

Name: Robert Lefrandt	Grading Quarter: 1	Week Beginning: 08/28/2023
School Year: 2023-24	Subject: Software & App Design	

Monday

Notes:  
  
Unit 1:  
Linear  
Programs  
  
Lesson:  
1.3  
Values  
  
Days:  
2/4

08/28/2023 - Monday - 5th Week

**Objective:**  
**STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS**  
 1.1 Establish objectives and outcomes for a task  
 1.2 Explain the process of decomposing a large programming problem into smaller, more manageable procedures  
 1.3 Explain “visualizing” as a problem-solving technique prior to writing code  
 1.4 Describe problem-solving and troubleshooting strategies applicable to software development

4.1 Declare numeric, Boolean, character, string variables, and float and double  
 4.2 Choose the appropriate data type for a given situation  
 4.3 Identify the correct syntax and usage for constants and variables in a program  
 4.4 Identify the correct syntax and safe functions for operations on strings, including length, substring, and concatenation

12.1 Use a program editor to enter and modify code  
 12.2 Identify correct input/output statements  
 12.3 Choose the correct method of assigning input  
 12.10 Demonstrate the use of parameters to pass data into program modules

13.1 Identify errors in program modules

14.1 Use standard library functions  
 14.2 Find and use third party libraries (e.g., web-based and package managers)  
 14.3 Explain and interact with an Application Program Interface (API)

<https://www.azed.gov/sites/default/files/2020/09/SoftwareandAppDesignTSs11020200.pdf>

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.

Unit 1: Linear Programs  
 Lesson: 1.3 Values  
 Days: 2/4

Activities

Warm-Up: Turn Ball  
 Integers and Floats  
 Horseshoe Order  
 Math Practice  
 Warm-Up: Data Check  
 Typcasting  
 Fishtank Runner  
 Reducing Waste  
 Warm-Up: How Much Screentime  
 Warm-Up: Tip Calculator

Activity Library  
 Song Shifter  
 Saving Goals

Academic Standards:  
  
<https://www.azed.gov/sites/default/files/2020/09/Standard1.0ApplyProblemSolvingAndCriticalThinkingSkills.pdf>  
 STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS  
 STANDARD 4.0 UTILIZE PRIMITIVE DATA TYPES AND OPERATORS  
 STANDARD 12.0 DEVELOP A PROGRAM  
 STANDARD 13.0 TEST AND DEBUG TO VERIFY PROGRAMS  
 STANDARD 14.0 UTILIZE AND CREATE COMMUNICATIONS  
  
<https://www.azed.gov/cte/profskills/>

		<p>Decor Helper</p> <p>***If finish TechSmartCoders – Python Daily Lessons and Activity library, then go to: FreeCodeCamp and work on Front/Back End Web Stack and Certifications***</p>	
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Tuesday

Notes:

08/29/2023 - Tuesday - 45h Week

Unit 1:  
Linear  
Programs

**Objective:**

**STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS**

- 1.1 Establish objectives and outcomes for a task
- 1.2 Explain the process of decomposing a large programming problem into smaller, more manageable procedures
- 1.3 Explain "visualizing" as a problem-solving technique prior to writing code
- 1.4 Describe problem-solving and troubleshooting strategies applicable to software development
  
- 4.1 Declare numeric, Boolean, character, string variables, and float and double
- 4.2 Choose the appropriate data type for a given situation
- 4.3 Identify the correct syntax and usage for constants and variables in a program
- 4.4 Identify the correct syntax and safe functions for operations on strings, including length, substring, and concatenation

Lesson:  
1.3  
Values

- 12.1 Use a program editor to enter and modify code
- 12.2 Identify correct input/output statements
- 12.3 Choose the correct method of assigning input
- 12.10 Demonstrate the use of parameters to pass data into program modules

13.1 Identify errors in program modules

- 14.1 Use standard library functions
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- 14.3 Explain and interact with an Application Program Interface (API)

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**Lesson Overview:**

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

Unit 1: Linear Programs  
Lesson: 1.3 Values  
Days: 3/4

Activities

- Warm-Up: Turn Ball
- Integers and Floats
- Horseshoe Order
- Math Practice
- Warm-Up: Data Check
- Typcasting
- Fishtank Runner
- Reducing Waste
- Warm-Up: How Much Screentime
- Warm-Up: Tip Calculator

Activity Library  
Song Shifter  
Saving Goals

Academic Standards:

<https://www.azed.gov/sites/default/files/2020/09/Standard1.0ApplyProblemSolvingAndCriticalThinkingSkills.pdf>

STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS

STANDARD 4.0 UTILIZE PRIMITIVE DATA TYPES AND OPERATORS

STANDARD 12.0 DEVELOP A PROGRAM

STANDARD 13.0 TEST AND DEBUG TO VERIFY PROGRAMS

STANDARD 14.0 UTILIZE AND CREATE COMMUNICATIONS

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Wednesday

Notes:  
  
Unit 1:  
Linear Programs  
  
Lesson:  
1.3 Values  
  
Days:  
4/4  
  
**\*\*\*If complete go to:**  
Research Question  
Tech Impact

08/30/2023 - Wednesday - 5th Week

**Objective:**  
**STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS**  
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Unit 1: Linear Programs  
 Lesson: 1.3 Values  
 Days: 4/4  
**\*\*\*If complete go to:**  
 Research Question  
 Tech Impact

Activities

Warm-Up: Turn Ball  
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 Horseshoe Order  
 Math Practice  
 Warm-Up: Data Check  
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 Reducing Waste  
 Warm-Up: How Much Screentime  
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		<p><u>Activity Library</u> Song Shifter Saving Goals Decor Helper</p> <p>***If finish TechSmartCoders – Python Daily Lessons and Activity library, then go to: FreeCodeCamp and work on Front/Back End Web Stack and Certifications***</p>	
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Thursday	<p>Notes:</p> <p>Unit 1: Linear Programs</p> <p>Lesson: 1.3 Values</p> <p>Days: 4/4</p> <p><b>***If complete go to:</b> Research Question Tech Impact</p>	<p>08/31/2023 - Thursday - 5th Week</p> <p><b>Objective:</b> <b>STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS</b></p> <p>1.1 Establish objectives and outcomes for a task 1.2 Explain the process of decomposing a large programming problem into smaller, more manageable procedures 1.3 Explain “visualizing” as a problem-solving technique prior to writing code 1.4 Describe problem-solving and troubleshooting strategies applicable to software development</p> <p>4.1 Declare numeric, Boolean, character, string variables, and float and double 4.2 Choose the appropriate data type for a given situation 4.3 Identify the correct syntax and usage for constants and variables in a program 4.4 Identify the correct syntax and safe functions for operations on strings, including length, substring, and concatenation</p> <p>12.1 Use a program editor to enter and modify code 12.2 Identify correct input/output statements 12.3 Choose the correct method of assigning input 12.10 Demonstrate the use of parameters to pass data into program modules</p> <p>13.1 Identify errors in program modules</p> <p>14.1 Use standard library functions 14.2 Find and use third party libraries (e.g., web-based and package managers) 14.3 Explain and interact with an Application Program Interface (API)</p> <p><a href="https://www.azed.gov/sites/default/files/2020/09/SoftwareandAppDesignTSs11020200.pdf">https://www.azed.gov/sites/default/files/2020/09/SoftwareandAppDesignTSs11020200.pdf</a></p> <p>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.</p> <p>Unit 1: Linear Programs Lesson: 1.3 Values Days: 4/4 <b>***If complete go to:</b> Research Question Tech Impact</p> <p><u>Activities</u></p> <p>Warm-Up: Turn Ball Integers and Floats Horseshoe Order Math Practice Warm-Up: Data Check Typcasting Fishtank Runner Reducing Waste Warm-Up: How Much Screentime Warm-Up: Tip Calculator</p>	<p>Academic Standards:</p> <p><a href="https://www.azed.gov/sites/default/files/2020/09/Standard1.0ApplyProblemSolvingAndCriticalThinkingSkills.pdf">https://www.azed.gov/sites/default/files/2020/09/Standard1.0ApplyProblemSolvingAndCriticalThinkingSkills.pdf</a></p> <p>STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS</p> <p>STANDARD 4.0 UTILIZE PRIMITIVE DATA TYPES AND OPERATORS</p> <p>STANDARD 12.0 DEVELOP A PROGRAM</p> <p>STANDARD 13.0 TEST AND DEBUG TO VERIFY PROGRAMS</p> <p>STANDARD 14.0 UTILIZE AND CREATE COMMUNICATIONS</p> <p>14.1 Use standard library functions</p> <p>14.2 Find and use third party libraries (e.g., web-based and package managers)</p> <p>14.3 Explain and interact with an Application Program Interface (API)</p> <p><a href="https://www.azed.gov/cte/profskills/">https://www.azed.gov/cte/profskills/</a></p>
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	<p><u>Activity Library</u> Song Shifter Saving Goals Decor Helper</p> <p>Research Question Tech Impact</p> <p>***If finish TechSmartCoders – Python Daily Lessons and Activity library, then go to: FreeCodeCamp and work on Front/Back End Web Stack and Certifications***</p>	
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Friday	<p>Notes:</p> <p>Unit 1: Linear Programs</p> <p>Lesson: 1.3 Values</p> <p>Days: 4/4</p>	<p>09/01/2023 - Friday - 5th Week</p> <p>****NO SCHOOL?****</p> <p><b>Objective:</b> <b>STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS</b></p> <p>1.1 Establish objectives and outcomes for a task 1.2 Explain the process of decomposing a large programming problem into smaller, more manageable procedures 1.3 Explain “visualizing” as a problem-solving technique prior to writing code 1.4 Describe problem-solving and troubleshooting strategies applicable to software development</p> <p>4.1 Declare numeric, Boolean, character, string variables, and float and double 4.2 Choose the appropriate data type for a given situation 4.3 Identify the correct syntax and usage for constants and variables in a program 4.4 Identify the correct syntax and safe functions for operations on strings, including length, substring, and concatenation</p> <p>12.1 Use a program editor to enter and modify code 12.2 Identify correct input/output statements 12.3 Choose the correct method of assigning input 12.10 Demonstrate the use of parameters to pass data into program modules</p> <p>13.1 Identify errors in program modules</p> <p>14.1 Use standard library functions 14.2 Find and use third party libraries (e.g., web-based and package managers) 14.3 Explain and interact with an Application Program Interface (API)</p> <p><a href="https://www.azed.gov/sites/default/files/2020/09/SoftwareandAppDesignTSs11020200.pdf">https://www.azed.gov/sites/default/files/2020/09/SoftwareandAppDesignTSs11020200.pdf</a></p> <p>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.</p> <p>Unit 1: Linear Programs Lesson: 1.3 Values Days: 4/4</p> <p><u>Activities</u></p> <p>Warm-Up: Turn Ball Integers and Floats Horseshoe Order Math Practice Warm-Up: Data Check Typecasting Fishtank Runner Reducing Waste Warm-Up: How Much Screentime Warm-Up: Tip Calculator</p> <p><u>Activity Library</u> Song Shifter Saving Goals</p>	<p><a href="https://www.azed.gov/sites/default/files/2020/09/SoftwareandAppDesignTSs11020200.pdf">https://www.azed.gov/sites/default/files/2020/09/SoftwareandAppDesignTSs11020200.pdf</a></p> <p>STANDARD 1.0 APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS</p> <p>STANDARD 4.0 UTILIZE PRIMITIVE DATA TYPES AND OPERATORS</p> <p>STANDARD 12.0 DEVELOP A PROGRAM</p> <p>STANDARD 13.0 TEST AND DEBUG TO VERIFY PROGRAMS</p> <p>STANDARD 14.0 UTILIZE AND CREATE COMMUNICATIONS</p> <p>14.1 Use standard library functions</p> <p>14.2 Find and use third party libraries (e.g., web-based and package managers)</p> <p>14.3 Explain and interact with an Application Program Interface (API)</p> <p><a href="https://www.azed.gov/cte/profskills/">https://www.azed.gov/cte/profskills/</a></p>
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