Computer Studies Intent Comparison

Our curriculum intent is underpinned by our trust ethos and values of **strength** through **diversity**, **ambition** through **challenge** and **excellence** through **curiosity** as well as our individual schools' visions, values and mission statements. We collaborate and share practice, planning and resources across our trust, and adapt our own curricula with respect to our school's particular context and needs.

Sequencing, connectivity & EiTP model of Pedagogy:

CHS Intent	Trust Intent
Enable students to coherently understand, remember and make connections between the knowledge they are taught within and across subject areas.	Academies will **map** their curricula within and across subject areas, mindful of the **foundations** of the primary curriculum, and the future demands of further and higher education.

We have mapped our curricula within and across subject areas using the **national curriculum** as well as using the UK's council's **Education for a connected world framework**. We have been mindful of the **foundation** of the primary computing curriculum as well as the future demands of the further and higher education. Our schools want our students to become immersed in new learning experiences and our curriculum is designed to support students making **links** between subjects. We succeed with this through **sequential** building of knowledge using a **spiral curriculum** in which there is an **iterative revisiting** of topics, knowledge and skills throughout the 5 years. Each loop of a topic **deepens** the learning and difficulty of a topic, with each successful encounter **building** upon the previous one. New information or skills introduced are related back and **linked** directly to learning in a previous iteration of the spiral allowing students to see the **linkages** between each lesson as students spiral upwards in their studies of computer studies.

We us the '**Excellence of Teaching'** model of pedagogy to plan and deliver our lessons using **direct instruction** to support learning across the curriculum. To support students in their ability to acquire new knowledge and develop skills, we have implemented a **learning sequence** that supports students in securing, understanding and retaining new knowledge. The Excellence in Teaching Programme (EiTP) learning sequence is underpinned by **Rosenshine's Principles** of **Instruction**; in every lesson, students are guided through the following learning sequence:
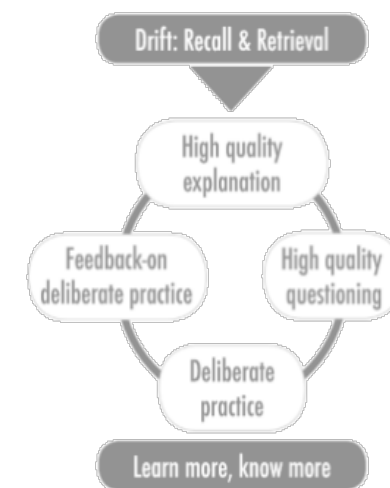
Recall and retrieval activities are used to support well-researched practices which move learning from short- to long-term memory. By regularly **revisiting prior learning**, students are able to more quickly remember knowledge and apply skills, meaning that their learning is accelerated. Supporting this, each lesson contains new learning delivered through **high-quality explanations**. This direct instruction ensures all students receive the correct information they need to rapidly make progress in the following **supplementary tasks** and **questions**. These tasks are then **assessed** during lesson time, ensuring all students receive **quality guidance** to improve in future tasks.

Each half term, students undertake **one graded assessments**, in which they will receive **feedback** and guidance in the form of '**What went well'** and either an '**Even better if'** or a supplementary 'Learning or **driving Question** (LQ)'; these graded assessments ensure that students are making **good progress** towards their **targets** and enable teachers to direct in-class **intervention**, to teach or **re-teach material** where there exist any **misconceptions**.

Curriculum enrichment & cultural capital

We aim to enrich our curriculum by:

- Establishing **cross curricular** links
- Encouraging students to contribute to the **life** of the **school** and the **community**
- Encouraging students to take part in **national initiatives** such as internet safety days and the UK Cyber Security Challenge
- Developing partnerships with **external providers** that extend children's opportunities for learning such as visits to Bletchley Park
- Encourage students to engage in **TV shows** that can deepen their understanding of Computing and its impact on world around them
- To give student the opportunity to develop skills with new and **developing technologies**

Computer Studies	CHS Intent	Trust Intent	Evidenced?
Develop skills and knowledge in computer science and digital technologies	**Enable** students to coherently understand, remember and make connections between the knowledge they are taught within and across subject areas.	**Deliver** coherence within and across subject areas so that students understand, learn how to remember, and make connections between the composite parts of the knowledge they are taught	See intent section 'Curriculum Progression and strategies'
Prepare them for a future world where technology is fully embodied	**Deliver** powerful and challenging knowledge to students to drive their learning experiences and their emotional intelligence	**Support** our students to overcome disadvantage by equipping them with the deep knowledge and complex skills they will need to success in future education, work and life	Topics: • Collaborating online respectfully – Y7 • Gaining support for a cause – Y7 • Networks from semaphore to the Internet – Y8 • Media – Vector Graphics • Mobile app development – Y8 • Computing systems – Y8 • Physical computing – Y9 • Creative imedia in the media industry • Cybersecurity – Y9 • Media – Animations – Y9 • AI & Ethics - Y9
Wider techniques and thinking skills.	**Enable** students to coherently understand, remember and make connections between the knowledge they are taught within and across subject areas.	**Deliver** coherence within and across subject areas so that students understand, learn how to remember, and make connections between the composite parts of the knowledge they are taught	Lesson sequencing Recall and retrieval EiTP – direct instruction

			See curriculum links of SoW
			Topics: • Programming 1 – Y7 • Gaining support for a cause – Y7 • Media – vector graphics – y8 • Representations from clay to silicon – Y8 • Introduction to Python programming – Y8 • Representation – Going audio-visual – Y9 • Physical Computing - Y9
Students are given the chance to learn the workings of the digital **systems that pervade their world**	**Encourage** students to embrace and have opinions on the social, moral, spiritual and cultural issues they may encounter throughout their lives.	**Spark** curiosity and excitement in students about the world, themselves and each other.	Topics: • Collaborating online respectfully – Y7 • Gaining support for a cause – Y7 • Networks from semaphore to the Internet – Y8 • Media – Vector Graphics • Mobile app development – Y8 • Computing systems – Y8 • Physical computing – Y9 • Creative imedia in the media industry • Cybersecurity – Y9 • Media – Animations – Y9

			• AI & Ethics - Y9
Enthuse students to have an understanding far deeper than the interface they currently operate.			Curiosity examples Challenge examples
Aware of the **influence of computer technology around them.** Recognising the **impact** on nearly every aspect of the world in which they live	**Deliver** powerful and challenging knowledge to students to drive their learning experiences and their emotional intelligence **Encourage** students to embrace and have opinions on the social, moral, spiritual and cultural issues they may encounter throughout their lives.	**Engender** understanding, optimism and home in our students, to empower them to create a better world **Spark** curiosity and excitement in students about the world, themselves and each other.	We teach a topic called the 'bigger issues' which looks at the impact of Computer science on the world around them. With year 9 we are currently doing some work around artificial intelligence and the impact of this socially, morally and ethically. Self-driving cars and the impact ethically i.e. accountability, safety, algorithmic bias and legal liability. Impact on the environment e.g. energy consumption, disposal, replacement cycles and the pros and cons of these to society. In year 8 we do a lot of work on fake news, bias, reliability and accuracy of information they read, particularly on social media and the Internet. In year 7 we introduce them to our subject with online safety. Focusing on social and moral dilemmas around personal information, privacy (ethics around GPS and location tracking etc.) identity theft etc

They will realise that Computer Science is an **ever-changing field** and that new technologies continue to be developed.	**Enable** students to coherently understand, remember and make connections between the knowledge they are taught within and across subject areas.	**Inspire** students to enjoy reflective and dynamic learning	Lesson sequencing Recall and retrieval EiTP – direct instruction Cross curricular links on scheme of work
Enable students to **develop** a **love of learning** for the subject and an understanding that there are no limits to their own development in programming and IT.	**Provide** our students with a varied curriculum offer that promotes ambition and accounts for the social contexts of our students	**Challenge** robustly all forms of discrimination and unconscious bias by providing an inclusive curriculum that is relevant to the backgrounds of all our pupils	Curiosity examples Challenge examples Diversity examples
An important life skill for anyone is to **problem solve**. Using the strands of **computational thinking** will aid learners with their Computer Science studies and, as it is embedded within everyday life activities, they will understand that they cannot run before they can walk.	**Provide** our students with a varied curriculum offer that promotes ambition and accounts for the social contexts of our students **Instil** resilience and ambition in our students by promoting challenging ideas and concepts in lessons	**Provoke** ambition in our students by challenging them to engage in hard concepts.	Topics: - Programming 1 – Y7 - Gaining support for a cause – Y7 - Media – vector graphics – y8 - Representations from clay to silicon – Y8 - Introduction to Python programming – Y8 - Representation – Going audio-visual – Y9 - Physical Computing - Y9
Students will be given guidance on how to work **safely** on-line so that it will be second nature to carry out all the necessary steps for their own safety as well as those around them.	**Develop** students' Cultural Capital through varied curriculum experiences that inspire students and help them gain an appreciation of achievement, creativity and nature	**Promote** social justice through the provision of a rich and relevant cultural capital curriculum that supports students' learning in a wide range of subjects	See curriculum enrichment and cultural capital section above
Mathematics underpins the technological world around them which consist of	**Enable** students to coherently understand, remember and make	Deliver **coherence** within and across subject areas so that students understand,	

mathematical algorithms written as computer programs	connections between the knowledge they are taught within and across subject areas.	learn how to remember, and make connections between the composite parts of the knowledge they are taught	Lesson sequencing Recall and retrieval
Computer Science endeavours to **deepen students' understanding** of key concepts by making links to transferable knowledge and understanding (skills) in Mathematics where appropriate and prior learning in Computer Science.	**Provide** our students with a varied curriculum offer that promotes ambition and accounts for the social contexts of our student **Instil** resilience and ambition in our students by promoting challenging ideas and concepts in lessons	**Provoke** ambition in our students by challenging them to engage with hard concepts	EiTP – direct instruction Cross curricular links on scheme of work
Students will **transfer knowledge and understanding** acquired elsewhere (e.g. Maths, Science) to Computer Science and they will show their workings (process, steps, method) when solving problems.	**Enable** students to coherently understand, remember and make connections between the knowledge they are taught within and across subject areas.	**Deliver** coherence within and across subject areas so that students understand, learn how to remember, and make connections between the composite parts of the knowledge they are taught.	Topics: • Programming 1 – Y7 • Gaining support for a cause – Y7 • Media – vector graphics – y8 • Representations from clay to silicon – Y8 • Introduction to Python programming – Y8 • Representation – Going audio-visual – Y9 • Physical Computing - Y9
Prepare students to have an active role in the digital world that surrounds them	**Deliver** powerful and challenging knowledge to students to drive their learning experiences and their emotional intelligence	**Support** our students to overcome disadvantage by equipping them with the deep knowledge and complex skills they will need to success in future education, work and life	
We want them to **develop a sound understanding** of computing concepts which will help them get the best from the systems they use and how to solve problems when things go wrong.	**Provide** our students with a varied curriculum offer that promotes ambition and accounts for the social contexts of our students	**Provoke** ambition in our students by challenging them to engage with hard concepts	See above

	Instil resilience and ambition in our students by promoting challenging ideas and concepts in lessons		
Students will develop an understanding and **application in the fundamental principles** of computer science by having the opportunity to write programs, design webpages and produce professional digital products.	**Provide** our students with a varied curriculum offer that promotes ambition and accounts for the social contexts of our students **Instil** resilience and ambition in our students by promoting challenging ideas and concepts in lessons	**Provoke** ambition in our students by challenging them to engage with hard concepts	See learning journey.
Computing skills are a major factor in enabling children to be **confident, creative and independent learners** and it is our intention that children have every opportunity available to allow them to achieve this.	**Deliver** powerful and challenging knowledge to students to drive their learning experiences and their emotional intelligence.	**Support** our students to overcome disadvantage by equipping them with the deep knowledge and complex skills they will need to succeed in future education, work and life	
The curriculum fully supports **diversity**, for example, through showing the role women played in computing and programming e.g. cryptography, aeronautics, ballistics, software programming, electrical engineering and computer hardware development.	**Develop** students' Cultural Capital through varied curriculum experiences that inspire students and help them gain an appreciation of achievement, creativity and nature **Provide** our students with a varied curriculum offer that promotes ambition and accounts for the social contexts of our students	**Promote** social justice through the provision of a rich and relevant cultural capital curriculum that supports students' learning in a wide range of subjects **Challenge** robustly all forms of discrimination and unconscious bias by providing an inclusive curriculum that is relevant to the backgrounds of all our pupils	Diversity examples Schemes of work
In the computer studies department, we are dedicated to ensuring our students leave with the **skills to fully embrace a future** of rapidly advancing computer technology.	**Enable** students to coherently understand, remember and make connections between the knowledge they are taught within and across subject areas.	Deliver **coherence** within and across subject areas so that students understand, learn how to remember, and make connections between the composite parts of the knowledge they are taught	