

LEARNING JOURNEY COMPUTING

INTRODUCTION TO PROGRAMMING IN PYTHON

GOLDEN THREAD QUESTION

WE ARE HERE What is the difference **Concepts** between What is an a algorithms and translator? programs? Why do computers need translators when **Techniques** What does executing input, process, programs? output mean in Describe how a variable works programming? in a program

This unit introduces learners to text-based programming with Python. The lessons form a journey that starts with simple programs involving input and output, and gradually moves on through arithmetic operations, randomness, selection, and iteration. You will learn the mechanics of program execution, and participate in active learning using pair programming, live coding, and worked examples.

TUDOR HABITS

You will develop computational thinking skills initiated in year 7 as you work through this unit.

VOCABULARY
Algorithm, program, input,
operator, output

Describe how an arithmetic operator works in a program

Describe how an

operator works

assignment

Describe how a relational operator works in a program

Describe how a logical operator works in a program

Write an algorithm for a program containing all these techniques

Control structures





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Describe how sequence works in a program

Describe how selection works in a program

Describe how

a function

works in a program

Describe how countcontrolled iteration works in a program

Describe how

Boolean

variables work

in a program

Describe how variables work in a program

conditioncontrolled iteration works in a program

Describe how

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VOCABULARY

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Application

Write an algorithm for a program containing all these techniques