

Curriculum Overview

Subject: ICT

Year Group: 7

Students are introduced to 3 key areas of Computer Science, Information Technology and Games Development. They are introduced to block-based computer programming, investigate the use of productivity software to complete a project and explore the 3D games development process. Computational thinking underpins all lessons in Computing with digital literacy being a key aim. Students are encouraged to articulate and record specialist terms to develop their understanding of the subject.

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS • Key programming constructs • Computational thinking skills • Solve a problem by programming a solution • Recognise and understand the importance of staying safe online	KNOWLEDGE/SKILLS • Use event driven programming • Exploring digital game genres and platforms • Digital game creation	KNOWLEDGE/SKILLS • Select appropriate software for a given task • Critique digital content for credibility • Develop media for a range of business needs
KEY ASSESSMENTS Half term 1: code.org summative assessment Half term 2: e-safety summative assessment	KEY ASSESSMENTS Half term 1: Game genres and platforms summative assessment Half term 2: Kodu summative assessment	KEY ASSESSMENTS Half term 1: Spreadsheets summative assessment Half term 2: ICT project summative assessment

Extended reading suggestions and external resources:

Bitesize Key Stage 3 Computer Science <https://www.bbc.co.uk/bitesize/subjects/zvc9q6f>

Join the weekly code-along using open projects based on a weekly theme, with different levels available for all abilities <https://www.raspberrypi.org/at-home>

Curriculum Overview

Subject: ICT

Year Group: 8

Students are introduced to text-based programming in the first term of Year 8. In term 2, they explore game development, beginning with the learning planning and design stages before creating their own game in a specialist program. In the final term, students use various desktop applications to plan and develop media for a project, including a video. Students are encouraged to articulate and record specialist terms to develop their understanding of the subject.

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS • Use a textual programming language to solve a variety of computational problems. • Understand how instructions are stored and executed within a computer system. • Appreciate alternative algorithms for more efficient programming solutions	KNOWLEDGE/SKILLS • Plan and design a game • Create suitable sprites and animations • Build a functioning game incorporating event driven programming	KNOWLEDGE/SKILLS • Use suitable applications to develop various media for a project • Identify common hardware found in computing devices • Use search technologies effectively.
KEY ASSESSMENTS Half-term 1: Python summative assessment 1 Half-term 2: Python summative assessment 2	KEY ASSESSMENTS Half-term 1: Design and planning summative assessment Half-term 2: Construct 3 summative assessment	KEY ASSESSMENTS Half-term 1: Computer hardware summative assessment Half-term 2: ICT summative assessment

Extended reading suggestions and external resources:

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Join the weekly code-along using open projects based on a weekly theme, with different levels available for all abilities <https://www.raspberrypi.org/at-home/>

Programming tutorials with easy to follow instructions. <https://www.codecademy.com/>

Curriculum Overview

Subject: Computing

Year Group: 9

Students extend their text based programming skills using the PRIMM methodology and by programming portable devices. They investigate and explore the changing world of work and the impact of computer technology on this aspect of life. They also explore the technologies that make up the internet and World Wide Web and build a functioning website. In term 3, students will discover how professionals create digital games using the industry-standard software package, Construct 3 and then complete a final project to create a product to a client specification, working in groups and following the systems life cycle. Students are encouraged to articulate and record specialist terms to develop their understanding of the subject.

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS • Write programs that use device components to interact with the physical world. • Build a physical computing project. • Use independent and paired investigation to improve programming skills with PRIMM.	KNOWLEDGE/SKILLS • Investigate the changing working world and the impact of technology. • Understand the meaning of social engineering and have an awareness of methods to protect ourselves and our networks against these attacks.	KNOWLEDGE/SKILLS • Develop an idea for a digital game. • Understand the programming constructs in digital game making. • Build a 2D digital game.
KEY ASSESSMENTS Half term 1: Programming assessment Half term 2: Physical computing summative assessment	KEY ASSESSMENTS Half term 1: The world of work summative assessment Half term 2: Cybersecurity summative assessment	KEY ASSESSMENTS Half term 1: Game design summative assessment Half term 2: Construct 3 summative assessment
Extended reading suggestions and external resources: BBC Bitesize Key Stage 3 Computer Science https://www.bbc.co.uk/bitesize/subjects/zvc9q6f		