Books of Canada*. ISBN 0-87694-214-1.

*Covers choosing food for best nutrition and best economy, and planning meals to maximize both nutrition and economy. Reading level 3-6. Includes exercises, review tests, and teacher's guide.*

Health: A Way of Life. Marion Pollock, Candace Purdy, & Charles Carroll. (1982).

*Covers most of the objectives in our Level II health course. Written for high school level, but suitable for adults as well.*

Mastering Basic Skills in Science. Donald D. Abramson. Amsco. ISBN AS495P.

*Focuses on the fundamental process of enquiry skills that students need to acquire for success in their science courses. Written for students with below average reading levels. Objectives of IS 2011 can be covered with this book. Answer key available.*

Matter, Motion, and Machines. Joan S. Gottlieb. (1990). Steck-Vaughn, carried by Pippin Publishing Ltd.

*Part of a series, The Wonders of Science, written for junior high and high school students who are reading at low levels. Passages are short, and readability level is 2-3. Objectives of IS 2013 and IS 2014 are largely covered by this book.*

Nutriscore. (2nd. edition). Ruth Fremen & Dr. Zak Sabry. (1989). Stoddart.

*Used in school system. Good for section on nutrition and diet in our Level II health.*

Nutrition. [NMN3G-J]. Independent Learning Centre. Kwik-Kopy Printing.

*A distance education package covers nutrition and health, choosing food, meal patterns and nutrition, and food shopping, storage, and preparation.*

Perspectives On Health. Leroy H. Getchell, Grover D. Pippin and Jill W. Varnes. (1994).

*D.C. Heath and Company.* ISBN: 0-669-30407-7

*Covers all of the objectives for the Level II Health course at a fairly high reading level. Senior High School students appear to be the target audience, although this text is also appropriate for adult learners.*

Physical Science: The Challenge of Discovery. Mark A. Carle, Mickey Sarquis & Louise Mary Nolan. (1991). *D.C. Heath And Company.* ISBN: 0-669-18060-2

*Provides a thorough coverage of most of our physical science objectives in Level II, particularly IS 2011 Introduction to Science, IS 2013 Matter and IS 2014 Energy.*

*There are also sections dealing with pollution which are relevant to IS 2015 The Planet Earth.*

Readings in Physical Science. (1987). Cambridge.

*Designed for adult reading. Contains simple and readable sections on matter, energy, and earth science.*

Science: Process and Discovery. Dennis Field. (1989). Addison Wesley.

*Examines scientific method and the history of science. Short narrative articles with questions. Teacher's guide available.*

Searching for Structure Book 3. James Lyons, James McDowell, Christopher Paige, and Douglas Paul. (1982). Holt, Rinehart, & Winston, carried by Harcourt-Brace & Company.

*This book has been around for some time, and is probably readily available.*

The Evaluation of Scientific Processes. Alan Griffiths. (1987). *Holt, Rinehart, & Winston*, carried by *Harcourt-Brace & Company*.

*Written to accompany Searching for Structure for the Newfoundland school system. A good teaching resource on the processes of science. Available from Department of Education and Training (School Supplies).*

The Earth and Beyond. Joan S. Gottlieb. (1990). *Steck-Vaughn*, carried by *Pippin Publishing Ltd.*

*Workbook is part of a series, The Wonders of Science, written for junior high and high school students who are reading at low levels. Passages are short, and readability level is 2-3. Many of the objectives of IS 2015 are covered by this book.*

The Human Body. Joan S. Gottlieb. (1990). *Steck-Vaughn*, carried by *Pippin Publishing Ltd.*

*Workbook is part of a series, The Wonders of Science, written for junior high and high school students who are reading at low levels. Passages are short, and readability level is 2-3. Many of the objectives of IS 2012 are covered by this book.*

Well-Being. [NMW3G-J]. Independent Learning Centre. *Kwik-Kopy Printing*.

*This distance education package covers well-being, how it can be achieved and maintained, and why it is important to your life.*

World Issues in the Global Community. Robert Harshman & Christine Hannell. (1989). *John Wiley & Sons*. The ISBN is 0471796921.

*Useful as a teacher's resource on pollution, resources, and global issues.*

## **Videos and Films:**

*NIMCO, Inc.*  
P.O. Box 9  
117 Hwy. 815  
Calhoun KY 42327-0009  
TEL: (502)-273-5050

This company may carry a variety of films, cassettes and software on a variety of science concepts.

## **Publishers and Suppliers**

### *ACCESS Network*

The Alberta Educational Communications Corporation  
295 Midpark Way, S.E.  
Calgary, Alberta T2X 2A8  
Telephone: (403) 256-1100  
FAX: (403) 256-6837

### *Addison-Wesley Publishers Limited*

26 Prince Andrew Place  
P.O. Box 580  
Don Mills, Ontario  
M3C 2T8  
Telephone toll free: 1-800-465-0536  
Fax: (416)-443-0948

### *Benjamin Cummings Publishing Co.*

carried by *Addison-Wesley*

### *Bobbs-Merrill Company, Inc.*

4300 W. 62nd Street  
Indianapolis, Indiana 46268

### *Boreal Laboratories*

1820 Mattawa Avenue  
Mississauga, Ontario L4X 1K6  
Toll free telephone: 1-800-387-9393  
FAX (416) 279-9203  
L4X 1K7

### *Breakwater Books Ltd.*

100 Water Street  
St. John's, NF  
A1C 6E6  
Phone: (709) 722-6680  
Fax: (709) 753-0708

### *Wm. C. Brown Publishers*

Dubuque, Iowa 52001  
Canadian Sales Representative:  
Sylvain Henry  
District Office  
384 Dolores  
Favreville, Quebec  
H2P 3G7  
Telephone: (514) 622-9911

### *Canadian Government Publishing Centre*

Supply and Services Canada  
Ottawa, Canada  
K1A 0S9

*Career Institute*  
423 Cardinal Drive  
Little Falls  
New Jersey 07424

*Careerware*  
STM Systems Corporation  
2220 Walkley Road  
Ottawa, Ontario K1G 5L2  
Toll free telephone: 1-800-267-1544  
FAX: 1(613) 737-9479

*Central Scientific Company*  
1830 Mattawa Avenue  
Mississauga, Ontario L4X 1K1  
Toll free telephone: 1-800-268-4355

*Clarke, Irwin & Company Limited*  
791 St. Clair Avenue West  
Toronto, Ontario M6C 1B8

*Coles Publishing*  
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Rexdale, Ontario  
M9W 1C1

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*Canadian Heart Foundation*

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Telephone: 753-8521

*Canadian Institute for Scientific and Technical Information*

National Research Council  
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Telephone (613) 993-2013

*Canadian Congress of Learning Opportunities for Women*

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*Career Support Services*

Department of Employment and Labour Relations  
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Toll free telephone 1-800-563-6600

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*Consumer and Corporate Affairs Canada*

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Suite 202  
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*Department of Environment and Lands*

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*Department of Fisheries*

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*Heritage Foundation of Newfoundland and Labrador*  
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*Newfoundland Lung Association*  
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Literacy Branch  
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