Name: Robert Lefrandt		Grading Quarter: 2	Week Beginning: 06 11/20/2023	
School Year: 202	23-24	Subject: Software & App Design		
Notes: 11/20/2023 Operators and Expressions in Python - Real Python A sequence of operands and operators, like a + b - 5, is called an expression. Python supports many operators for combining data objects into expressions. Compare other LMS's Harvard CS50x MS Visual Code Studio Al assistants Prompt Engineering AFE CS AP Principles Python Programmer Certification (PCEP)	Assessment Certification DEC(Eastente	le Loops loops to repeat code until the ps that are governed by a sing llowing techniques: Force Corns, True Until False olling Loops to exit a loop early to their Smart Tech Coders Cothough the Learning Manage	ake /C++ is installed Desktops ies an issue) Online Tutorials, 450+ Items, 117 with Arduino IDE) user chooses to stop gle boolean control rect Input, Nested Loops, loop iteration 5 201 Python accounts. ment System (LMS)	Academic Standards: AZ_CTE SoftwareAppDesign TechStandards STANDARD 1.0 APPLY PROBLEM- SOLVING AND CRITICAL THINKING SKILLS Iterative/Loops STANDARD 7.0 UTILIZE ITERATIVE STRUCTURES IN WRITING PROGRAMS 7.1 Identify various types of iteration structure (e.g., while, for, for-each, and recursion) 7.2 Identify how loops are controlled (variable conditions and exits) 7.3 Use the correct syntax for nested loops 7.4 Compute the values of variables involved with nested loops STANDARD 12.0 DEVELOP A PROGRAM STANDARD 13.0 TEST AND DEBUG TO VERIFY PROGRAM OPERATION STANDARD 14.0 UTILIZE AND CREATE COMMUNITY RESOURCES 14.1 Use standard library functions

Notes: 11/21/2023

Operators and Expressions in Python - Real Python

A sequence of operands and operators, like a + b -5, is called an expression.

Python supports many operators for combining data objects into expressions.

Compare other LMS's

Harvard CS50x

MS Visual Code Studio Al assistants

Prompt Engineering

AFE CS AP Principles

Python Programmer Certification (PCEP)

***Discuss purchases/CTE Assessment/tests/New Unit 3- Loops:

- Assessment: Unit 2 Review Test -Retake
- Certifications- Web, Python, Arduino- C/C++
- DEC(Eastern Az)/FBLA Skills Competitions
- Physical computing-programming
- VCode/Python IDE Cloud/online
- Thonny IDE: Talked w/ BRHS Helpdesk installed Desktops Robotics/FabLab (*See if installing libraries an issue)
- SunFounder Raspberry Pi Pico W Ultimate Starter Kit with Online Tutorials, 450+ Items, 117
 Projects, MicroPython, Piper Make and C/C++ (Compatible with Arduino IDE)

Objective:

Students learn how to program:

TechSmart Unit 3: Loops:

Lesson 3.1 While Loops

- Use while loops to repeat code until the user chooses to stop
- Create loops that are governed by a single boolean control variable
- Use the following techniques: Force Correct Input, Nested Loops, Player Turns, True Until False

Lesson 3.2: Controlling Loops

- Use break to exit a loop early
- Use continue to skip the remainder of a loop iteration

Lesson Overview:

Students will login to their Smart Tech Coders CS 201 Python accounts. Students will work though the Learning Management System (LMS) curriculum to learn Python.

Activity Library

If finish TechSmartCoders – Python Daily Lessons and Activity library, then go to: FreeCodeCamp and work on Front/Back End Web Stack and Certifications

Academic Standards:

AZ_CTE SoftwareAppDesign TechStandards

STANDARD 1.0
APPLY PROBLEMSOLVING AND
CRITICAL THINKING
SKILLS

Iterative/Loops

STANDARD 7.0 UTILIZE ITERATIVE STRUCTURES IN WRITING PROGRAMS

- 7.1 Identify various types of iteration structure (e.g., while, for, for-each, and recursion)
- 7.2 Identify how loops are controlled (variable conditions and exits)
- 7.3 Use the correct syntax for nested loops
- 7.4 Compute the values of variables involved with nested loops

STANDARD 12.0DEVELOP A PROGRAM

STANDARD 13.0

TEST AND DEBUG TO VERIFY PROGRAM OPERATION

STANDARD 14.0

UTILIZE AND CREATE
COMMUNITY
RESOURCES
14.1 Use standard
library functions

		Notes:		Academic Standards:
		11/22/2023		AZ_CTE
				SoftwareAppDesign
		Operators and		TechStandards
		Expressions in	November 22-24:	
		Python - Real	NOVEILIBEI ZZ-Z4.	STANDARD 1.0
		Python Real Python		APPLY PROBLEM-
		<u>r ython</u>		SOLVING AND
		A sequence of	Thanksgiving Break	CRITICAL THINKING
		operands and	indinsgranig break	SKILLS
		operators, like a + b - 5, is called an	District Classed	
		expression.	District Closed	Iterative/Loops
		Python supports		STANDARD 7.0 UTILIZE
		many operators for combining data		ITERATIVE
		objects into		
		expressions.		STRUCTURES IN
				WRITING PROGRAMS
				7.1 Identify various
		Compare		types of iteration
		other LMS's		structure (e.g., while,
		other Livis s		for, for-each, and
				recursion)
		Harvard		
		CS50x		7.2 Identify how loops
				are controlled
		NAC 3 //		(variable conditions
	≶	MS Visual		and exits)
)ə	Code Studio		7.3 Use the correct
	ηľ	Al assistants		syntax for nested
	es			loops
	Wednesday	Prompt		
•	✓	Engineering		7.4 Compute the
		Linginiceting		values of variables
				involved with nested
		AFE CS AP		loops
		Principles		STANDARD 12.0
				DEVELOP A PROGRAM
		Python		
		Programmer		STANDARD 13.0
		Certification		TEST AND DEBUG TO
		(PCEP)		VERIFY PROGRAM
		,		OPERATION
				STANDARD 14.0
				UTILIZE AND CREATE
				COMMUNITY
				RESOURCES
				14.1 Use standard
				library functions

	Notes: 11/23/2023	November 22-24:	Academic Standards: AZ_CTE SoftwareAppDesign TechStandards
Thursday	Operators and Expressions in Python - Real Python A sequence of operands and operators, like a + b	Thanksgiving Break District Closed	STANDARD 1.0 APPLY PROBLEM- SOLVING AND CRITICAL THINKING SKILLS
	- 5, is called an expression. Python supports many operators for combining data objects into expressions.		Iterative/Loops STANDARD 7.0 UTILIZE ITERATIVE STRUCTURES IN WRITING PROGRAMS
	Compare other LMS's		7.1 Identify various types of iteration structure (e.g., while, for, for-each, and recursion)
	Harvard CS50x MS Visual		7.2 Identify how loops are controlled (variable conditions and exits)
	Code Studio Al assistants		7.3 Use the correct syntax for nested loops
	Prompt Engineering AFE CS AP		7.4 Compute the values of variables involved with nested loops
	Principles		STANDARD 12.0 DEVELOP A PROGRAM
	Python Programmer Certification (PCEP)		STANDARD 13.0 TEST AND DEBUG TO VERIFY PROGRAM OPERATION
			STANDARD 14.0 UTILIZE AND CREATE COMMUNITY RESOURCES 14.1 Use standard library functions

	Notes: 11/24/2023	November 22-24:	Academic Standards: AZ_CTE SoftwareAppDesign
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	Prompt Engineering AFE CS AP		7.4 Compute the values of variables involved with nested loops
	Principles Python		STANDARD 12.0 DEVELOP A PROGRAM
	Programmer Certification (PCEP)		STANDARD 13.0 TEST AND DEBUG TO VERIFY PROGRAM OPERATION
			STANDARD 14.0 UTILIZE AND CREATE COMMUNITY RESOURCES 14.1 Use standard library functions