Year: 13
Subject: Computer science

Autumn Term		
	Core	Extension
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	• What is abstraction • Can you identify the inputs of a system? • What are preconditions for devising a solution to a problem? • What is caching in programming? • How can you program more efficiently? • How are system diagrams used? • How can a system diagram be used to represent a computing problem? • How are flowcharts used to define algorithms? • How is pseudocode used as an alternative to flowcharts? • What are sub-procedures, and how do they help to construct a complete solution to a problem? • What is meant by the term “decision points” in a program? • What is concurrency? • What are programming constructs? • What is recursion? • What are global variables? • What is the difference between procedures and functions? • What is an IDE?	• How is abstraction used in every-day life? • Why is decomposition important? • How does industry program? • What does the future hold for IDEs?
	Skill/Technique	How students will develop and demonstrate this
Key skills	Writing and following algorithms Draw system diagrams Refine and improve solutions	During assessments, classwork and homework, students will:

	Working independently Solving problems Programming in high and low level languages	• complete tasks that test the knowledge and understanding. • Students create a summary sheet for each topic that requires them to condense the topic into one A3 piece of paper. solve problems in VB.NET & other languages