

Correlation of the textbook *Introduction to Programming in Turing* to the Ontario Computer and Information Science Policy Document for Grade 10 TIK20

Expectation Code	Expectation	Page Number in textbook
Theory and Foundation		
<i>Overall Expectations</i>		
TFV.01I	- describe the stages in the software design process;	pages 62, 65-68
TFV.02I	- define and explain the fundamental programming constructs;	pages 11, 208-209
TFV.03I	- describe the functions of internal and external computer components;	pages 14-17, 20-22, 24-25
TFV.04I	- describe the relationship among networks, operating systems, application software and explain their uses	pages 26-28
<i>Specific Expectations</i>		
Problem Solving, Logic, and Design		
TF1.01I	- use input, processing, and output correctly as a model for solving problems using a computer;	pages 82-90
TF1.02I	- explain how clarity at each step in the problem-solving process determines the quality and effectiveness of the final product;	pages 65-68
TF1.03I	- define a problem by identifying the required result, the necessary user inputs, and the steps required to produce the result.	pages 62, 67, 216-217
Hardware, Interfaces, and Networking Systems		
TF2.01I	- use correct terminology to describe hardware concepts;	pages 14-17, 20-22, 24-25
TF2.02I	- identify the basic internal components of the computer:	pages 15-217, 20-22, 24-25

	the computer;	20-22, 24-25
TF2.03I	- identify the functions of peripheral devices;	pages 14, 17, 20-21, 26
TF2.04I	- describe operating system functions that meet user needs;	pages 26
TF2.05I	- describe networking system functions that meet user needs;	pages 22-23
TF2.06I	- compare and contrast application, programming, and systems software.	pages 25-28
Programming Concepts		
TF3.01I	- use correct terminology to describe programming concepts;	pages 61-374
TF3.02I	- describe the types of data that computers store, including numbers and characters;	pages 82-87
TF3.03I	- define constants, variables, expressions, and assignment statements, including the order in which the operations are performed;	pages 75, 82-90, Appendix E
TF3.04I	- explain the need for decision and repetition structures, and how they can be expressed in different programming languages;	pages 13, 96-111, 152-162
TF3.05I	- explain the difference between logic and syntax errors;	pages 46, 85
TF3.06I	- explain the role of internal documentation in ensuring program correctness and clarity.	pages 62, 64-65, 67, 91
Skills and Processes		
<i>Overall Expectations</i>		
SPV.01I	- apply a problem-solving model;	pages 62-63, 65-68
SPV.02I	- select software to solve specific problems;	pages 26-28
SPV.03I	- use proper programming practice;	pages 62, 63-65, 66-67, 90-92, 106
SPV.04I	- create computer programs using fundamental programming constructs;	pages 72-77, 82-90, 96-111, 162-162.....
SPV.05I	- use correctly an operating system that	pages 22-23,

	includes a local network to perform management tasks.	26
<i>Specific Expectations</i>		
Problem Solving, Logic and Design		
SP1.01I	- state problems accurately to gain a clear understanding of what is required for a solution;	pages 66, 216 (+ many examples)
SP1.02I	- identify and resolve ambiguities and missing information in a problem statement;	pages 66, 216 (+ numerous examples)
SP1.03I	- design a simple method to obtain clear and precise information from the user;	pages 62, 67, 216 (+ many examples)
SP1.04I	- state the steps required to take user input and produce correct output;	pages 62, 67, 216-217
SP1.05I	- solve and verify solutions to simple problems using application software, calculators, and computer programs;	pages 26-28, 73-77, 103...
SP1.06I	- compare and contrast a variety of tools, such as application software, calculators, and computer programs, based on ease of use and time required.	pages 26-28, 73-77 (+ many examples)
Hardware, Interfaces, and Networking Systems		
SP2.01I	- use correctly file management techniques to create, name, copy, move, delete, and organize files;	pages 40-41, 43-44, 50-51
SP2.02I	- use correctly networking services to log on and off and access shared files and devices;	pages 22-23 49-51, 54-55
SP2.03I	- use correctly Internetworking services to access and navigate global information resources;	pages 28-29
SP2.04I	- develop resources to share information locally and globally;	pages 22-23, 28-29
SP2.05I	- maintain backup copies of program files on different media.	pages 16, 43-44
Programming Concepts		
SP3.01I	- write numbers and characters in such a way that computers recognize them (e.g., place	pages 72-77

	quotation marks around characters);	
SP3.02I	- use correctly constants, variables, expressions, and assignment statements to store and manipulate numbers and characters in a program;	pages 82-90
SP3.03I	- use descriptive naming conventions for constants, variables, and expressions;	pages 64, 66-67, 91
SP3.04I	- write input and output statements that conform to a program design;	numerous examples throughout
SP3.05I	- write programs that compare data using constants, variables, and expressions;	pages 97-102, 108-111, 152-162 (+ many examples)
SP3.06I	- write a program that uses a decision structure involving two or more alternatives;	pages 152-162 (+ many examples)
SP3.07I	- write a program that uses a counted repetition structure;	pages 102-110 (+ many examples)
SP3.08I	- use appropriate sequences, decisions, and loops to conform to a program design;	pages 72-77, 82-90, 96-111, 152-162...
SP3.09I	- incorporate internal documentation to a specific set of standards to ensure clarity and maintainability;	pages 62, 64-65, 91
SP3.010I	- trace the execution of programs to find and correct logic and syntax errors;	pages 13, 46, 85-86, 181-182...
SP3.011I	- validate a program using appropriate data.	pages 67-68, 83-88 (+ many examples)
Impact and Consequences		
<i>Overall Expectations</i>		
ICV.01I	- describe the evolution of programming languages;	pages 6-13
ICV.02I	- identify the social impact of computers and associated technologies;	pages 29-33
ICV.03I	- identify related computer careers.	pages 62-63

<i>Specific Expectations</i>		
IC1.01I	- describe the evolution of different levels of programming languages;	pages 6-13
IC1.02I	- describe the need to translate higher-level languages to machine code to make a computer operable;	page 8
IC1.03I	- explain major developments in information technology and anticipate future changes;	pages 3, 29-33
IC1.04I	- describe software-related careers;	pages 62-63
IC1.05I	- describe how computers change the ways in which information is collected and used and explain how this affects people's privacy and access to information;	pages 30-31
IC1.06I	- describe how computers change the ways in which people live, work, and communicate;	pages 29-33
IC1.07I	- comply with acceptable computer use policies;	pages 31
IC1.08I	- use appropriate strategies to prevent potential health and safety problems associated with computer use, such as posture problems, eye strain, and musculoskeletal injuries.	