Train up a child in the way he should go; even when he is old he will not depart from it.
Proverbs 22:6

Subject Information: Computing

That the man of God may be competent, equipped for every good work.
Timothy 3:17

How does it work?

What happens if…?

Within a caring Christian environment, we will;

- **inspire confident learners who will thrive in an ever-changing world.**

Who?/ Why?

How will I solve?

How can I develop?

How can I stay safe online?

Principles of Computing at St Chad's C of E (VC) First School

At St Chad's C of E (VC) First School

An engaging and reflective experience of technology use and impact in the wider world

- An opportunity for staff to teach in a creative and purposeful way, and using a range of effective teaching and learning strategies to teach a range of concepts.
- An opportunity for pupils to develop confidence and creativity with a range of hardware, software and devices, that they can apply in different context to enrich their learning experiences across the curriculum.
- To prepare our pupils for life in the modern, wider world (of technology) and keeping them safe when using technology .
- Used to promote the prevention, recognition and reporting of issues that may arise with using technology, in conjunction with statutory guidance for safeguarding.

What is Computing?

Computing is a foundation subject in the National Curriculum for England for KS1 and KS , key skill developed across the Early Years Foundation Stage learning goals . It is the study of how technology is used and works in the wider world, and how pupils can recognise, prevent and report issues when using technology. At St Chad's CE First School, Computing is split into the 3 following areas, however these do interlink: Technology Uses in the Wider World; Computing Science, and Online Safety.

How is Computing taught?

Computing is taught as a discrete whole-class lesson and within it's own right. Any knowledge, understanding and skills taught within discrete Computing lessons should be applied across the curriculum, in order to promote teaching and learning for mastery. Teaching staff will make effective use of different digital devices, software and practical visual analogies for pupils to use, in order to extend their knowledge and understanding. In lessons, effective modelling and questioning of each learning concept will ensure pupils recognise and make connections within their learning. Furthermore, it aims to build on pupils' prior learning and their experiences of technology within and outside of school. In the Early Years Foundation Stage, learning about and with technology is creatively embedded into learning activities, which are explicitly linked to the early learning goals. This enables younger pupils to actively recognise and make use of different technological devices.

How will pupils learn?

Pupils will learn through a 'hands-on' approach by investigating and using a range of personalised hardware and software, which enables their learning to come to life. Key learning vocabulary is shared and explored with pupils so that they are fluent in demonstrating their learning. To promote a rich partnership in learning between pupils, they will work independently, in pairs, and in small groups; this will enable effective learning discussions to take place and the sharing and modelling of knowledge, understanding and skills.

What will pupils learn?

Pupils will learn the following in each phase:

EYFS	Key Stage 1	Key Stage 2
The use of technology is promoted and embedded across all of the early learning goals: • communication and language. • physical development. • personal, social and emotional development. • literacy. • mathematics. • understanding the world. • expressive arts and design.	• understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions • create and debug simple programs • use logical reasoning to predict the behaviour of simple programs • use technology purposefully to create, organise, store, manipulate and retrieve digital content • recognise common uses of information technology beyond school • use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies	• design, write and debug programmes that accomplish specific goals including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • use sequence, selection, and repetition in programs; work with variables and various forms of input and output • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

How is learning assessed?

Learning in Computing is assessed continually within each lesson to ensure that staff plan for progression. This ensures that all groups of pupils are both supported and challenged to enable them to make at least expected progress. At the end of each unit, staff take into account their knowledge of each individual pupil to come to a judgement as to whether they are: Working Towards/Working at/Working Above the Expected Standard. As pupils are viewed as individuals with their own prior experiences and with each unit being unique with its own knowledge, understanding and skills, the judgement at the end of each unit may vary to reflect the progress that pupils make.

In the Early Years Foundation Stage, the use of observations underpinned by personalised and creative learning activities, enable staff to draw conclusions and judgements about pupils' understanding of technology across the early learning goals.

Access to Resources

Staff and pupils have access to a rich and varied set of resources, across the school enabling learning to happen at any time and in any place. Most notably is access to our Purple Mash online learning portal, which uses personalised and purpose-built software to ensure pupils progress at their own pace, whilst also being appropriately supported and challenged.

How does it promote fundamental British Values and SMSC?

British Values – Pupils consider how technology can be both lawfully and unlawfully used, including the consequences and impact of this. They will also explore how technology provides them with the opportunity to express their views positively, whilst also developing tolerance and respect for the diverse world they live within.

Spiritual Development – Pupils have the opportunity to ask meaningful questions to extend their understanding about how technology works and the world they live within; use and apply their learning purposefully and creatively; reflect on the impact of technology in the wider world, and how technology can be used to explore beliefs and new experiences.

Moral Development – Pupils will explore different concepts of right and wrong when using technology and how to use technology safely, respectfully and lawfully.

Social Development – Pupils will recognise and use technology to effectively communicate and collaborate with others, whilst appreciating the diverse views of others.

Cultural Development – Pupils will explore how technology can enable them to recognise and develop an appreciation of the diverse world around them, such as exploring and celebrating different beliefs, values and new wider world experiences through digital services and media.