



KS3 Long Term Plan

Subject: Computing

2021/2022

Curriculum Statement of Intent

Computer science KS3 curriculum is in line with the overall aims and vision for the whole school curriculum. Digital literacy and a firm understanding of how computers work is vital for all of our students in the technologically changing world of today. We intend to develop our students' natural curiosity about the e-world and how it works. The department aims to encourage all students to develop an interest in computing and to work in a confident and independent manner. We strive to equip students with the practical and theoretical skills necessary to flourish in the world of work. The department achieves this by providing a supportive learning environment and challenging all students to be the best that they can be.

Curriculum Statement of Implementation

We will achieve the above mentioned intend by:

- Having engaging lessons, creating a love for the subject.
- Ensuring pupil progress in every lesson, no student should be left behind.
- Covering national curriculum and making sure students have sound, in-depth knowledge.
- Promoting independent activities / tasks to help students become independent learners.
- Working online and teacher marking their progress using one note/ some other online platform.
- Regular formative tests to check student knowledge.
- Summative tests to recap / test learning.

	Autumn 1	Autumn 2	Spring 1
Yr. 8	<p>Topics and skills: Unit 1: HTML</p> <ul style="list-style-type: none"> • Write HTML code to create a simple web page and display it in a browser • Write CSS to define the styles used in a web page • Create a simple navigation system using HTML • Use a design to create a template for a web page using HTML • Create their own multi-page website • Insert text, images and links on their web pages 	<p>Topics and skills: Unit 2 : heroes in computing</p> <p>Reworking and reusing digital artefacts</p> <ul style="list-style-type: none"> • Image editing • Background / layers • Text addition / fonts colours etc • Effective searching • Copyright • Getting peer feedback and improving the work 	<p>Topics and skills: Unit 3 Database (MS Access) :</p> <ul style="list-style-type: none"> • Database definition • Database design • Database queries • Database testing • Broadcasting message over internet • When messages spread on internet
Assessments		- written assessment paper	
	Spring 2	Summer 1	Summer 2
Yr. 8	<p>Topics and skills: Unit 4 Programming concepts</p> <ul style="list-style-type: none"> • Write and run programs in Small Basic • variables, input output • selection statements • Identify and correct syntax errors • For...EndFor loop • While...EndWhile loop • Find and correct logic errors 	<p>Topics and skills: Unit 5 Cryptography</p> <ul style="list-style-type: none"> • Programming the Caesar Cipher • Hashing • Cryptography and the WWW • Public key encryption • Sorting Algorithms (bubble sort) • Searching Algorithms (linear) 	<p>Topics and Skills Unit 6 Me and My Digital world 2</p> <ul style="list-style-type: none"> • What to trust online • How to search smart • Staying safe online ,Online risks : sharing material online, difficulty of removing potentially compromising material online • Cyberbullying – bystander and up stander • Not to provide other with material which you don't want to be shared and not to share personal material that is send to them
Assessments	Mid-year assessment		EOY Assessment

	Autumn 1	Autumn 2	Spring 1
Yr. 7	<u>Topics and Skills</u> Unit 1 Computer Systems: <ul style="list-style-type: none"> • Data and Information • Hardware and software components that make up computer systems • Input/ Output Devices • CPU - Fetch Decode Execute Cycle 	<u>Topics and Skills</u> Unit 2 Data Representation: <ul style="list-style-type: none"> • Binary code • Binary to Decimal • Binary to ASCII • Image Representation • Sound Representation • Assessment 	<u>Topics and Skills</u> Unit 3 Me and My Digital World 1 <ul style="list-style-type: none"> • Reflecting on their place in a digital world • Understanding how to combat cyberbullying • Using PowerPoint to create an eBook – inc hyperlinks • get user feedback and improve ebook. • Boolean Logic and Logic Gates
Assessments	written assessment paper	written assessment paper	
	Spring 2	Summer 1	Summer 2
Yr. 7	<u>Topics and Skills</u> Unit 4 Spreadsheet Modelling : <ul style="list-style-type: none"> • Give examples of how computer models are used in the real world • Format a simple spreadsheet model • Use simple formulae and functions • Name cells in a spreadsheet model • Use a simple spreadsheet model to explore different “what if” scenarios • Create a basic pie chart to display results 	<u>Topics and Skills</u> Unit 5 Computational Thinking : <ul style="list-style-type: none"> • Algorithms • Abstraction • Decomposition • Pattern recognition • Flowcharts: Algorithm selection Algorithm iteration 	<u>Topics and Skills</u> Unit 6 - Introduction to Scratch : <ul style="list-style-type: none"> • How to create animations, games and interactive programs using Scratch • Drawing Shapes • Creating a swimming fish game • Creating face changers • Creating a maze game • assessment
Assessments	Spring 2 Mid-Year Assessment		End of Year Assessment

	Autumn 1		Autumn 2		Spring 1	
Yr. 9	Topics and Skills: <ul style="list-style-type: none"> • Variables, Input/output statements • Maths, Boolean logic and Selection • Iteration: For Loops, While loops • Lists: 1D and 2D • Functions and procedures • Reading and writing to files • Assessment 		Topics and skills: <ul style="list-style-type: none"> • Internet safety • Cyber security (malware, phishing, virus) • Introduction to JavaScript (Ozaria) • Data representation (numbers) • Hardware and Software • AI and machine learning (computational abstractions) • Assessment 		DT	
Assessments	written assessment				written assessment	
	Spring 2		Summer 1		Summer 2	
Yr. 9	DT	•	Food tech	•	Food Tech	•
Assessments					written assessment	