

Year: 10 – first cohort of J277

Subject: Computer science - Option

	Refine and improve work	
Spring Term		
Overarching Topic: Programming fundamentals		
What has come before and what comes later:	In the previous term students completed the content for the unit 1 paper and now move onto to unit 2 which focuses on programming techniques and associated theory.	
	Core	Extension
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	<ul style="list-style-type: none"> • What are the three basic programming constructs? • What terms are associated with programming? • Why are numbers sometimes stored as strings? • What are the steps to using data files with programs? • How is SQL used to search for data? • What does a two-dimensional array or list mean? • Why are sub-programs used? • In what sort of problems might we need to generate a random number or sequence of random numbers? • What terms are associated with programming? 	<ul style="list-style-type: none"> • How does Python differ from other high level programming languages? • Use assembly language to solve problems • What is the difference between a function and a procedure? • How do we make code more efficient?
	Skill/Technique	How students will develop and demonstrate this
Key skills	Describe and explain technical terminology and techniques. Apply knowledge to exam style questions. Solve problems Refine and improve work	During assessments, classwork and homework, students will: <ul style="list-style-type: none"> • complete a range of activities that test the understanding and application of the topics covered.