

Unit Title	Introduction to Programming				
Subject group and discipline	Digital design	MYP year	1	Unit duration (hrs)	12

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context
Development	Innovation	Scientific and technical innovation How do we create innovative solutions that meet a customer's requirements.
Statement of inquiry		
By carefully listening to customers and using the design cycle we can create innovative solutions that effectively solve specific problems.		
Inquiry questions		
Factual— What is a computer programme? What is a computer programming language? How do I write and execute a programme in Python? What Python commands have I learned to use? How do I debug Python programmes?		Conceptual— What is the difference between innovation and invention? How is data stored and organised in a computer programme? Debatable— What are the differences between customer requirements and product specifications?

Objectives	Summative assessment	
<p>Objective B: Developing ideas</p> <p>ii. present feasible design ideas, which can be correctly interpreted by others</p> <p>iii. present the chosen design</p> <p>Objective C: Creating the solution</p> <p>ii. demonstrate excellent technical skills when making the solution</p> <p>iv. list the changes made to the chosen design when making the solution.</p>	<p>Outline of summative assessment task(s) including assessment criteria:</p> <p>Goal</p> <p>Create a programme to greet attendees arriving at the <i>Future Tech World</i> computing exhibition.</p> <p>Role</p> <p>You are a junior software developer at a company called <i>PyPower Projects</i>, tasked with writing and testing the greeting programme</p> <p>Audience</p> <p>The organisers of <i>Future Tech World</i>.</p> <p>Situation</p> <p>In previous years, attendees would walk into the exhibition without any fanfare. This year, your greeting programme will display the welcome message for each attendee using a giant banner display over the entrance as they walk in.</p> <p>Purpose</p> <p>Make attendees feel welcome so that they feel good about the exhibition from the moment that they step in.</p> <p>Standards and criteria</p> <ol style="list-style-type: none"> 1. Create a design specification for the project that: <ul style="list-style-type: none"> • Reflects the customer requirements • Describes the appearance and operation of the intended solution 2. Produce a Python programme that: <ul style="list-style-type: none"> • Asks for the name of the attendee • Generates a message welcoming the attendee to the exhibition • Multiple messages must be used so that all attendees do not get the same message • Repeats until stopped by the user 	<p>Relationship between summative assessment task(s) and statement of inquiry:</p> <p>Students will take a set of simple customer requirements, and then design, write and test a Python programme that meets those requirements, using approaches that will be innovative to the students.</p>

Approaches to learning (ATL) *These can be listed or you could offer some explanation of how they will be developed*

In order for students to create a design specification they will need to: paraphrase the client brief accurately and precisely; organise and depict information logically

Category: Communication

Cluster: Communication skills

In order for students to produce a Python programme that meets the brief they will need to: propose and evaluate a variety of solutions; troubleshoot systems and applications

Category: Thinking

Cluster: Critical thinking skills