Computing at Sir Charles Parsons School

Intent:

Computing delivered at Sir Charles Parsons School (SCPS) follows the units of study outlined in the National Curriculum. The units of study are chosen from the relevant Key Stage but are highly adapted and differentiated to meet the needs of all of our learners.

The computing curriculum reflects the belief that SCPS has, that ICT has a major role in the current and future lives of all young people at the school. We recognise that ICT is pivotal in allowing students to further develop learning in other areas, meet recreational needs, and communicate with others.

The delivery of computing at SCPS aims to ensure that all students have the opportunity to develop the knowledge and skills necessary to access technology. The curriculum is designed so that students can consolidate and build on prior learning and skills, whilst developing their confidence using a range of hardware and software in various situations and work tasks. Students are encouraged to reflect on and evaluate the technology they use so they become more confident in choosing software and hardware in other situations, being able to justify their selections.

The design of the curriculum allows students to develop their understanding of the importance of technology in society as well as in their personal lives. Learning activities are delivered so that students have an awareness of how technology has developed and what was used before technology was in place to fulfil a role. Students are also given the opportunity to understand how to use technology safely and with respect for others, understanding the impact of inappropriate use of technology.

Most students will learn to use a range of hardware appropriately, as well as explore the use of new software. They will learn to identify which software or hardware is most suited to a particular situation. Most students will also extend their knowledge of how technology and computer systems work, develop a better understanding of everyday language relating to computer systems, and use key technical terms appropriately.

Learning opportunities that are delivered allow the students to develop a greater range of everyday skills, such as communicating, team working, reasoning and thinking skills. In addition to this, students are given the opportunity to work towards achieving ‘IEP Targets’ and developing the school’s ‘Behaviours for Life and Learning’.

The computing curriculum is highly differentiated to meet the needs of learners within the seven aspirational pathways. Therefore, outcomes for students will differ according to the pathway they follow.

The intent, implementation and impact in the computing curriculum is designed and developed with each pathway in mind, whilst also ensuring the school’s core professional purpose of ‘Enjoy, Learn and Achieve’ is delivered to students through the curriculum.

Red/Orange/Yellow Pathways

Intent

The computing curriculum aims for students on this pathway to:

- Use hardware appropriately and safely to be able to undertake learning, social or communication activities.
- Use software to be able to create, store, edit, organise and retrieve digital content.
- Use technology to be able to express themselves, as well as developing ideas and sharing these safely and respectfully with others.
- Understand how computers and digital systems work, developing an understanding of networks including the internet, recognising how these provide opportunities for collaboration and communication.
- Develop computational thinking and programming skills which will allow them to design algorithms, and write, debug and improve code.
- Develop an understanding of why, and not just how. Reflecting on why particular hardware and software is used, and the impact that technology has on their daily lives.
- Understand the development of technological systems over time, recognising the rapid growth in more recent years.
- Extend their knowledge and use of subject specific vocabulary.
- Recognise where specific applications of ICT are used in the wider world.
- Have an awareness of moral and ethical issues around the use of ICT (for example job automation and unemployment, use of personal data, etc.).
- Acknowledge the many occupations which require the competent and accurate use of ICT.
- Feel confident in using their ICT knowledge and skills to be able to work with students and staff in different classrooms.
- Develop literacy, numeracy and communication skills.

Implementation

The curriculum is led and overseen by the curriculum lead for computing who ensures that:

- The subject is taught through discreet computing lessons, with students having the opportunity to use skills they have learnt and developed in other subjects.
- Prior knowledge and skills are regularly reviewed and revisited in order to enhance the learning opportunities offered.
- The school lesson guidance template is used for the planning and delivery of lessons to ensure students are able to review, consolidate and build on prior knowledge.
- ‘Unplugged’ learning activities are used during the delivery of each topic to develop the student’s understanding that computing is about exploring fundamental concepts, not just using technology.
- ‘Assessment for Learning’ is used on a regular basis so that students can communicate about their learning. This reflects planning and subsequent lessons.
- SMSC and the school’s ‘Behaviours for Life and Learning’ are threaded throughout the subject delivery.

- Topics are delivered half termly to allow for a breadth of areas to be covered, whilst also giving clear markers between beginning and end of topic.
- Key topics are revisited over the young person's school career to ensure that they have fully understood areas of learning, as well as developed sufficient confidence to use skills in a range of contexts.
- 'Knowledge organisers' are used to support learning, in particular to support students to recall and retain new facts, vocabulary and skills within their long term memory.
- Lessons allow learning opportunities for visual, auditory, reading/writing and kinaesthetic learners, through providing a range of activities and approaches to concepts.
- Technology is used to support the delivery of lessons, using clear and informative presentations, as well as multimedia (videos and audio) where appropriate. Presentations always use BoardMaker symbols
- Makaton signing is used throughout lessons to support clear delivery of content.
- Early communication/speech and language techniques are used when introducing new concepts to support the students to be able to learn new and challenging vocabulary.
- There are opportunities for students to work both collaboratively and independently.
- The most able students are challenged further to undertake and complete projects to a 'professional' standard.

Impact

The delivery of the curriculum aims to allow students to:

- Make progress in their knowledge of a range of computing hardware and software.
- Make progress in the skills necessary to use a range of hardware and software.
- Make progress in their acquisition of subject specific language, demonstrating an understanding of the vocabulary by using appropriately.
- Make safe and positive choices when using technology as a social or leisure activity, ensuring a healthy balance of activities.
- Speak openly and confidently with staff about their use of ICT both in school and at home.
- Become self-directed learners who are able to make choices about which technology they use (including in other subjects), being able to talk about and justify their decisions.
- Apply the British values of individual liberty, democracy, tolerance and mutual respect, and the rule of law when using technology.
- Achieve relevant accreditation.

Green/Blue Pathways

Intent

The computing curriculum aims for students on this pathway to:

- Use hardware appropriately and safely, with support, to be able to undertake learning, social or communication activities.
- Use software with support to be able to create, store, edit, organise and retrieve digital content.
- Use technology to be able to express themselves, as well as developing ideas and sharing these safely and respectfully with others.
- Understand how computers and technology in the world around them work, being able to identify inputs, processes and outputs.
- Begin to develop an understanding of what a network is and how this term applies to the internet and computer systems in school, recognising how they provide opportunities for collaboration and communication.
- Develop computational thinking and programming skills which will allow them to follow algorithms, and create and debug code.
- Become more reflective in their use of technology, questioning why, and not just how.
- Understand that technology systems have developed over time.
- Extend their knowledge and use of subject specific vocabulary.
- Recognise when they are using ICT in their day to day lives, and how ICT applications are used in the wider world.
- Considering the impact that technology has on their daily lives, considering both positive and negative effects.
- Develop an understanding of the impact of technology on society (for example job automation).
- Have an awareness of occupations which require the daily use of ICT.
- Feel confident in using their ICT knowledge and skills to be able to undertake learning activities in different classrooms.
- Develop literacy, numeracy and communication skills.

Implementation

The curriculum is led and overseen by the curriculum lead for computing who ensures that:

- The subject is taught through discreet computing lessons, with students having the opportunity to use skills they have learnt and developed in other subjects.
- Prior knowledge and skills are regularly reviewed and revisited in order to enhance the learning opportunities offered.
- The school lesson guidance template is used for the planning and delivery of lessons to ensure students are able to review, consolidate and build on prior knowledge.
- ‘Unplugged’ learning activities are used during the delivery of each topic to develop the student’s understanding that computing is about exploring fundamental concepts, not just using technology.

- ‘Assessment for Learning’ is used on a regular basis so that students can communicate about their learning. This reflects planning and subsequent lessons.
- SMSC and the school’s ‘Behaviours for Life and Learning’ are threaded throughout the subject delivery.
- Topics are delivered half termly to allow for a breadth of areas to be covered, whilst also giving clear markers between beginning and end of topic.
- Key topics are revisited over the young person’s school career to ensure that they have fully understood areas of learning, as well as developed sufficient confidence to use skills in a range of contexts.
- ‘Knowledge organisers’ are used to support learning, in particular to support students to recall and retain new facts, vocabulary and skills within their long term memory.
- Lessons allow learning opportunities for visual, auditory, reading/writing and kinaesthetic learners, through providing a range of activities and approaches to concepts.
- Technology is used to support the delivery of lessons, using clear and informative presentations, as well as multimedia (videos and audio) where appropriate. Presentations always use ‘BoardMaker’ symbols
- Makaton signing is used throughout lessons to support clear delivery of content.
- Early communication/speech and language techniques are used when introducing new concepts to support the students to be able to learn new and challenging vocabulary.
- There are opportunities for students to work both collaboratively and independently.

Impact

The delivery of the curriculum aims to allow students to:

- Make progress in their knowledge of a range of computing hardware and software.
- Make progress in the skills necessary to use a range of hardware and software.
- Make progress in their acquisition of subject specific language, demonstrating an understanding of the vocabulary by using appropriately.
- Make safe and positive choices when using technology as a social or leisure activity, ensuring a healthy balance of activities.
- Speak openly and confidently with staff about their use of ICT both in school and at home.
- Become self-directed learners who are able to make choices about which technology they use (including in other subjects), being able to talk about their decisions.
- Apply the British values of individual liberty, democracy, tolerance and mutual respect, and the rule of law when using technology.
- Achieve relevant accreditation.

Indigo/Violet Pathways

Intent

The computing curriculum aims for students on this pathway to:

- Develop a sense of self awareness.
- Develop an awareness and interest in people and events around them.
- Explore communication methods in order to express basic needs, wants and preferences (communication methods may include eye contact, facial expressions, verbalising, using a low or high tech communication aid).
- Develop resilience when communicating with unfamiliar people or engaging in physically challenging tasks.
- Develop an awareness (realisation) of cause and effect by using technology to control their environment.
- Explore a range of hardware which allows access to technology devices (for example computers, light and sound making sensory items, food preparation equipment).
- Explore a range of software, developing preferences for particular programs and communicating these preferences.
- Demonstrate anticipation when taking part in familiar activities using technology.
- Develop persistence, being able to attend to activities for longer periods of time in order to develop and apply other skills and knowledge.
- Develop the skills to be able to initiate interactions, acting spontaneously and independently when accessing a familiar activity or item.

Implementation

The curriculum is led and overseen by the curriculum lead for computing who ensures that:

- Students access discreet computing lessons, with the opportunity to use skills they have learnt and developed in other subjects.
- The curriculum is highly differentiated. The focus is on developing individual skills within an overarching theme which changes on a termly basis.
- There is significant repetition to allow for students to develop and demonstrate their progress and achievements.
- Lessons are multisensory and allow learning opportunities for visual, auditory, reading/writing and kinaesthetic learners, through providing a range of activities and approaches to concepts.
- A range of both IT and non IT resources and experiences are used to develop skills of exploration, realisation, anticipation, persistence and initiation.
- Personalised computer programs are created to enhance the student's experience.
- 'Unplugged' learning activities are used during each lesson to ensure that students have the opportunity to take part in a broad range of activities.
- At least one group activity is undertaken each lesson to ensure students have the opportunity to develop communication and turn taking skills.
- Individual skills are regularly reviewed in order to further develop them in different learning situations.

- The school lesson guidance template is used for the planning and delivery of lessons to ensure students are able to review, consolidate and build on prior knowledge.
- Where relevant, 'Assessment for Learning' is used on a regular basis so that students can communicate about their learning. This reflects planning and subsequent lessons.
- SMSC and the school's 'Behaviours for Life and Learning' are threaded throughout the subject delivery.
- Symbols and Makaton signing are used where appropriate to support clear delivery of content.
- Early communication/speech and language techniques are used, where appropriate, to develop interactions with others.

Impact

The delivery of the curriculum aims to allow students to have:

- Developed a sense of self awareness.
- Developed an awareness and interest in people and events around them.
- Explored and developed a recognised communication method in order to express basic needs, wants and preferences (communication methods may include eye contact, facial expressions, verbalising, using a low or high tech communication aid).
- Explored and engaged in more physically challenging tasks.
- Demonstrated an awareness (realisation) of cause and effect by using technology to control their environment.
- Tolerated or actively explored a range of hardware which allows access to technology devices (for example computers, light and sound making sensory items, food preparation equipment).
- Tolerated or actively explored a range of software, demonstrating and communicating preferences for particular programs.
- Demonstrated an awareness of familiar activities, anticipating the next step in a routine.
- Demonstrated persistence, being able to attend to activities for longer periods of time in order to develop and apply other skills and knowledge.
- Initiated interactions, acting spontaneously and independently when accessing a familiar activity or item.