

Computer Science Programme of study (2025-)

Golden Threads – Algorithms AL, Programming and robotics PR, Data DA, Hardware and software HS, Communication and digital citizenship CD, Digital skills DS

Year	T1	T2	T3	T4	T5	T6
EYFS	Free access to computers, ipads and Beebots					
1	Crazy computers AL HS DA	Robots! HS AL DS PR DA	Fantastic fish (programming) AL PR HS DS	Clickable colours (programming) AL PR DS	Introducing the internet CD	Digital me AL PR DS HS
2	Superheroes (programming) AL PR HS DS	Recycled racers (spreadsheets) AL DA HS DS	Perfect patterns (programming) PR HS DS	Music-maker AL PR DS	Mysterious messages AL DA DS	Communicating digitally DA HS CD
3	Mousey mazes AL PR DS	Avatar-maker AL PR DA DS HS	RoboCook AL PR DA DS	Inside the internet DA CD DS HS	Crazy contraptions AL HS DA	Zookeeper AL DA DS
4	Scratch tales PR AL DS CD	Creative calculators PR AL DS DA HS	Wonderful weather app PR AL DS DA HS	Fantastic food DS PR AL DA	Inside a computer DS HS DA	Party planner DA DS AL PR HS CD
5	Rhythmic algorithms PR AL DA DS HS	Quality quizzes DS PR AL DA HS CD	Magnificent maze games DS PR AL HS CD	Mystery mansion PR AL DA DS HS CD	Navigating the net DS CD DA	The bug report DA DS CD HS
6	Animal enclosures PR AL DA HS DS	Creative shapes PR AL DS DA	Robo dance-off PR AL DS DA HS	Surprise stories PR DS AL DA HS CD	Computational racing HS DA AL CD DS	Esports tournament DS DA CD AL HS
7	Unit 3: Perfect playgrounds PR DS DA CD	Unit 1: Extended reality (XR) PR DS AL HS CD	Unit 2: The magic of AI PR DS AL DA HS CD	Unit 4: Super security PR DS AL DA HS CD	Unit 6: Quirky quizzes PR DS DA HS CD	Unit 5: 'Where I live' website PR DS AL HS CD
8	Unit 1 Python puzzler PR DS AL CD	Unit 1 Python puzzler PR DS AL CD	Unit 2 Delving into data PR DS DA HS CD	Unit 3 Crazy contraptions PR DS AL DA HS CD	Unit 4 Robo Challenge PR DS AL DA HS CD	Unit 6 Cyber security PR DS AL DA HS CD
9	Unit 1 Machine Learning PR DS AL DA HS CD	Unit 4 Big data PR DS AL DA HS CD	Unit 6 Astro computing PR DS AL DA HS CD	Unit 2 - Retro gamer PR DS AL DA HS CD	Unit 3 – Social media marketing DS DA HS CD	Unit 3 – Social media marketing DS DA HS CD
10 CS	Introduction 1.1 Systems Architecture 1.2 Memory and Storage 2.2 Programming fundamentals	1.2 Memory and storage 2.2 Programming fundamentals HS PR AL	2.1 Algorithms 1.3 Computer networks, connections and protocols HS PR AL CD	2.1 Algorithms 2.4 Boolean logic 2.5 Programming languages and Integrated Development Environments	2.1 Algorithms 2.2 Programming fundamentals 2.3 Producing robust programs PR AL DA	Recap

	HS DA PR AL			PR AL DA		
10 CIM	Introduction to Creative iMedia DS	Course work preparation DS	R095 Coursework DS	R095 Coursework DS	R093 preparation DS	R094 preparation DS
11 CS	1.3 Computer networks, connections and protocols 1.4 Network security 1.5 Systems software HS DA CD	1.6 Ethical, legal, cultural and environmental impacts of digital technology CD	2.1 Algorithms 2.2 Programming fundamentals 2.3 Producing robust programs PR AL DA	2.4 Boolean logic 2.5 Programming languages and Integrated Development Environments PR AL DA	RECAP	RECAP
11 CIM	R094 Coursework DS	R094 Coursework DS	R093 theory DS	R093 Exam preparation DS	R093 Exam preparation DS	
12	1.1.1 Structure and function of the processor 1.1.2 Types of processor 1.4.1 Data Types 1.4.2 Data Structures HS DA	1.1.3 Input, output and storage 1.2.1 Systems Software 1.4.3 Boolean Algebra 2.1 Elements of computational thinking HS DA	1.2.2 Applications Generation 1.2.3 Software Development 1.2.4 Types of Programming Language 2.2.1 Programming techniques 2.2.2 Computational methods PR AL	1.3.1 Compression, Encryption and Hashing 1.3.2 Databases 1.3.3 Networks 2.3.1 Algorithms HS PR AL DA CD	1.3.4 Web Technologies 1.5.1 Computing related legislation PR AL CD	1.5.2 Moral and ethical Issues Introduction to NEA PR AL CD DS
13	NEA prep Recap 1.1 Recap 1.2 PR AL DS	NEA Prep Recap 1.3 Recap 1.4 PR AL DS	NEA prep Recap 1.5 PR AL DS	NEA Prep Revision component 1 PR AL DS	NEA Prep Revision Component 2 PR AL DS	

Golden Threads:

Algorithms AL (Understanding the logic behind programs, using symbols or structured language to plan programs, and understanding the limitations of a program)

Programming and robotics PR (Writing programs using visual or text-based programming languages using sequence, selection and iteration, debugging, utilising data types and operators)

Data DA (Representing different types of data, transferring data, data types, binary, file size, understanding data and information, searching for information and structuring data to make it useful)

Hardware and software HS (Processing, understating how software works, different types of devices, operating systems and components, understanding how data is transferred between devices, and computer architecture)

Communication and digital citizenship CD (Understating the WWW, online safety, searching for data using the internet, understanding networks and internet services)

Digital skills DS (invention, audience, purpose, evaluation and creating content)