Northbrook Primary Academy



Computing

Policy

Date of policy: September 2021

Review Date: September 2022

At Northbrook Primary Academy, our children’s happiness, well-being and achievements are at the heart of everything we do. We provide a nurturing environment for each child, where they feel safe and supported to achieve their full potential.

Our logo represents the nurture and opportunities for growth we provide for all of the children in our care. The compass and brook not only refer to our name, they also represent the educational journey each child will embark on from the moment they join us here at Northbrook.

At Northbrook we recognise that every child is unique and all our staff strive to ensure that every child is given the opportunity to work to the best of their ability. We endeavour to develop the whole child and prepare each one academically, emotionally and socially to live and succeed in an ever-changing world. We provide our children with a wide range of experiences to ensure every child can develop a love of learning, enjoy being in school and have a chance to shine. We aspire to ensure that our children leave us with the best possible foundations upon which they can build throughout their lives. We are incredibly proud of our children and want our children to feel proud of themselves.

We take pride in the family atmosphere that we have developed and value the partnerships we have with parents, carers and the local community. It is important to us all at Northbrook that parents feel part of our school as well and always feel welcome.

**Our values are at the HEART of our school**

**Happiness**

**Empathy**

**Aspiration**

**Respect**

**Teamwork**

In our developing world, a high-quality Computing is essential in developing children’s computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. At Northbrook, we are fortunate to have desktop computers, Chromebooks and tablets which children have regular access to. Computer science lies at the core of the curriculum, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world. Online safety is taught throughout computing, to ensure that children are safeguarded and are aware of appropriate use of computers and working online.

**Aims:**

At Northbrook Primary Academy, we aim to provide an exciting, rich, relevant and challenging Computing curriculum for all children, equipping and enthusing them with the capability to use technology throughout their lives. Through computing, children become responsible, respectful and competent users of data, information and communication technology and hardware.

Teach pupils to understand the importance of governance and legislation regarding how information is used, stored, created, retrieved, shared and manipulated. Utilise computational thinking beyond the Computing curriculum. Give children access to a variety of high-quality hardware, software and unplugged resources. Equip pupils with skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others. Exceed the minimum government recommended/statutory guidance for programmes of study for Computing and other related legislative guidance (online safety). Use technology imaginatively and creatively to inspire and engage all pupils, as well as using it to be more efficient in the tasks associated with running an effective school.

**Implementation:**

At Northbrook Primary Academy, we have chosen the Purple Mash Computing Scheme of Work from Reception to Year 6. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve to their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool.At Northbrook, the computing curriculum discretely as well as linking to other subjects as appropriate and meaningful.

Early Years

We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following: Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language. Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay. Pupils gain confidence, control and language skills through opportunities to ‘paint’ on the interactive board/devices or control remotely operated toys. Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets.

Key Stage 1

Children will:

* 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.
* 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.

Key Stage 2

Children will:

* Design and write programs that accomplish specific goals, including controlling or simulating physical systems;
* solve problems by decomposing them into smaller parts.
* 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.
* 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.
* 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.
* 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 worldwide web; and the opportunities they offer for communication and collaboration.

**Assessment:**

At Northbrook Primary Academy, attainment is assessed using the 2Simple Computing Assessment Tool for Years 1 to 6. The tool enables staff to accurately identify attainment of pupils through the detailed exemplification it has for each key learning intention. Teacher use the 2Simple Computing Assessment Tool to track attainment which is used to inform future planning. Children are encouraged to self, peer and group assess work in a positive way using online collaborative tools such as 2Blog in Purple Mash. Formative assessment is undertaken each session/interaction in Computing and pupils are very much encouraged to be involved in that process. Through using the progression of skills documents and displays from 2Simple, both teachers and pupils can evaluate progress. Features such as preview and correct in Purple Mash are used to further support feedback and assessment. Summative assessment is undertaken in line with the assessment cycle (See Assessment Policy). Using electronic work samples from children’s portfolios on Purple Mash, teachers enter judgements about the samples into the 2Simple Computing Assessment Tool.