

Lesson 1

Python: Basics

Name: _____ Date: _____

How to make a Sandwich

Directions: In the left column of the table, list all of the steps necessary to make a PB&J Sandwich. Leave the right column of the table blank for future discussions.

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Exploring Python: Introduction

Directions: Work with your partner to answer all of the following questions.

1. What is Python? _____
2. Who created Python? _____
3. When was Python released? _____
4. What does IDE stand for? _____
5. Why do we use an IDE? _____

6. What is IDLE? _____
7. Give four other examples of IDEs for Python. _____

8. What are the advantages of coding in Python? _____

9. What are the disadvantages of coding in Python? _____

10. Why did the creator call it Python? _____

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Exploring Python: Definitions [1]

Directions: Pair each word with their proper definition.

Program	_____	A: Executes a program in a high-level language by translating it one line at a time.
High Level Language	_____	B: A way of using the Python interpreter by typing commands and expressions at the prompt.
Low Level Language	_____	C: Data that is displayed on the screen or sent into a file or other device.
Portable	_____	D: A programming language that is designed to be easy for a computer to execute.
Interpreter	_____	E: The output of the compiler after it translates the program.
Compiler	_____	F: A sequence of instructions that specifies how to perform a computation.
Source Code	_____	G: Information gathered from the keyboard, a file or some other device.
Object Code	_____	H: A property of a program that can run on more than one kind of computer.
Interactive Mode	_____	I: A way of using the Python interpreter to read and execute statements in a script.
Script Mode	_____	J: A program in a high-level language before being compiled.
Input	_____	K: A programming language that is designed to be easy for humans to read and write.
Output	_____	L: Translates a program from a high-level language to a low-level language all at once, in preparation for execution later on.

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Exploring Python: Errors [1]

Directions: Fill out the questions below based on the class discussions and through research.

1. Define formal language, and define natural language.

What are some differences?

Give an example of a formal language versus a natural language.

2. Define the following errors:

Syntax:

Runtime:

Semantic:

What are some differences?

Give an example of the following:

Syntax error:

Runtime error:

Semantic error:

3. What error did we experience during the PB&J activity? Why?

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Exploring Python: Block Coding [6]

Directions: Use the tablet/computer provided to complete the “Bee: Debugging” activity. Write all of your codes in the spaces below.

1:	2:
3:	4:
5:	6:

7:

8:

9:

10:

11:

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Exit Ticket

Prompt: Chemistry teaches us that temperature affects (nearly) everything in our universe. Notice that, depending where you live, temperature is measured on different scales. Given the following relationships, write Pseudocode, Block Code and/or Python Code (your choice) that will successfully convert a temperature in Fahrenheit to a temperature in Celsius.

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times 5 / 9$$

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 9 / 5) + 32$$