



Hour of Code: Teacher Guide

Before the Hour of Code:

- Make sure student computers have an up-to-date browser (Chrome, Safari, or Firefox).
- Read through teacher notes in this document. Download notes to have exercise solutions ready.

During the Hour of Code:

1. Direct students to codehs.com/hoc_python
2. Allow students to work through Hour of Code at their own pace, providing encouragement and support when needed. See tips below for handling student questions.
3. Tweet pictures or stories at @CodeHS #ReadWriteCode #HourOfCode!
4. If time allows at the end of the period, facilitate a discussion around the Hour of Code using the following guiding questions:
 - Before today, what did you think about programming or coding?
 - Did any of these ideas change during the Hour of Code?
 - What was your favorite part of the Hour of Code?
 - Did any parts of the Hour of Code challenge you? How?

Hour of Code Tips:

If students get stuck or have questions, it is okay if you don't have the answer! Ask questions to activate their problem-solving skills such as:

- What can we try differently?
- What do you want the program to do? What are you telling the program to do?
- How can we break this problem into smaller steps?

Thank you for your dedication to Computer Science Education!

**Interested in going beyond the Hour of Code?
Reach out to us at hello@codehs.com.**

Coding in Python Teacher Notes

Learn the basics of coding with the Python programming language by writing programs that you can interact with! This hour will cover printing, variables, math, and getting information from users. Write a program that take in and stores data from a user and returns a unique response!

Objective

Students will be able to ...

- Explain what a program is
- Identify variable types
- Use Python to print data to the screen

Link to Activity: codehs.com/hoc_python

Standards:

Discussion Questions

- What is a program?
- Why do we use programs?
- What are some programs you use on a daily basis?
- Why is data important? Where do you see data used in your favorite programs?
- What does Python do? What can you use it for?
- How do you think programs will change in the future?

Exercise Solutions

Introduce Yourself	
Description	Write a program that prints your name and something about yourself.
Motivation	Students are introduced to their first Python program and printing data to the screen
Solution	<pre>print "My name is Eleanor." print "I like writing Python programs!"</pre>

Coding in Python Teacher Notes

Note	If this is a student's first exposure to code, make sure they have double quotes around their answers (known as a string)
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ASCII Art	
Description	In this exercise, you will write a program that displays some text art. Write a program that outputs this drawing of a mouse: <pre>(__/) * */ \ / o</pre>
Motivation	Students will get to be creative with printing in Python
Solution	<pre>print "(__/)" print " * */" print " \ /" print " o"</pre>
Note	Students should be careful with spacing when printing the characters

Make Some Variables	
Description	Write a program that does the following: <ul style="list-style-type: none"> - Creates a string (characters inside of double quotes) variable. - Creates an integer (whole number without quotes) variable. - Prints both variables, each on its own line.
Motivation	Students begin exploring variables and printing different types of data to the screen
Solution	<pre>name = "Keisha" number = 100</pre>

Coding in Python Teacher Notes

	<pre>print name print number</pre>
Note	Answers vary depending on what values student's input

Code a Bio in Python!	
Description	<p>Write a program that takes in user input to ask the following questions:</p> <pre>"What is your favorite food?" "What is your favorite color?" "What is your favorite movie?"</pre> <p>After asking these three questions, print out the answers on their own lines.</p>
Motivation	Students can be using data to create a more full program
Solution	<pre>first_name = "Tracy" last_name = "Turtle" fav_movie = "Ninja Turtles" fav_book = "The Tortoise and the Hare" print "Hello, my name is " + first_name + " " + last_name + ". My favorite movie is " + fav_movie + " and my favorite book is " + fav_book + "."</pre>
Note	<p>Students should be adding the variables to the string and use only 1 print keyword</p> <p>Student answers will vary</p>