

Teacher: CORE Intro to
Programming
Course: Intro to Programming

Year: 2017-18
Month: All Months

A The Turtle

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
How do you program the turtle to move across the screen	Using the Turtle module of Python, students will write a program that moves the turtle around on the screen.	Students will be able to write a basic robot commands	syntax Function				

S Variables

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
How do you write a simple program, that takes inputted variables, does math operations to them and prduces and output.	Students a writing code using the computer programming language python.	Students will be able to write a simple program, that takes inputted variables, does math operations to them and prduces and output.	Debugging Input Output				

O Strings

Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
What are strings? How can strings be manipulated?	Students a writing code using the computer programming language python.	Students will be able to write python programs that use and alter strings.	Strings concatenati on				

r If statements

N	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	What does and If statement do? How do you write an if statement?	Students a writing code using the computer programming language python.	Students will be able to read and explain if statements. Students will be able to write if statements in python	Boolean functions				
o	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	What is a loop? How do you write a for loop?	Students a writing code using the computer programming language python.	Students will be able to explain and follow a loop. Students will be able to write for loops in python	loop for loop				
e	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	When do you use a while loop instead of a for loop? How do you write a while loop?	Students a writing code using the computer programming language python.	Students will be able to write while loops in python Students will be able to use the in operator	while loop in operator				
a	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	How do you import and use build in functions? How do you write definitions	Students a writing code using the computer programming language python.	Students will be able to import and use a function. Students will be able to write definitions	functions Definitions				

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F Lists and Arrays

e	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
b	What is an array and how is it used in programming?	Students a writing code using the computer programming language python.	Students will be able to define and use arrays.	Array				
r	How do you write programs with lists in them?		Students will be able to write programs with lists in them.	List				

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M Dictionaries and Tuples

a	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
r	What are the differences between arrays, lists, dictionaries and tuples?	Students a writing code using the computer programming language python.	Students will be able to read code that contains arrays, lists, dictionaries and tuples.	tuples				
c	How do you write programs using dictionaries and tuples?		Students will be able to write code that contains dictionaries and tuples.	dictionaries				

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A Classes and Objects

p	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
r	What is Object Oriented Programming?	Students a writing code using the computer programming language python.	Students will be able to create a class usin OOP.	OOP				
i	How do you create a class?		Students will be able to create multiple instances from thier class.	Class				
I	How do you create an instance?			Object				
				Instance				

M Class and Functions

a	Essential Questions	Content	Knowledge and Skills	Vocabulary	Assessments	Lessons	Resources	Standards
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y	How do you write a method that affects the attributes of the instances of your class?	Students a writing code using the computer programming language python.	Tudents will be able to write a method that affects the attributes of the instances of your class?	method attributes
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