

Conneaut School District - Introduction to Computer Programming

Adopted: May 2018

Major Topic	Concepts	Time	The students will know:	Skills	Assessment	Standard(s)
VB Scripting	Write Programs in VB Scripting	20 days	Students will know how to write basic scripts using Notepad ++.	Learn VB Scripting Practice problems Writing program in VB Scripting	VB scripting problems and coding drills, Projects, Formative Assessments, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 1: Introduction to Visual Basic 2013 Programming	Introduce Visual Basic utilizing Visual Studio	6 days	Students will know what an IDE, specifically Visual Studio, is. Students will know the role of a developer/computer programmer. Students will understand what a software and computer program is.	Learn how to use arithmetic operations Understand role of input, processing, and output data Explain different frameworks including .NET, ADO.NET, ASP.NET, MSIL, and CLR frameworks	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 2: Program and Graphical User Interface Design	Introduce GUI design	10 days	Students will know how to create user interfaces, or graphical user interfaces. Students will know how the program development life cycle.	Learn how to instantiate objects and fine tune a user interface Learn how to understand programming documentation like Requirements documents, Use Case definitions, and Event Planning documents	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 3: Program Design and Coding	Design Code for programs	18 days	Students will know how to code their programs using precursory scripting knowledge. Students will know how to analyze IntelliSense	Learn how to change object properties Learn how to add images and import them as a resource Learn how to programming code Learn how to debug a program Learn how to prepare documentation for a program	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 4:	Understand how variables	18 days	Students will know how to	Learn how to use literals and constants in addition to variables	Knowledge Checks,	15.4.12 A 15.4.12 C

Variables and Arithmetic Operation	and various operators work together		create and modify new objects like TextBoxes Students will know how to convert between data types	Learn how to check for user input correctness with methods like IsNumeric Understand and use various operators Use assignment statements to place data	Formative Assessments, Projects, Multiple Choice Test	15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 5: Decision Structures	Understand how to use Decision Structures of Conditional Logic	20 days	Students will know how to create containers and other new objects. Students will review how to create decision structures or conditional logic.	Learn how to write If/Then/ElseIf/Else statement Learn how to write Select Case statements Learn how to use containers and radio buttons	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 6: Loop Structures	Understand how to create and utilize a loop structure	20 days	Students will know how to create loop structures. Students will know how to create new objects.	Learn how to write For/Next and While loops Learn how to avoid infinite loops and how to validate data	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 7: Using Procedures and Exception Handling	Understand how to create and utilize exception handling	20 days	Students will know how to identify different exceptions. Students will learn how to code their own sub procedures.	Learn how to code a sub procedure Learn how to pause a program's runtime Learn how to create splash screens Learn how to identify and utilize various exceptions Learn how to use a Try-Catch block	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 8: Using Arrays and File Handling	Understand how to use a collection of data	20 days	Students will know how to initialize and access array elements. Students will know the difference between single and multidimensional arrays.	Learn how to create and edit an array Learn how to access an array Learn how to resize an array	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L

Chapter 9: Creating Web Applications	Understand how to create web applications	20 days	Students will know how to create web applications utilizing Visual Studio, HTML, JavaScript, and SQL. Students will know how to add new objects specific to web applications.	Learn how to create applications that exist solely on the web Learn how to set up web form properties Learn how to validate data	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Final Project	Complete a review on all materials	8 days	Students will know how to create an application of their own design from scratch.	Review and present final projects	Knowledge Checks, Formative Assessments, Projects, Multiple Choice Test	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G 15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
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