Mission Statement

'Christian values are the foundation upon which Prees C. E. School is built.

St Chad's church is at the heart of our school and the wider community.
The cross of St Chad symbolises our link through the ages to the Cathedral of our Lichfield Diocese.

We are committed to promoting Christian values such as love, peace, forgiveness and self-control, to enable our children to develop into the people they are meant to be.'

Believe and Achieve

The use of computers and technology is totally embedded in the lives of the children we teach. Every aspect of their lives is touched by computers, their home life, school life and their leisure time. Due to the rate of progress in the field of technology we need to prepare our children today for jobs in the future that don't yet exist. They need to be divergent thinkers, problem solvers and analysts.

The national curriculum for computing has four main aims to ensure that all pupils:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.
- Are responsible, competent, confident and creative users of information and communication technology.

The school aims to:
- Provide a relevant, challenging and enjoyable curriculum for ICT and computing for all pupils.
- Meet the requirements of the national curriculum programmes of study for computing.
- Use ICT and computing as a tool to enhance learning throughout the curriculum.
- To respond to new developments in technology.
- To equip pupils with the confidence and capability to use ICT and computing throughout their later life.
- To enhance learning in other areas of the curriculum using ICT and computing.
- To develop the understanding of how to use ICT and computing safely and responsibly.

Early years

It is important in the foundation stage to give children a broad, play-based experience of ICT in a range of contexts, including outdoor play. ICT is not just about computers. Early years learning environments should feature ICT scenarios based on experience in the real world, such as in role-play. Children gain confidence, control and language skills through opportunities to work on the interactive whiteboard or drive a remote-controlled toy. Outdoor exploration is an important aspect, supported by ICT toys such as walkie-talkie sets or

radio-controlled toys. Recording devices can support children to develop their communication skills. This is particular useful with children who have English as an additional language.

By the end of key stage 1 pupils should be taught to:
- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions
- write and test simple programs
- use logical reasoning to predict and compute the behaviour of simple programs
- organise, store, manipulate and retrieve data in a range of digital formats
- Communicate safely and respectfully online, keeping personal information private, and recognise common uses of information technology beyond school.

By the end of key stage 2 pupils should be taught to:
- design and write programs 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; generate appropriate inputs and predicted outputs to test programs
- use logical reasoning to explain how a simple algorithm works 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
- describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Planning

The planning will follow the scheme of work produced by the North Shropshire Schools Alliance Small Schools Project. Modules were designed for computing to be blocked at different times during the year rather than being taught in a regular weekly slot.

Computing should also be identified in all other areas of the curriculum where it can be used to support learning. E.g. datalogging in science, research in history and geography & design in D&T and art.

Inclusion

A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or any who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities teachers should bear in mind that special arrangements could be made available to support individual pupils.

Assessment

By the end of each Key Stage, pupils are expected to know, apply and understand the matters, skills and processes outlined in the relevant programme of study. This is recorded in the school's assessment and tracking document.

Monitoring and evaluation

The subject leader is responsible for monitoring the standard of the children's work and the quality of teaching in line with the schools monitoring cycle. This may be through lesson observations, book trawl or looking at other data for the subject. The subject leader is also responsible for supporting colleagues in the teaching of computing, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the school.

Equal Opportunities

All pupils, regardless of race, class or gender, should have the opportunity to develop ICT capability.
It is our policy to ensure this by:
- ensuring all children follow the scheme of work for computing,
- monitoring children's computer use to ensure equal access and fairness of distribution of computing
- resources, providing curriculum materials and software which are in no way class, gender or racially prejudice or biased.

Security and E-Safety

• Use of ICT and computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.
• Parents will be made aware of the 'acceptable use policy' at school entry and ks2.
• All pupils and parents will be aware of the school rules for responsible use of ICT and computing and the internet and will understand the consequence of any misuse.

The use of computers and regulations regarding data are in the School's ICT and Security Policy, accessible to all staff.

Children should be taught the importance of staying safe online. At an early age they should learn the significance of personal information and keeping it private when working online. Although internet access in school is firewalled children should be taught what to do if they feel threatened online or come across any text or image that makes them feel uncomfortable because computers at home may not be similarly protected. At an appropriate time children need to be made aware that 'stranger danger' rules should also apply online. This can be supported with online resources at https://www.thinkuknow.co.uk and CEOP.

Curriculum Resources

The school has 2 laptop charging cases each containing 16 laptops.
Each classroom from F2 to year 6 has an interactive whiteboard, ceiling projector and laptop.
Beebots
LogIt Dataloggers
Pulse meters (Science)

Glossary of Terms

Term	Explanation	Exemplification
Abstraction	The process of simplifying a problem by removing levels of complexity. Abstraction can take many forms such as modelling, decomposing and generalising.	The London Underground can be abstracted into a map. In reality it is not an accurate geographical representation but gives a simplified view of the map.
Algorithm	A set up steps that provides a solution to a problem.	Scratch allows users to build up a set of scripts to form an algorithm.
Computational thinking	A problem solving method that makes use of the concepts used to create computer programs. Computational thinking is a technique used by people rather than computers.	If we planned a 4x100m relay race using computational thinking it is possible to start **decomposing** the race into 4 stages, identifying the **sequence** and **repetition** and to explain the race as an **algorithm**.
Computer network	Two or more computers connected together	The school PCs will be part of a network.
Computer Science	The discipline that underpins and explains how a system is designed and programmed.	Creating an app or writing a program in software such as Scratch.
Decomposing	Breaking down a larger problem into smaller problems.	A solution in Scratch may be broken into a script for the first sprite and a script for the second sprite.
Digital literacy	The ability to access and use technology.	Researching the web or maintaining a blog.
Information technology	A digital system	Creating a Powerpoint on Global warming or a spreadsheet on endangered animals.
Input	The devices used to enter data into a computer system.	Keyboard, mouse, microphone, buttons, switches, etc
Logic	The non-arithmetic operations carried out by a computer to achieve sorting, matching and comparing	Using boolean logic (And, Or, Not etc) to search the internet or a database.