# Curriculum Overview

Subject: Computing

Year Group: 7

CHASE HIGH
Aspirations, Character & Excellence

Students are introduced to 3 key areas of Computer Science, Information Technology and Games Development. They are introduced to more complex 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** |
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| KNOWLEDGE/SKILLS<br>• Key programming constructs<br>• Computational thinking skills<br>• Solve a problem by programming a solution | KNOWLEDGE/SKILLS<br>• Select appropriate software for a given task<br>• Critique digital content for credibility<br>• Collect and analyse data using spreadsheet software | KNOWLEDGE/SKILLS<br>• Understanding of digital game genres<br>• Exploring digital game platforms<br>• Digital 3D game creation |
| KEY ASSESSMENTS<br>Half term 1: BEBRAS Challenge<br>Half term 2: Scratch programming summative assessment | KEY ASSESSMENTS<br>Half term 1: Using media summative assessment<br>Half term 2: Spreadsheets summative assessment | KEY ASSESSMENTS<br>Half term 1: Game genres and platforms summative assessment<br>Half term 2: Kodu summative assessment |
| Extended reading suggestions and external resources:<br>BBC Bitesize Key Stage 3 Computer Science https://www.bbc.co.uk/bitesize/subjects/zvc9q6f<br>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/ | | |

# Computing Year 7 Assessment Criteria

|  | Bronze | Silver | Gold | Platinum |
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| **Terminology** | I need support to use the correct terminology. | I sometimes use the correct terminology. | I often use the correct terminology. | I always use the correct terminology. |
| **Feedback** | I need support to act upon feedback and improve my work. | I sometimes act upon feedback, and improve my work. | I usually act upon feedback, and improve my work. | I independently act upon feedback and improve and version my work accordingly. |
| **Presentation of Work** | I always present my book work according to the school presentation policy<br>**I sometimes include a suitable header, footer and page numbers on my printed work.** | I always present my book work according to the school presentation policy<br>**I usually include a suitable header, footer and page numbers on my printed work.** | I always present my book work according to the school presentation policy<br>**I always include a suitable header, footer and page numbers on my printed work.** | I always present my book work according to the school presentation policy.<br>**I always include a suitable header, footer and page numbers on my printed work.** |
| **E-Safety** | I can show use of computers safely and responsibly, knowing a range of ways to report unacceptable content and contact when online. | I know what is acceptable and unacceptable behaviour when using technologies and online services. | I can show responsible use of technologies and online services, and I know a range of ways to report concerns. | I can use technologies and online services securely, and I know how to identify and report inappropriate conduct. |
| **Folder Structure** | I need support to set up and name a basic folder structure. | I can set up a basic folder structure with suitable names. | I can set up a suitable folder structure with suitable names. | I can set up a suitable folder structure with subfolders and suitable names. |
| **Saving Work** | I need support to save my work in the correct folders with a suitable file name. | I can save most of my work in the correct folders with suitable file names. | I can save all of my work in the correct folders and subfolders with suitable file names. | I can save all of my work in the correct folders and subfolders with suitable file names and version numbers. |
| **Email** | I need support to access my email. | I can access my email independently and some of the advanced email features. | I can access my email independently and use most of the advanced email features. | I can access my email independently and use most of the advanced email features. |

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| **Computer Science** | **I can explain the outputs from an algorithm.**<br>I can detect errors in simple algorithms.<br>**I can solve a simple (3-4 lines of code) computational problem with guidance.**<br>I can sequence instructions in a limited fashion on Code.org.<br>**I have a limited understanding of why computers use binary.** | **I can explain how a simple algorithm works.**<br>I can detect errors in simple algorithms and identify solutions.<br>**I can solve a basic computational problem with guidance.**<br>I can use basic sequence and selection in Code.org.<br>**I have a basic understanding of why computers use binary.** | **I can explain how algorithms, such as searching algorithms work and I have some understanding of what sorting algorithms do.**<br>I can identify which algorithm is the best to use for a given scenario.<br>**I can independently solve a simple (3-4 lines of code) computational problem.**<br>I can use sequence, selection and repetition in Code.org.<br>**I have some understanding of why computers use binary.** | **I can explain how several algorithms such as algorithms for sorting and searching work.**<br>I can evaluate the performance of two different algorithms that are designed to complete the same task.<br>**I can independently solve a basic computational problem.**<br>I can create code in a written language, such as Python, to perform basic operations on variables.<br>**I can explain why computers use binary.** |
| **Creative Computing** | I have developed some of the specified outcomes.<br>**My teacher told me what IT tools to use to complete this work.**<br>I have searched for information on the internet, but what I find may not be relevant.<br>**I am able to identify the source of information that I collect on the internet.**<br>I have created/re-purposed digital artefacts that show a very limited awareness of audience and purpose. | I developed the specified outcomes.<br>**I have chosen some of the IT tools I used to complete the work, but some of them caused me some problems.**<br>I have used some sources to search for information to use in my work, to select some relevant information.<br>**I understand that some sources of information are not trustworthy.**<br>I have created/re-purposed digital artefacts that show limited awareness of audience and purpose. | I have developed the specified outcomes using some appropriate content and/or features.<br>**I have chosen most of the IT tools I used to complete the work, but some of them caused me some problems.**<br>I have a range of sources to search for information to use in my work, to select some relevant information.<br>**I can identify trust worthy and untrustworthy sources of information.**<br>I have created/re-purposed digital artefacts that show some awareness of audience, purpose and usability. | I have developed the specified outcomes using appropriate content and features.<br>**I have chosen and combined appropriate IT tools/devices to complete the work.**<br>I have a range of appropriate sources to search for and select relevant information to use in my work.<br>**I have acknowledged the trustworthiness of any sources of information I use.**<br>I have created/re-purposed digital artefacts that show a good awareness of audience, purpose and usability. |
| **Information Technology** | **I have a basic understanding of the hardware and software components that make up computer systems.** | **I have some understanding of the hardware and software components that make up computer systems.** | **I have some understanding of the hardware and software components that make up computer systems exploring how they interact.** | **I have a good understanding of the hardware and software components that make up computer systems exploring how they interact.** |
| | I can identify the different services the Internet offers. | I understand the different services (such as WWW) that the Internet offers and how they can be used to share and collaborate. | I understand how computers can communicate with each other. | I understand how computers communicate with one another and with other systems. |

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| | **I have a limited understanding of how personal digital devices affect people's lives.** | **I have a basic understanding of personal digital devices and the impacts they have on everyday life.** | **I have some understanding of personal digital devices and the impacts they have on everyday life.** | **I have a good understanding of personal digital devices and the impacts they have on everyday life.** |
| | I can use a model or simulation to try out different circumstances. | I can create a simple spreadsheet model that generates some useful information. | I can create spreadsheet model generates meaningful information and is based on a real-world problem or physical system. | I can create a spreadsheet model that uses some complex functions appropriately and that is relevant to a real world situation or physical system. |