Computer Science 20, 30
A Bibliography for the Secondary Level

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Prepared by:
Instructional Resources Unit
Curriculum and Instruction Branch
Saskatchewan Education
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Computer science 20, 30: A bibliography for the secondary level

Includes indexes.


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Foreword

This bibliography is a short list of materials that is considered appropriate for support of the new Computer Science 20, 30: Curriculum Guidelines for the Secondary Level. The purpose of this listing is to provide teachers with suggested starting points for building a wide range of suitable instructional and assessment materials.

The materials in this bibliography are offered only as suggestions; teachers are encouraged to investigate other applicable resources and to select additional suitable materials.

Resource-based Learning

The items listed are intended to promote the philosophy of resource-based learning, in which the students gain knowledge and understandings through a variety of resources and instructional approaches. In addition to print and video materials, the list includes internet sites.

Teachers are reminded that resource-based courses of study can be enhanced through the use of additional materials such as the following:

- newspapers and magazines
- pamphlets, brochures
- television and radio programming
- environmental print, such as posters
- internet sites featuring instructional and assessment strategies, computer-related content, and basic skill development
- public library collections, including the National Library of Canada
- local resources, such as community colleges, computer training institutions, and local computer and internet clubs.

It is important that human resources be accessed as well. Every community has capable people who can enrich educational experiences. Local computer-related businesses may be willing to assist in-school and work experience programs.

When selecting resources, the following suggestions may be helpful.

Background Review: Selection Policy and Criteria for Selection

This bibliography provides suggestions for resources; however, it remains the responsibility of classroom teachers, in consultation with teacher-librarians, to preview and select materials. Selection of teacher resources should be based on the specific professional needs of the teacher, while the selection of student resources should take into consideration the objectives of the curriculum, and students' interests, abilities, prior knowledge, and experience.

As well, material should be considered in terms of the following characteristics:

- literary quality
- cultural relevance and accuracy
- country of origin
- equity regarding gender, age, ability, and race
- reflection of the curriculum's philosophy and objectives
- accuracy
- ease of reading
- relevance to current issues
- adaptability.

Materials should be chosen in accordance with the school division's materials selection policy. Every school division is responsible for developing a materials selection policy in order to meet the particular needs of that division.

Several publications available from the Saskatchewan Learning Resources Distribution Centre (LRDC, formerly the Book Bureau) provide further assistance in the selection process. These include:

- Diverse Voices: Selecting Equitable Resources for Indian and Métis Education, 1992 - suggests strategies for recognizing and dealing with bias in resources.

- Indian and Métis Education Policy From Kindergarten to Grade XII, 1995 - provides rationale and guidelines for integrating Indian and Métis materials into curricula.


Analyzing Present Resources

This bibliography should be cross-referenced with the school resource centre catalogue in order to identify suitable resources already present in the school library collection.

Materials in the present collection should be assessed based on the needs of the curriculum, the students, and teachers.

Resource needs not met by the present collection could be identified by the teachers and teacher-librarian working together. Some materials may be useful for several grade levels and subject areas. Educators are encouraged to coordinate material selection at the school or school division level.

Previewing Resources

Teachers and teacher-librarians are urged to preview materials carefully before suggesting them for classroom use, and are advised to refer to their school division's selection policy for guidance in making choices about materials.

If schools have not been able to preview the materials prior to purchase, it is advisable to order only one copy to review before placing orders for multiple copies. Return policies vary from company to company, but if inappropriate materials have to be returned, they must be in saleable condition. The LRDC will allow most materials to be returned.

Purchasing Resources

Schools interested in purchasing resources listed in the bibliography should contact the distributors cited in the Distributor Directory or special order them from the LRDC. Prices quoted are subject to change and do not include taxes, but will serve as a guide to approximate costs.

Internet Sites

Saskatchewan Education provides a forum through its homepage on the World Wide Web for teachers to share educationally appropriate internet sites at:

http://www.sasked.gov.sk.ca/review/addsuggest.html

Saskatchewan Education also coordinates the evaluation of internet sites to identify those that support its curricula. Suggested sites for evaluation may be accessed through Saskatchewan Education’s home page on the World Wide Web at:

http://www.sasked.gov.sk.ca/review/suggestsearch.html

Information on sites that are highly recommended for curriculum support is offered at:

http://www.sasked.gov.sk.ca/curr_inst/iru/assig_pr.html

Virus Alert

Internet users, who download files and applications should be aware that viruses abound in the internet environment. Users should scan downloaded files and applications using an anti-virus utility. It is also advisable that updates to the anti-virus utility be purchased regularly. These updates recognize the newest viruses as well as the old.

The following internet sites provide a very brief overview of what is available. These sites have been evaluated and are recommended for use in schools. It is recommended that a careful screening and evaluation of the site be undertaken prior to using it.

If users are unsure about the reliability of the information found at a website, they should
compare the author's claims and evidence with other sources with which they are familiar. When in doubt, it is advisable to choose only the sites that include a by-line—a signature tag that lists the author's and/or contributors' names along with the title. If the site does not identify contributors and authors, the information found at the site might not be reliable.

Help-Site.com
http://help-site.com/c.m/

This is a website that provides over 950 free documents on computer programming. It also links to over 170 computer-related sites including on-line computer programming courses.

Jon’s C++ Resources Directory
http://www.cs.bham.ac.uk/~jdm/cpp.html

This site provides links to various courses, documentation, and resources that deal with the C++ programming language.

TechEncyclopedia
http://www.techweb.com/encyclopedia/

This site is the source of more than 11,000 definitions of computer terms and concepts. It also provides links to other related sites.

Tufts Technologies: Other Important and Useful Links
http://www.tuftstech.com/links.htm

This page from Tufts Technologies is mainly for software developers using C/C++, Java, and HTML languages. There are a number of links on the Web that contain great information for the developer. This page consolidates some of those links into one readable and reliable resource.

Visual Basic On-line Magazine
http://www.vbonline.com/vb-mag/

Published monthly, this on-line resource presents a series of articles, information, and features related to programming in Visual Basic.

How to Use the Bibliography

Titles and Descriptions
Titles are listed alphabetically. The entries provide bibliographic information and suggestions for use.

An example of a citation for text is:

<table>
<thead>
<tr>
<th>Title</th>
<th>Media Designation</th>
<th>Authors</th>
<th>Publisher</th>
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</thead>
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Distributor  Date  Collation      Order Number             Price     Annotation

This resource focusses on the use of Pascal as a programming language. It targets the senior level computer programming language and builds upon programming learned in other computer programming classes. A-Plus Pascal presents many easy-to-understand examples that clearly illustrate programming concepts. Each chapter contains a list of objectives, key words, a summary, problems, syntax diagrams, spiral reference keys, and boxed features that include such items as “Extras for Experts,” “Programming Tips,” “Programming Skills,” “Debugging Hints,” “Pascal Differences,” and “Computer Connections.” The resource includes a table of contents, several appendices related to programming with Pascal, and an index.

Suggested Use: Computer Science 30: Analyzing Programming; Application Programming; Computer Programming; Computer Systems; Number Systems and Codes

The abbreviation hdc. denotes hardcover edition; pbk. denotes paperback edition.

ISBN denotes the International Standard Book Number, usually the order number.

Dup. is an abbreviation indicating that a video is available for duplication from Media Group.

(CAN) preceding the annotation indicates that the resource includes Canadian content.

Suggested Use provides suggestions for the course and topic that the resource best supports. All materials in this bibliography are listed as student resources.

Distributor Directory

The abbreviations enclosed in parentheses following the publisher or producer represent the distributor. The full names, addresses, fax, and phone numbers of these companies are given in this section. Please note that some distributors provide a toll free 1-800 phone number.

Index of Suggested Uses

Titles are listed alphabetically according to the course and topic that the resource best supports.

Media Index

This resource focusses on the use of Pascal as a programming language. It targets the senior level computer programming language and builds upon programming learned in other computer programming classes. A-Plus Pascal presents many easy-to-understand examples that clearly illustrate programming concepts. Each chapter contains a list of objectives, key words, a summary, problems, syntax diagrams, spiral reference keys, and boxed features that include such items as “Extras for Experts,” “Programming Tips,” “Programming Skills,” “Debugging Hints,” “Pascal Differences,” and “Computer Connections.” The resource includes a table of contents, several appendices related to programming with Pascal, and an index.

Suggested Use: Computer Science 30; Analyzing Programming; Application Programming; Computer Programming; Computer Systems; Number Systems and Codes


Prices follow.

- Single site license: $49.00
- Single district license: $99.00
- Series site license (10 programs): $392.00
- Series district license (10 programs): $792.00

(CAN) This video focusses on what bits (0s and 1s) are doing for humans (diagnostic instrumentation and biomedically engineered aids for disabilities).

Suggested Use: Computer Science 20; Computer Science 30; Research and Presentation

Biotechnology (Video). (Cybernation Series). TV Ontario (ITF), 1997. 28 min. Order no. 540808

Prices follow.

- Single site license: $49.00
- Single district license: $99.00


This textbook provides a complete introductory course on the essentials of C++ programming and problem solving. It presents many, easy-to-follow examples and programming techniques. Fundamentals of C++ contains many instructional features that give students a variety of opportunities to understand and perfect C++ programming. The resource includes a table of contents, a glossary, several indices related to C++ programming, and an index.

Suggested Use: Computer Science 20; Computer Science 30; Analyzing Programming; Application Programming; Computer Programming; Computer Systems; Number Systems and Codes; Software and Hardware Systems


This resource presents a well-paced instructional design for the teaching of the basic concepts of programming with Pascal. It features, in part, communication and style tips, programming exercises and problems, module specifications,
suggestions for test programming, a focus on program design case studies, running and debugging hints, and structure charts. The resource includes a table of contents, an index, a glossary, and a series of appendices dealing with specific nomenclature of computer programming. Suggested Use: Computer Science 20; Computer Science 30; Analyzing Programming; Application Programming; Computer Programming; Computer Systems Software and Hardware Systems; New Media; Number Systems and Codes

Prices follow.

- Single site license $49.00
- Single district license $99.00
- Series site license (10 programs) $392.00
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(CAN) This program discusses LANs and WANs, the internet, and surrounding economic and social issues. Suggested Use: Computer Science 20; Computer Science 30; New Media; Societal Impact of Information Technology

**Going Digital** (Video). (Cybernation Series). TV Ontario (ITF), 1997. 27 min. Order no. 540802
Prices follow.

- Single site license $49.00
- Single district license $99.00
- Series site license (10 programs) $392.00
- Series district license (10 programs) $792.00

(CAN) This program addresses the digital economy, the convergence of technologies, and their economic and social impacts. Suggested Use: Computer Science 20; Computer Science 30; New Media; Societal Impact of Information Technology


This resource presents a detailed, well-written exploration into programming with C++. It offers a variety of hands-on exercises in which students have to either enter the program code or load, compile, and run existing programs. Each chapter contains a list of key words, a summary, projects for practice, case studies, and sidebars that warn students of potential pitfalls and note special features or information that can enrich students’ understanding. The resource includes a table of contents, a glossary, several appendices related to C++ programming, and an index. Suggested Use: Computer Science 30; Analyzing Programming; Application Programming; Computer Programming; Computer Systems; Numbers and Operations; Software and Hardware Systems


This resource explores the realm of computers from their history to issues arising from the digital revolution. *Introduction to Computers and Technology* is a well-written, concise look at what computers are, from where they came, how they are interconnected, why they have become the tool of preference in the private and public sectors, and the changes in society that they are provoking. The resource encourages discussion and exploration with features such as “CyberForum,” “Caveat Emptor,” and “Delving Deeper.” It also includes a table of contents, a glossary, and an index. Suggested Use: Computer Science 20; Computer Science 30; Computer Systems; New Media; Research and Presentation; Societal Impact of Information Technology; Software and Hardware Systems

**Material World** (Video). (Cybernation Series). TV Ontario (ITF), 1997. 25 min. Order no. 540807
Prices follow.

- Single site license $49.00
- Single district license $99.00
- Series site license (10 programs) $392.00
- Series district license (10 programs) $792.00

(CAN) The program addresses the role of materials in the development of technology and the evolution of materials engineering.
Phototonics (Video). (Cybernation Series). TV Ontario (ITF), 1997. 27 min. Order no. 540806
Prices follow.

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(CAN) This program poses the questions: What is light and how does it enhance electronic information processing? It gives the example of fingerprinting with optical computers.
Suggested Use: Computer Science 20; Computer Science 30; New Media

Promise or Peril (Video). (Cybernation Series). TV Ontario (ITF), 1997. 26 min. Order no. 540810
Prices follow.

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(CAN) This program addresses nanotechnology and surrounding issues. It asks: Is the greatest test for the future a computer in every home, a mobile phone, free access to information, or eradication of poverty and clean-up of the environment?
Suggested Use: Computer Science 20; Computer Science 30; New Media; Research and Presentation; Societal Impact of Information Technology

Qbasic. 2nd ed. (Print-Non-Fiction). Baumann, Susan K. and Mandell, Steven L. South-Western Educational Publishing (NEL), 1997. 492 p. ISBN 0-314-20547-0 ($77.95 hdc.).

This resource is a well-written primer on programming with Qbasic. It uses a hands-on approach to instruction and offers thorough, easily understood explanations that hold students' interest. It includes a table of contents, several appendices related to programming using Qbasic, a glossary, an index, and a Qbasic quick reference card.
Suggested Use: Computer Science 20; Computer Science 30; Analyzing Programming; Computer Programming; Computer Systems; Software and Hardware Systems


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(CAN) This video focusses on microprocessors and what they are enabling, and the new open systems. It also considers the economic and social impact of this modern technology.
Suggested Use: Computer Science 20; Computer Science 30; New Media; Societal Impact of Information Technology


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(CAN) This video compares the computer-generated information explosion to the one which resulted from the invention of the printing press.
Suggested Use: Computer Science 20; Computer Science 30; New Media; Societal Impact of Information Technology


This well-written resource presents the concepts of programming with visual basic using a hands-on approach. Using Visual Basic presents many relevant and interesting sample programs and examples that clearly illustrate various aspects of computer programming. Please note that this text uses Visual Basics 3 and Windows 3.1. The
resource includes a table of contents, an index, and an appendix dealing with technological issues.
Suggested Use: Computer Science 20; Computer Science 30; Analyzing Programming; Application Programming; Computer Programming; Computer Systems; Number Systems and Codes

**Virtual and Interactive** (Video). (Cybernation Series). TV Ontario (ITF), 1997. 26 min.
Order no. 540805. Prices follow.

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(CAN) This program discusses the pros and cons of living in a technological world. It addresses new media virtual reality, and teleconferencing. It also asks viewers to consider what the thinking capacity of a computer might be.
Suggested Use: Computer Science 20; Computer Science 30; New Media; Societal Impact of Information Technology
Index of Suggested Uses

Please note that the titles in the indexes are truncated. The complete titles appear in the citations for the resources.

Computer Science 20
Cybernation Series
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding
Introduction to Computers and Technology
Qbasic
Using Visual Basic

Computer Science 30
A-Plus Pascal
Cybernation Series
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding
Introduction to Computer Science Using
Introduction to Computers and Technology
Qbasic
Using Visual Basic

Analyzing Programming
A-Plus Pascal
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding
Introduction to Computer Science Using
Qbasic
Using Visual Basic

Application Programming
A-Plus Pascal
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding
Introduction to Computer Science Using
Using Visual Basic

Computer Programming
A-Plus Pascal
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding

Introduction to Computer Science Using
Qbasic
Using Visual Basic

Computer Systems
A-Plus Pascal
Cybernation Series
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding
Introduction to Computer Science Using
Introduction to Computers and Technology
Qbasic
Using Visual Basic

New Media
Cybernation Series
Fundamentals of Pascal: Understanding
Getting Wired
Going Digital
Introduction to Computer Science Using
Material World
Phototonics
Promise or Peril
Smaller, Faster, Smarter
A Technological Transformation
Virtual and Interactive

Number Systems and Codes
A-Plus Pascal
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding
Using Visual Basic

Numbers and Operations
Introduction to Computer Science Using

Research and Presentation
Biomedics
Biotechnology
Cybernation Series
Introduction to Computers and Technology
Material World
Promise or Peril
Societal Impact of Information Technology

Cybernation Series
Getting Wired
Going Digital
Introduction to Computers and Technology
Promise or Peril
Smaller, Faster, Smarter
A Technological Transformation
Virtual and Interactive

Software and Hardware Systems

Cybernation Series
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding
Introduction to Computer Science Using
Introduction to Computers and Technology
Qbasic

Media Index

Print-Non-Fiction

A-Plus Pascal
Fundamentals of C++: Understanding
Fundamentals of Pascal: Understanding
Introduction to Computer Science Using
Introduction to Computers and Technology
Qbasic
Using Visual Basic

Video

Biomedics
Biotechnology
Cybernation Series
Getting Wired
Going Digital
Material World
Phototonics
Promise or Peril
Smaller, Faster, Smarter
A Technological Transformation
Virtual and Interactive
Distributor Directory

**GDS**  General Distribution Services  
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(800) 387-0172  
(416) 445-3333  
Fax: (416) 445-5967  
Gds@genpub.com  
www.genpub.com

**NEL**  ITP Nelson Canada  
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SCARBOROUGH ON  M1K 5G4  
(800) 268-2222  
(416) 752-9448  
Fax: (800) 430-4445  
Inquire@nelson.com  
www.nelson.com

**ITF**  International Tele-Film Enterprises Ltd.  
41 Horner Ave Unit 3  
ETOBICOKE ON  M8Z 4X4  
(800) 561-4300  
(416) 252-1174  
Fax: (416) 285-2155  
Sales@itf.ca  
www.itf.ca