Curriculum Overview

Subject: Computing

Year Group: 7

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

In Computing, the year is divided into 3 key areas of Computer Science, Information Technology and Games Development. Students are introduced to increasingly complex block-based computer programming, they 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 Understands key programming constructs – sequencing, variables, selection, and count-controlled iteration. Developed computational thinking skills – abstraction, decomposition, pattern recognition whilst learning to code. Can solve a problem by programming a solution – combining programming techniques with computational thinking to design and create the solution.	KNOWLEDGE/SKILLS Can combine software to manipulate and create digital content with awareness of audience and purpose. Can identify and explain the use of technology beyond the classroom and relate this to their own experiences. Knows how to evaluate solutions using criteria or feedback and make improvements based on evaluation.	KNOWLEDGE/SKILLS To know how to select appropriate software for a given task. Can identify trustworthy and untrustworthy sources of information when using the internet for research. To know and understand how to collect and analyse and process data effectively using spreadsheet software.
KEY ASSESSMENTS Half term 1: Scratch programming summative assessment Half term 2: BEBRAS Challenge	KEY ASSESSMENTS Half term 1: Kodu Summative assessment Half term 2: Game genres and platforms summative assessment	KEY ASSESSMENTS Half term 1: Using media summative assessment Half term 2: Spreadsheets summative assessment

Extended reading suggestions and external resources:

BBC 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/

Remix any website to include your own content https://x-ray-goggles.mouse.org/

Badges and awards to demonstrate digital, enterprise and employability skills https://idea.org.uk/

Curriculum Overview

Subject: Computing

Year Group: 8

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The Year 8 Computing curriculum begins with an exploration of key network concepts, as well as the services and protocols that enable online communication, before moving into Python programming where students develop problem-solving skills and learn core programming constructs. In Term 2, learners focus on game design, planning and developing creative game concepts, producing their own sprites and animations, and building a fully functioning game using event-driven programming. Term 3 introduces website and mobile app development, where students apply decomposition to break down tasks, build websites using HTML, and create functional mobile apps. Computational thinking continues to form the foundation of all learning, with students applying and extending the problem-solving strategies introduced in Year 7 to more complex tasks across the year.

TERM 1	**TERM 2**	**TERM 3**
KNOWLEDGE/SKILLS Understands the terms 'internet' and 'World Wide Web', and the key services and protocols used. Uses a textual programming language to solve a variety of computational problems Understands the main programming constructs of Python.	KNOWLEDGE/SKILLS Plans and designs a game concept using a range of design tools Creates suitable sprites and animations for a digital game Builds a functioning game incorporating event driven programming	KNOWLEDGE/SKILLS Builds a functioning website using HTML. Uses decomposition to break down a problem into steps in order to support the creation of a product. Creates a functional mobile app.
KEY ASSESSMENTS Half term 1: Networks summative assessment Half term 2: Python summative assessment	KEY ASSESSMENTS Half term 1: Game Concept Creation summative assessment Half term 2: Building a game with Construct 3 summative assessment	KEY ASSESSMENTS Half term 1: Mobile Apps summative assessment Half term 2: Web Development summative assessment

Extended reading suggestions and external resources:

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

Projects for micro:bit, Minecraft, MakeCode Arcade and more https://makecode.com/online-learning

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

Curriculum Overview

Subject: Computing

Year Group: 9

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

In Year 9, students further develop the foundations built in earlier years by revisiting Python programming and progressing to more advanced concepts, applying increasingly sophisticated techniques to solve complex computational problems. They then extend their creativity and technical understanding through a games development unit, designing and building a digital game using Construct 3 while applying principles of event-driven programming and effective game design. In the final term, pupils explore key aspects of cybersecurity, learning how data is protected and how to recognise common threats, before moving on to data science, where they investigate how data can be collected, processed and interpreted to support real-world decision making. This year provides a strong bridge between KS3 and KS4, broadening students' digital literacy, deepening their computational thinking, and preparing them for the more rigorous demands of GCSE Computer Science.

TERM 1	**TERM 2**	**TERM 3**
KNOWLEDGE/SKILLS Is able to write programs that use device components to interact with the physical world. Can solve coding challenges by using computational thinking strategies, such as abstraction and decomposition. Uses independent and paired investigation to extend programming skills with PRIMM methodology.	KNOWLEDGE/SKILLS Designs and creates original sprites, characters and assets using digital drawing tools. Constructs multi-layered game environments, including backgrounds, platforms, and interactive objects. Implements core game mechanics such as movement, collisions, scoring and events.	KNOWLEDGE/SKILLS Understands how personal and organisational data can be targeted, stolen, or misused by cybercriminals. Recognises and explain common cyber threats such as social engineering, hacking, brute-force attacks, and malware. Uses data to investigate real-world problems by identifying patterns, trends, and insights in global and local datasets.
KEY ASSESSMENTS Half term 1: Programming assessment Half term 2: Computational thinking summative assessment	KEY ASSESSMENTS Half term 1: Game Assets & Environment Creation summative assessment Half term 2: Game Mechanics & Playtesting summative assessment	KEY ASSESSMENTS Half term 1: Cybersecurity summative assessment Half term 2: Data Science summative assessment

Extended reading suggestions and external resources:

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

Learn Python and web design with over 200 exercises https://snakify.org/en/

Self study courses, free software licenses and bootcamps https://academy.oracle.com/en/oa-student.html