

Computing, ICT and iMedia CEH Faculty

Vision

The computing curriculum at Grove School have been designed to cover the three main areas of: Digital Literacy, Computer Science and Information Technology. Our students will be introduced to the IT skills that they will need to support other subjects across the curriculum and will be introduced to elements such as programming, algorithms, some more complex elements of software packages and an understanding of computer hardware and how it works.

We are an energetic and ambitious team, who seek to deliver rich and innovative lessons that enthuse our students about ICT and Computing and equip them with the skills they need to support future aspirations.

At Key Stage 4, we offer both ICT and iMedia at Grove School.

Department Staffing and Expertise

Dave Pollard – ICT and Business Studies Teacher

- Teaching both subjects since 2008
- Current role – Teacher
- Previous role – Lead teacher

Paul Duerden – Business and ICT Teacher

- Teaching since 2014
- Current role – Head of Year
- Previous roles – Head of Department

Key Skills that we hope to develop in an ICT student

- Knowledge
- Application
- Confidence
- Oracy
- Investigative
- Analysis
- Evaluation

The Ascent of the Computing Curriculum

The intent of our department is to achieve ascent within the computing curriculum journey at both Key Stage 3 and Key Stage 4 by providing students with the foundations in the 3 key elements of the curriculum:

- 1) Computer Science
- 2) Digital Literacy
- 3) Information Technology.

This means that concepts that are generally understood by students are elevated to new aspects, allowing our students to have the opportunity to develop and improve their own knowledge, be able to articulate this confidently and to challenge accepted conventions, re-think and re-create.

Overcoming cumulative disfluency in the Key Stage 3 and Key Stage 4 Curriculum

We aim to overcome disfluency within computing through a range of strategies including:

- Sticky Knowledge
- Knowledge checks
- Key term starters
- Knowledge organisers
- Microsoft Forms
- Past Paper questions to perfect exam technique

Key Stage 3 ICT Content

Year	Topics
Year 7	Introduction to Grove Computer system, E-Safety, Computer Basics, Office skills (PowerPoint, Publisher, Word), Scratch, Spreadsheets
Year 8	Binary and Data, Business Documents, Networks and Cryptography, Microbits, Python and Kodu
Year 9	User Interface, Microbits, Graphics introduction and Idea program

Key Stage 4 ICT Content

Course	Topics
OCR Cambridge National IT Level 1 / 2	Ro50: IT in the Digital World (Exam 40%) Ro60: Data Manipulation using Spreadsheets (Coursework 30%) Ro70: Using Augmented Reality to Present Information (Coursework 30%)

Key Stage 4 iMedia Content

Course	Topics
OCR Cambridge Nationals in iMedia Level 1 / 2 (New Specification)	R093 - Creative iMedia in the Media Industry (Exam: 40%) R094 - Visual Identity and Digital Graphics (Coursework: 30%) R097 - Interactive Digital Media (Coursework: 30%)

“Knowing and remembering more”

A knowledge rich curriculum means that students can confidently articulate and understand key content within their specification, and are able to recall this information consistently throughout the course

We implement this through a range of strategies including: recap and recall starters; Microsoft Form quizzes; and, knowledge organiser tasks. We also review this knowledge through a range of testing understanding and retention through regular questioning and use of exam questions.

Disciplinary Knowledge

The order and sequence of our lessons has been carefully considered to allow students to develop confidence, skills and knowledge effectively. For example, Scratch and Microbits - which are blocked based coding languages - are studied before Python - a text-based programming language - that allows students to build up their knowledge and understanding of algorithms and programming.

We introduce students to PowerPoint and Word before moving onto more in-depth units in Excel and Access to provide students with a well-rounded understanding of how to use the Microsoft Office suite.

We provide an overview of computer basics in Year 7 where we introduce students briefly to concepts such as binary and then go on to develop these aspects in more detail during Year 8.

Grove School: Curriculum

Supra Curriculum

We aim to enhance our computing / information technology curriculum experience by introducing the following activities into our planning:

Silver IDEA Badges

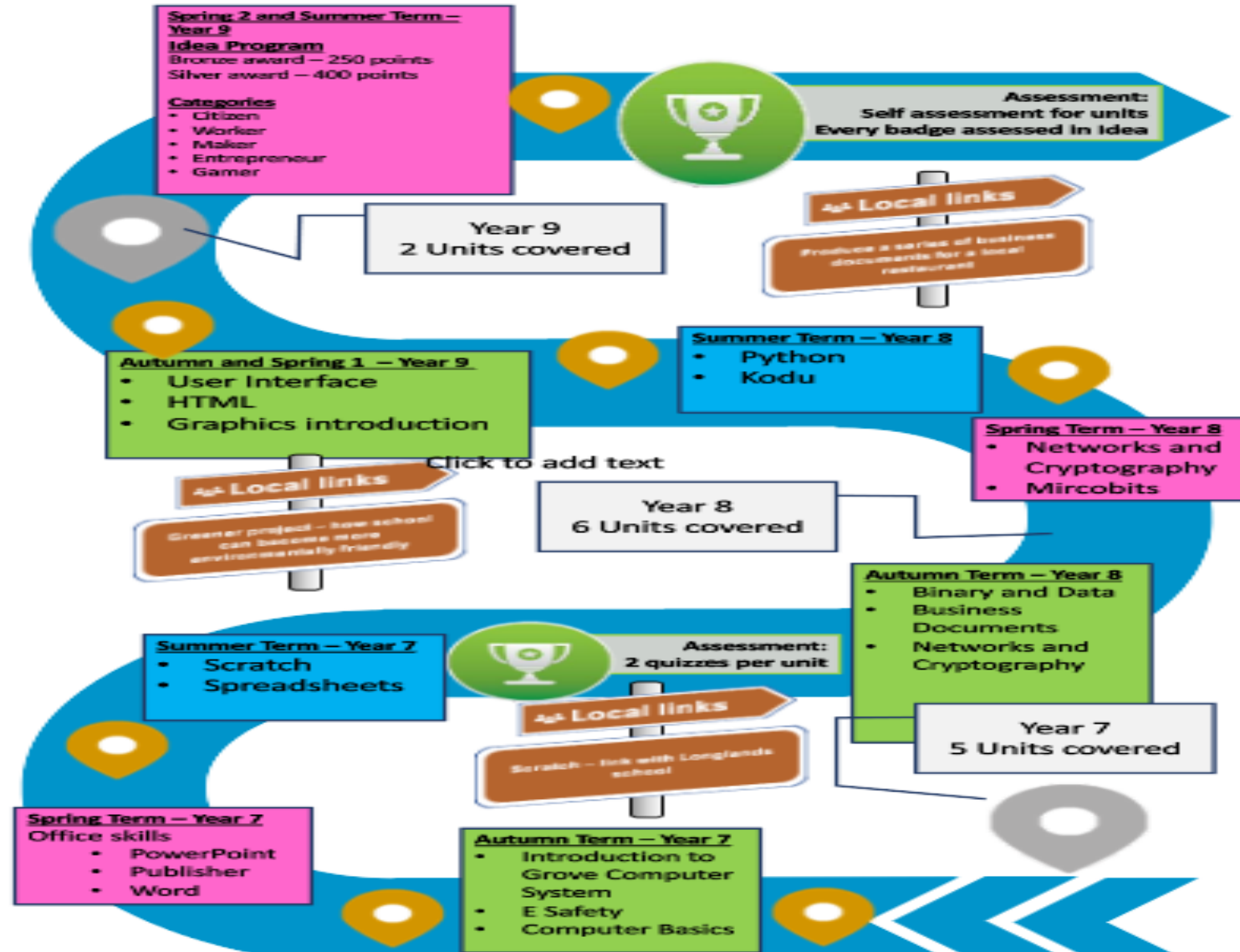
Using the BBC's 'Click' technology clips

Coding Courses e.g., w3Schools and Code Club

BBC News articles

Key Stage 3

Computing



Key Stage 3 Year 7 Curriculum

Unit	Overview
Introduction to Grove Computer System	The intent of this unit is to introduce students to Microsoft Teams and Office 365 features so that they can effectively use them.
E-Safety	To understand how to use computers effectively and safely.
Computer Basics	To understand how computers work and the key hardware and software used to run them effectively.
Office skills (PowerPoint, Publisher, Word)	To understand how to use PowerPoint/Publisher/Word more effectively and to know how to use features of them to make effective documentation.
Scratch	To understand algorithms and how to use scratch as a route into the world of programming.
Spreadsheets	To understand the purpose of spreadsheets and how to use them effectively to perform various tasks.

Key Stage 3 Year 8 Curriculum

Unit	Overview
Binary and Data	To understand how binary is used to represent numbers, character and picture on computers.
Business Documents	To provide pupils with a better understanding of when and where different computer programs should be used and how to create effective documents for a purpose.
Networks and Cryptography	To understand the theory behind networks and security threats. Students to learn about the use of cryptography for system security.
Microbits	Students are asked to solve problems to create a variety of programs such as a digital compass using Microbits
Python	To understand the purpose of programming languages and to be able to produce various programs using the language Python.
Kodu	To understand how to make games e.g., racing and maze games, using the Kodu programming language.

Key Stage 3 Year 9 Curriculum

Unit	Overview
User Interface	Provide students with a better understanding of planning, creating, evaluating and improving a project. Students will experience advanced features of various software programs in Microsoft Office.
HTML	Students are asked complete tasks using HTML code to Add and format text, add images, tables and links.
Graphics Introduction	To explore the purpose and the function of pre-production documents.
Idea Program <ul style="list-style-type: none">• Bronze award – 250 points• Silver award – 400 points <u>Categories</u> <ul style="list-style-type: none">• Citizen, Worker, Maker, Entrepreneur and Gamer	The overall aim is to give students a broad education that encourages creativity and equips them with the knowledge and skills to understand and change the world.

Key Stage 4

ICT

OCR Cambridge National IT Level 1 / 2

Unit	Overview
Ro50: IT in the Digital World (Exam)	<p>In this unit you will learn about design and testing concepts for creating an IT solution or product, and the uses of IT in the digital world.</p> <p>Topics include: Design Tools; Human Computer Interface (HCI) in everyday life; Data and testing; Cyber-security and legislation; Digital Communications; Internet of Everything (IoE).</p>
Ro60: Data Manipulation using Spreadsheets (Coursework)	<p>This is assessed by completing a set assignment. In this unit you will learn how to plan, design, create, test and evaluate a data manipulation spreadsheet solution to meet client's requirements. You will be able to evaluate your solution based on the user requirements.</p> <p>Topics include: Planning and designing the spreadsheet solution; Creating the spreadsheet solution; Testing the spreadsheet solution; Evaluating the spreadsheet solution.</p>
Ro70: Using Augmented Reality to Present Information (Coursework)	<p>This is assessed by completing a set assignment. In this unit you will learn how to design, create, test and review an Augmented Reality model prototype to meet a client's requirements.</p> <p>Topics include: Augmented Reality (AR); Designing an Augmented Reality (AR) model prototype; Creating an Augmented Reality (AR) model prototype; Testing and reviewing.</p>

Key Stage 4

iMedia

OCR Cambridge National iMedia Level 1 / 2

Unit	
R093 - Creative iMedia in the Media Industry (Exam: 40%)	In this unit you will learn about the sectors, products and job roles that form the media industry. You will learn the legal and ethical issues considered and the processes used to plan and create digital media products. You will learn how media codes are used within the creation of media products to convey meaning, create impact and engage audiences. You will learn to choose the most appropriate format and properties for different media products. Completing this unit will provide you with the basic skills for further study or a range of creative job roles within the media industry
R094 - Visual Identity and Digital Graphics (Coursework: 30%)	In this unit you will learn how to develop visual identities for clients. You will also learn to apply the concepts of graphic design to create original digital graphics which incorporate your visual identity to engage a target audience. Completing this unit will introduce the foundations for further study or a wide range of job roles within the media industry
R097 - Interactive Digital Media (Coursework: 30%)	In this unit you will learn to design and create interactive digital media products for chosen platforms. You will learn to select, edit and repurpose multimedia content of different kinds and create the structure and interactive elements necessary for an effective user experience. Completing this unit will provide you with the basic skills for further study or a range of creative and technical job roles within the media industry.

OCR iMedia Year 10 and Year 11

- The purpose of this course is to equip our students with a range of creative media skills and provide opportunities to develop, in context, desirable, transferable skills such as research, planning, and review, working with others and communicating creative concepts effectively. Through the use of these skills, students will ultimately be creating fit-for-purpose creative media products.
- Key skills are promoted in lessons through building on problem solving, resilience, group work leadership, communication listening or speaking skills when appropriate. Students are also expected to maintain an effective organisation of files/folders. Students are encouraged to show initiative and are praised when this is identified.
- Tasks will challenge all students, including high-attaining learners, by introducing them to demanding material and techniques; encouraging independence and creativity and providing tasks that engage the student. The units selected from this qualification will allow learners the freedom to explore the areas of creative media that interest them as well as providing good opportunities for them to enhance their learning.
- Scaffolding in the form of a wide range of resources support students in their independence. Peer assessment, identifying improvements for others to make further help students to develop their own independence. Teachers will often ask students to identify three revisions made to their original submissions with reasons.
- Literacy skills are developed by applying key word terminology and through the reviewing of digital products. Students will demonstrate analytical and interpretation skills (of situations and/or results) and the ability to formulate valid, well-argued responses. Our students will also evaluate and justify their decisions, choices and recommendations throughout the course.