**Lesson 1: Getting Started**

**Estimated Time**: 8 hours

**Guiding Question:** What is Python and what can we do with it? How do we design functions in Python?

**Concepts:** Introduction to Python, Functions, Strings

**Lesson Description**: Students are introduced to Python from basics into core skills of designing functions and working with strings.

**Instructor Preparation**: Be familiar with the exercises in the key text *Practical Programming: An Introduction to Computer Science Using Python 3.6*. Be ready to assist the students with installations on various machines (Windows, Mac).

| **Materials and Resources** | **Learning Goals** |
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| 1. Lesson slides 2. Projector and computer for teacher (if in-person) | * Be able to design functions in Python following the Function Design Recipe. * Learn various Python data types and their role in coding. |

| **Time** | **Lesson Content** | **Instructor Notes** |
| --- | --- | --- |
| 9:00-10:00 | **Introduction**   1. Welcome the students and introduce yourself 2. Intro to Python slides | In general, follow the slides and pause for clarifications. |
| 10:00-11:00  10 min break  11:10-12:10 | 1. Getting Python IDLE and Anaconda installed 2. Python basics (Hello, Python) 3. Complete the first couple of `PRACTICE IN YOUR NOTEBOOK` sections of the slides together as a class. | Ask the students regularly about the lesson pace. |
| 12:10-13:10 | LUNCH |  |
| 13:10-16:10  10 min break | 1. Intro to functions (built-in and user-defined) 2. Detailed Function Design Recipe 3. Working with strings |  |
| 15 min | **Activity / Discussion**  What was the most challenging part of the day? |  |
| 25 min | **Assessment**  Assignment 1 (not graded) contains exercises from the key text. Reinforce the importance of completing this assignment as it will build skills for the next graded assignment. |  |