



Programme of Study – Year 9 ICT-Python Coding/HTML/ Data presentation skills

	Theme	Overview of key learning to take place	How learning will be assessed
Term 1	Topic-1 Elements of programming	<p>Key Topic 1: Variables</p> <p>I can use the variables to store values. I can change the value of the variable. I can perform operations on variables. I can print the variables.</p> <p>Key Topic 1: Strings</p> <p>I can create string variables. I can find the length of a given string. I can combine two strings and print them.</p> <p>Key Topic 3: Lists</p> <p>I can create a list of numbers. I can create a list of variables. I can print the list. I can print all the elements in the list using a repetitive loop. I can add an element into the list. I can remove an element from the lists.</p> <p>Key Topic 4: Decision Statement</p> <p>I can use the logical operators. I can use the if statement for decision making. I can use if L statement if else statement for the condition if true and for the condition if false. I can use an if elif else statement to test multiple conditions.</p> <p>Key Topic 5: Control Statement(Loopy Loops)</p> <p>I can use a for loop to print a statement and number of times. I can use a for loop to print a statement infinite number of times. I can use a while loop to print a statement and number of times. I can use a while loop to print a statement infinite number of times. I understand how to control the counter in a <i>for</i> and a <i>while loop</i>.</p> <p>Key Topic 5: Functions</p> <p>I understand what a function definition is. I can differentiate between a function call and a function body.</p>	<p>Formative assessment to take place 1 - 2 times per term. Feedback will be given to help students to improve and progress in the topic area. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work.</p> <p>EXAMPLES OF FORMATIVE ASSESSMENT TASKS, WHICH WILL BE USED THIS TERM IN END OF UNIT TESTS:</p> <p>Fill in the blanks Example codes created in the past (using python) MCQ's Finding the output of a given code Debugging a sample code Rewrite the code to increase the efficiency of the code Online quiz on www.w3schools.com Practice using variables and strings. Show what you know from the book. Code of combat: https://codecombat.com/ Python code club project https://projects.raspberrypi.org/en/codeclub Online forms (quizzes)</p> <p>Summative assessment at end of units studied. 2 summative assessments per term. Students will receive a percentage for this assessment.</p> <ul style="list-style-type: none"> • First summative assessment will take place on week 4. The Practical test will be 30 marks and last about 30-40 mins of the lesson. • Second summative assessment will take place on week 9/10. The Practical test will be 30 marks and last about 30-40 mins of the lesson. (online/F2F) • An average will be given of both summative assessment which will generate their Termly report. <p>Additional assessment – Short piece of homework (SPEA approval needed). A written assignment or project of chosen topic in case of term 1 based on iterative and</p>

		<p>I can write a function body to perform a task. I can call the function n number of times from the main program.</p>	<p>Conditional Statements (for loop, while loop and If construct).</p>
<p>Term 1</p>	<p>Chapter 3 – Robot builder</p>	<p>Robot Builder teaches students how to create drawings in python using a module called turtle graphics along with other skills taught in chapter 2. The first section focusses getting students to draw simple shapes such as squares and rectangles. Students will need to make different sized shapes and place them in different locations using the go to function.</p> <ul style="list-style-type: none"> a) I can import turtle graphics. b) I can create simple shapes in turtle graphics. c) I can make the turtle move using co-ordinates. d) I can create more complex symmetrical shapes. 	<p>Formative assessment to take place 1 - 2 times per term. Feedback will be given to help students to improve and progress in the topic area. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work.</p> <p>EXAMPLES OF FORMATIVE ASSESSMENT TASKS, WHICH WILL BE USED THIS TERM IN END OF UNIT TESTS: Fill in the blanks Example codes created in the past (using python) MCQ's Finding the output of a given code Debugging a sample code Rewrite the code to increase the efficiency of the code Online quiz on www.w3schools.com Practice creating all 2D shapes. Show what you know from the book. Code of combat: https://codecombat.com/ Python code club project https://projects.raspberrypi.org/en/codeclub Online forms (quizzes)</p> <p>Summative assessment at end of units studied. 2 summative assessments per term. Students will receive a percentage for this assessment.</p> <ul style="list-style-type: none"> • First summative assessment will take place on week 4. The Practical test will be 30 marks and last about 30-40 mins of the lesson. • Second summative assessment will take place on week 9/10. The Practical test will be 30 marks and last about 30-40 mins of the lesson. (online/F2F) • An average will be given of both summative assessment which will generate their Termly report. <p>Additional assessment – Short piece of homework (SPEA approval needed). A written assignment or project of chosen topic in case of term 3, it will be based on the Turtle graphics concept.</p>

Term 2	<p>HTML</p>	<p>This topic focusses on students learning about hypertext markup language (HTML). The main focus of this chapter will be teaching students how to create a HTML webpage, create tables, add colored background, inserting images, creating tables, adding different types of text such as paragraphs, headings, body text and learning about tags.</p> <ul style="list-style-type: none"> a) To learn how to create a HTML webpage b) To continue developing understanding of programming languages c) To learn how to add elements in a HTML webpage d) To combine different skills together to make a unique and rich website <p>Students will be given a brief insight into html and how hypertext markup language is used to build and create websites. This will be started in notepad and will be developed over a series of 5-6 lessons.</p> <ul style="list-style-type: none"> a) I can explain how html is used. b) I can write a simple html script with head and body. c) I can create a file extension with html. d) I can embed a hyperlink and an image. e) I can add simple videos to my script. <p>I can create a simple navigation system.</p>	<p>Formative assessment to take place 1 - 2 times per term. Feedback will be given to help students to improve and progress in the topic area. Grades are not given for these pieces of work as the focus is on supporting students to make improvements to future pieces of work.</p> <p>EXAMPLES OF FORMATIVE ASSESSMENT TASKS, WHICH WILL BE USED THIS TERM IN END OF UNIT TESTS:</p> <p>Fill in the blanks Example codes created in the past (using python) MCQ's Finding the output of a given code Debugging a sample code Rewrite the code to increase the efficiency of the code Online quiz on www.w3schools.com Practice creating all 2D shapes. Show what you know from the book. Code of combat: https://codecombat.com/ Python code club project https://projects.raspberrypi.org/en/codeclub Online forms (quizzes)</p>
Term 3	<p>E safety, Data Presentation skills and Introduction to computer systems (Intro to IGCSE CS and ICT course)</p>	<p>This chapter covers safety and security issues when using computers in the office or at home.</p> <p>Safety and security</p> <ul style="list-style-type: none"> a) I can evaluate own use of IT equipment and develop strategies to minimise the potential safety risk b) I can explain what is meant by personal data c) I can explain why personal data should be confidential and protected d) I can explain how to avoid inappropriate disclosure of personal data including: own name, address, school name, a picture in school uniform e) I can discuss why eSafety is needed f) I can evaluate own use of the internet and use strategies to minimise the potential dangers, e.g. only using websites recommended by teachers, only using a learner-friendly search engine 	<p>Summative assessment at end of units studied. 2 summative assessments per term. Students will receive a percentage for this assessment.</p> <ul style="list-style-type: none"> • First summative assessment will take place on week 4. The Practical test will be 30 marks and last about 30-40 mins of the lesson. • Second summative assessment will take place on week 9/10. The Practical test will be 30 marks and last about 30-40 mins of the lesson. (online/F2F) • An average will be given of both summative assessment which will generate their Termly report. <p>Additional assessment – Short piece of homework (SPEA approval needed). A written assignment or project of chosen topic in case of term 3, it will be based on the Turtle graphics concept.</p>

		<p>Data Presentation skills</p> <p>This chapter considers the importance of researching your audience before an ICT solution is implemented – this ranges from presentations through to actual ICT systems which run companies.</p> <p>a) I can show a clear sense of audience when planning and creating ICT solutions.</p> <p>b) I can analyse the needs of an audience.</p> <p>c) I can explain why solutions must meet the needs of the audience.</p> <p>d) I can create ICT solutions that are responsive to and respectful of the needs of the audience</p>	
<p>Term 3</p>	<p>Revision and End of Year Assessments</p>	<p>In this section students will understand how small programs are created, this will allow them to develop their logical thinking skills and look at practical problem solving. Students will take part in one mini quiz and one end of term assessment.</p> <p>Example material (click link)</p> <p>Revision topic 1 – Introduction to IDE</p> <p>Revision topic 2 – Iteration, loops, sequences</p> <p>Revision topic 3 – Shapes using turtle graphics.</p> <p>Revision topic 4 – Changes of shape and size of shapes.</p> <p>Revision topic 5 – Using coordinates and parameters.</p> <p>Revision topic 6 – HTML</p>	<p>The learning will be assessed practically using Python and classroom-based learning. The assessment will be carried out on the computer and the students will be asked to write a Python program for the given sequence of instructions.</p>