

Conneaut School District - iOS App Development with Swift & Xcode

Adopted: May 2018

Major Topic	Concepts	Time	The students will know:	Skills	Assessment	Standard(s)
Chapter 01 - 02: Introduction & Swift Programming Language	Introduce Swift Programming Language and Xcode IDE	25 days	Students will know the background of the Swift language as well as the Xcode IDE. Students will learn how to create their first playground files, or mini-applications. Students will know the different data types of the Swift language.	Learn about the Swift language history and the Xcode IDE history Learn how to create their first Swift programming commands Learn how to utilize playground files as learning tools Learn how to use various data types such as Integers and Strings	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: Introduction to Classes, Objects, Methods and Functions	Introduce the abstract concept of Classes and Objects	15 days	Students will know how to identify the difference between a class and an object. Students will know how to create their own methods and functions.	Learn how to create your own classes and objects Learn how to create your own methods and functions Learn how to import various modules including the Foundation Framework Learn how to use the NumberFormatter module	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: Control Statements, Assignment and Logical Operators	Understand how all logical operators and assignment statements work	20 days	Students will know how to use conditional logic statements like if...else and switch. Students will know how to use loop statements like for...in and while. Students will know the difference between top and bottom controlled loops.	Learn how to create conditional logic statement Learn how to create compound if statements Learn how to create switch statements with multiple cases Learn how to use logic operators Learn how to use for...in loops Learn how to use while loops	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 5: Functions and Methods ;	Understand how different collections work	25 days	Students will know how to create collections like enumerations and tuples.	Learn how to create enumerations and tuples Learn how to create overloaded functions and methods Learn how to pass arguments by value and by reference and what the difference is Learn how to create random numbers Learn about recursion and how to you it	Knowledge Checks, Formative Assessments, Projects,	15.4.12 A 15.4.12 C 15.4.12 D 15.4.12 E 15.4.12 F 15.4.12 G

Enumerations and Tuples			Students will learn how to pass arguments by value and by reference. Students will learn how to create overloaded functions and methods.		Multiple Choice Test	15.4.12 H 15.4.12 I 15.4.12 J 15.4.12 K 15.4.12 L
Chapter 6: Arrays and an Introduction to Closures	Understand how Arrays collect data and learn about Closures	20 days	Students will know how to create, edit, and erase array collections. Students will know how to use methods on the arrays.	Learn how to use arrays, by creating, editing, and erasing Learn how to use filter, map, and reduce methods on arrays Learn how to use multidimensional arrays Learn how to create closures and use them as parameters in functions and methods	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: Dictionary Collections; First GUI and Xcode UI features	Understand how to create their first GUI apps and how to use Dictionary collections	30 days	Students will know how to create simple iOS apps using Swift and Xcode. Students will know how to create Dictionary collections.	Learn how to navigate the Xcode interface for the Single View iOS app template Learn how to manipulate objects to create interesting GUIs from a user's perspective Learn how to create and edit Dictionary collections Learn how to create first apps with GUI	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: Sharing data using prepare function ; utilizing multiple View Controllers	Understand how to use multiple view controllers and the prepare function to share data between them	30 days	Students will know how to manipulate multiple view controllers. Students will know how to share data between view controllers.	Learn how to create extra view controllers beyond the default starting view controller Learn how to share data between these view controllers utilizing the prepare function Learn how to create advanced apps, that users can enjoy and be entertained by	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	15 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