



# Computing at CLHS

## Topic 1 - Using computers safely

We begin studying in Year 7 by giving pupils access to the Office 365 suite and introducing a range of computing skills such as how to search for accurate information, importance of communicating safely and respectfully online, the need to keep personal information private and how to report concerns online.

## Topic 2 - Spreadsheet Modelling

How computers can be used to model data and answer "what-if?" questions. Understand the difference between data and information and use a range of spreadsheet functions such as AVERAGE, COUNTIF and IF statements to analyse data.

## Topic 3 - Programing Essentials in Scratch

What are algorithms? Develop programs, detect and correct simple semantic errors i.e. debugging, in programs. Solve problems through decomposition. Build programs that implement algorithms to achieve given goals and use logical reasoning to predict the behaviour of programs.

## Topic 1 - Understanding Computers

How do computers work? How do they use binary to store information? What is ASCII? How do computers represent sound waves, images and text?

## Topic 2 - Computer Networks & Protocols

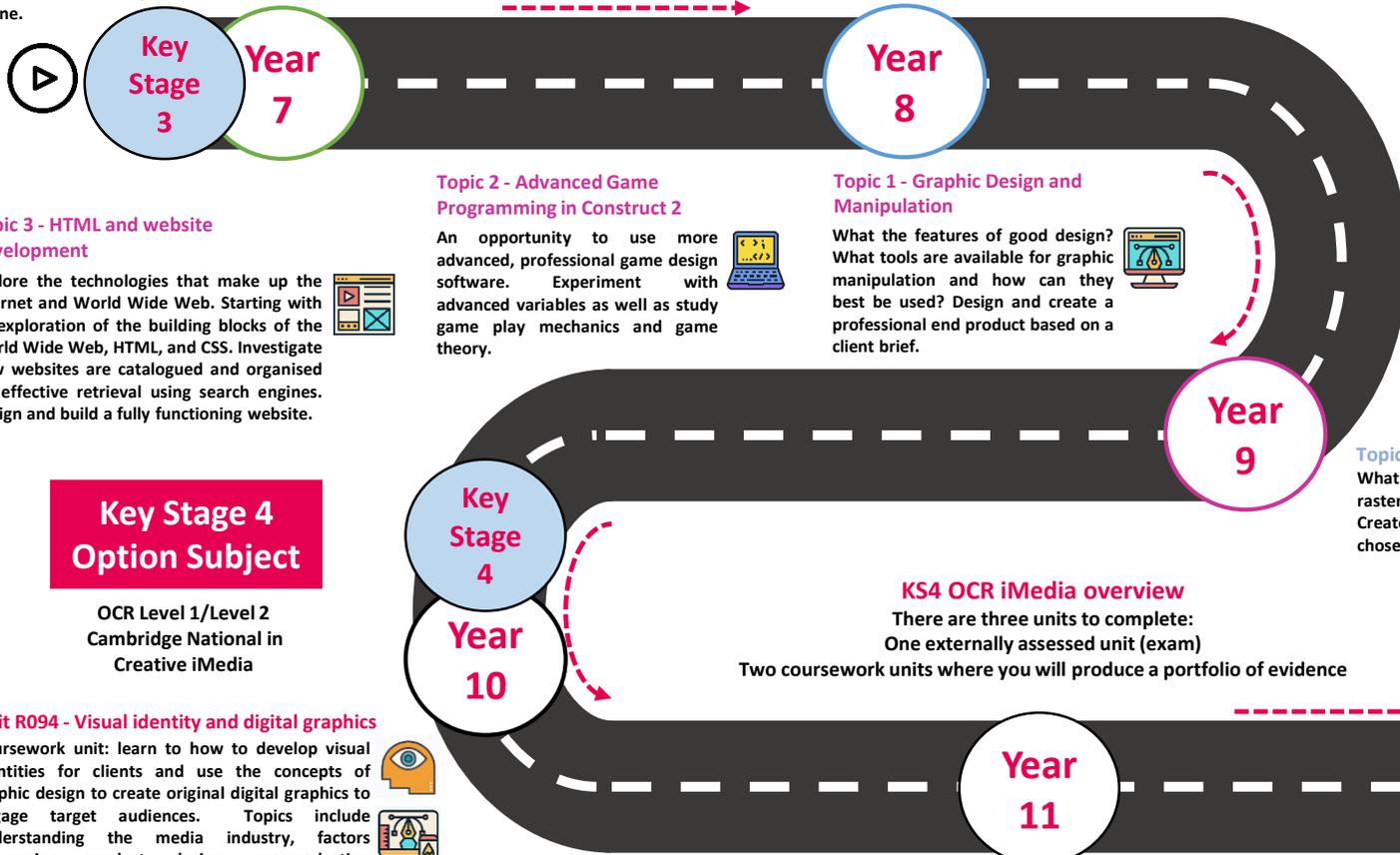
What is a computer network and how data is transmitted between computers across networks? What protocols are and how do they control systems? What is bandwidth and how does that influence data transfer speeds across a network such as the internet? What are components on the internet (servers, browsers, pages, HTTP and HTTPS protocols, etc.) and how do they work together?

## Topic 3 - Data Security and Cybersecurity

What is the difference between data and information? What data do companies collect on you? How that data might be valuable to cybercriminals? How can human errors pose security risks to data? What is hacking and how is it done, what prevention methods are there? What are the most effective methods to prevent cyberattacks?

## Topic 4 - Vector Graphics

What is the difference between bitmap and raster graphics? Where should each be used? Create a set of vector graphic icons for a chosen real world scenario.



## Topic 3 - HTML and website development

Explore the technologies that make up the internet and World Wide Web. Starting with an exploration of the building blocks of the World Wide Web, HTML, and CSS. Investigate how websites are catalogued and organised for effective retrieval using search engines. Design and build a fully functioning website.

## Topic 2 - Advanced Game Programming in Construct 2

An opportunity to use more advanced, professional game design software. Experiment with advanced variables as well as study game play mechanics and game theory.

## Topic 1 - Graphic Design and Manipulation

What the features of good design? What tools are available for graphic manipulation and how can they best be used? Design and create a professional end product based on a client brief.

## Key Stage 4 Option Subject

OCR Level 1/Level 2 Cambridge National in Creative iMedia

## KS4 OCR iMedia overview

There are three units to complete:  
One externally assessed unit (exam)  
Two coursework units where you will produce a portfolio of evidence

## Unit R094 - Visual identity and digital graphics

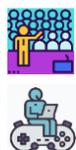
Coursework unit: learn to how to develop visual identities for clients and use the concepts of graphic design to create original digital graphics to engage target audiences. Topics include understanding the media industry, factors influencing product design, pre-production planning and distribution considerations.

## Unit R099 - Digital games

Coursework unit: learn how to plan, create and review digital games. The UK has one of the largest games markets in the world, and the UK's games industry is among the largest in Europe. Its workforce has one of the youngest profiles in the media industries with earnings above the media industry average. It is a sector with a huge variety of technical and creative job roles. This unit will open the door to a variety of roles within the media industry by enabling you to identify core features of digital games and understand the basics of planning, designing, creating and testing digital games.

## Unit R093 - Creative iMedia in the media

Exam Unit: 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.



T Level

BTEC Level 3

Apprenticeship

A Level