**1a) Intent:** Computer Science is engaging and practical, encouraging creativity and problem solving. It encourages students to develop their understanding and application of the core concepts in computer science. Students also analyse problems in computational terms and devise creative solutions by designing, writing, testing and evaluating programs. Computer Science is an optional subject taken by students with particular interest in the inner workings and science behind computers.

**1b) Careers and further study:** Learners taking this qualification will also benefit from the skills learned on the WJEC IT course and these can be combined to ensure progression onto A-Level Computer Science, Level 3 Vocational qualifications or Apprenticeships in the field of computing or cyber security. Beyond KS5, students can progress to University to study Computer Science, Computational Thinking or associated degrees, apply for degree apprenticeships or find employment in the sector for instance with Intel or Nationwide in Swindon. The field of IT is already large and growing in the UK. Diversifications into software engineering, forensic computing, IT trainer, data scientist, web developer or cyber security analyst are all possible.

2) Implementation: The course is made up of two components each assessed in a 1hr30mins exam at the end of the course contributing 50% each to the overall grade. Students are given the opportunity to undertake a programming task during their course of study which allows them to develop their skills to design, write, test and refine programs using a high-level programming language. Students will be assessed on these skills during the written examinations, in particular component 02.

Implementation – Pedagogical approaches including Rosenshine principles of instruction										
Daily Review	New Material in Small Steps	Ask Questions	Provide Models	Guide Student Practice	Check Student Understanding	Obtain High Success Rate	Scaffolds for Difficult Tasks	Independent Practice	Weekly and Monthly Review	
Mon Tue Wed Thu Fri	••••••••••••••••••••••••••••••••••••••		တိုထိုမိုင္ ဆိုင္ + သိုင္	Ś ż					<b>7</b> 31	
Daily review is an important component of instruction. It helps strengthen the connections of the material learned. Automatic recall frees working memory for problem solving and creativity	Our working memory is small, only handling a few bits of information at once. Avoid its overload— present new material in small steps and proceed only when first steps are mastered.	The most successful teachers spend more than half the class time lecturing, demonstrating and asking questions. Questions allow the teacher to determine how well the material is learned.	Students need cognitive support to help them learn how to solve problems. Modelling, worked examples and teacher thinking out loud, help to clarify the specific steps involved.	Students need additional time to rephrase, elaborate and summarise new material in order to store it in their long-term memory. More successful teachers build in more time for this.	Less successful teachers merely ask "Are there any questions?" no questions are taken to mean no problems. Faise. By contrast, more successful teachers check on all students.	A success rate of around 80% has been found to be optimal, showing students are learning and also being challenged. Better teachers taught in small steps followed by practice.	Scaffolds are temporary supports to assist learning. They can include modelling, teacher thinking aloud, cue cards and checklists. Scaffolds are part of cognitive apprenticeship.	Independent practice produces 'overlearning" - a necessary process for new material to be recalled automatically. This ensures no overloading of students' working memory.	The effort involved in recalling recently -learned material embeds it in long-term memory. And the more this happens, the easier it is to connect new material to such prior knowledge.	
• Every unit of work has a series of quiz questions to help students recall key knowledge. These are used in lessons and for prep work.	Teachers define and chunk the steps for students to follow when learning new material. These steps are agreed across the department.	Teachers use cold calling, pair share and stretch it TLAC strategies to check for mastery. Questions are pre- planned.	The visualiser is used across the department. Teachers will 'live' model to demonstrate how to construct analytical and creative texts.	Tasks and activities have been designed so that automaticity can be achieved. Repetition and revision is built into tasks.	Specific mastery checks are embedded into SOLS so that teachers can check for mastery.	We use I do, We do, You do to build students retention of key procedural knowledge and support automaticity.	<ul> <li>Scaffolds are pre- planned so that there is consistency across the department. Testing includes memorisation of scaffolds.</li> </ul>	<ul> <li>Students repeat activities and tasks at spaced intervals to support learning of key procedural knowledge as well as knowledge.</li> </ul>	• We map our quiz questions so that we can test core learning throughout the year. All SOLS have defined 'retention' knowledge.	

KS4	Term 1	Term 2		Term 3	Term 4	Term 5		Term 6	
Year 10	Memory and Storage (1.2)Memory and storage (1.2) • Data storage (1.2.4)Memory and storage (1.2.4) • Data storage (1.2.4)• Data storage (1.2.4)Network Security (1.4)Network Security (1.4)		Memory and storage (1.2) • Data storage (1.2.4) • Compression (1.2.5) • Primary storage (1.2.1)	Memory and storage (1.2) • Secondary storage (1.2.2) Systems architecture (1.1)	Ethical, legal, cultural and environmental impacts of digital technology (1.6)		Yr10/12 PPES	Systems software (1.5)	
				Computer networks, connections and protocols (1.3)	connections and protocols (1.3)				
Year 11	Algorithms (2.1)	Programming fundamentals (2.2)	Year 11/13 PPES	Producing robust programs (2.3) Boolean logic (2.4)	Programming languages and Integrated Development Environments (IDEs)	Revision and preparation for final exams	Year 11 GCSE Exams		

## 3)Impact:

## Data analysis of Summer exam series 2023

Y10 Grades	All students in subject %	SEN %	Disadvantaged (PP) %	Males %	Females %	Students to target	Action	Outcomes
9-7	0							
Mar Mock 9-7								
9-5	28							
Mar Mock 9-5								
9-4	42							
Mar Mock 9-4								
9-1	77							
Mar Mock 9-1								
Destinations: University-			·					

Apprenticeships-Work placements-