Blackpool Gateway Academy

Computing Policy

September 2024

FCAT

The best we can be

Curriculum Intent

At Blackpool Gateway Academy, our computing curriculum is designed around the four key areas, as outlined in the National Curriculum. We prepare children to participate in a rapidly changing world in which work and other activities are increasingly transformed by access to varied and developing technology.

We recognise that Computer Studies are an important tool in the society we live in, and in the process of teaching and learning, we ensure that children have the knowledge and skills in order to take advantage of the opportunities, responsibilities and experiences of later life. Pupils use computing tools to find, explore, analyse, exchange and present information responsibly, creatively and with discrimination. They learn how to employ IT to enable rapid access to ideas and experiences from a wide range of sources. Our vision is for all teachers and learners in our school to become confident users of IT so that they can develop the skills, knowledge and understanding which enable them to use appropriate computing resources effectively as powerful tools for teaching and learning.
By the end of Key Stage 2 children will be able to

- design, write and debug 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.
- 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.

Securing Cultural Capital

As part of giving children a broad and rich approach to Computing, we provide the children opportunities that will give them knowledge of how to succeed in life, giving them experiences they may not otherwise be exposed to. In some ways, this can address social disadvantage. Some of these opportunities may include:

- Visits from other outside companies throughout the year.
- Various out of school visits where children focus on building and experiencing computing knowledge.
- Working with high school students to give children an insight into continued development of the computing curriculum.
- Local competitions and incentives that focus on Computing.
- Opportunity to be prepared future job opportunities in the field of computing

Curriculum Implementation.

At Blackpool Gateway Academy, all teachers use the Purple Mash Computing Scheme of Work - a powerful comprehensive resource aligned to the National Curriculum and EYFS Framework which supports schools with achieving excellence in Teaching & Learning for Computing. The Scheme of Work is intended to facilitate teachers in achieving the very best

outcomes for pupils, regardless of starting points. It exposes pupils to a wide variety of skills, experiences and poignant real-life scenarios which supports the notion of Cultural Capital, providing the foundations that lead to well-rounded global citizens. From September 2024 all adults who teach computing, will use the Teach Computing Scheme of work.

📗 KS2 TCC Curriculum map (2).xlsx - Curriculum Map
📘 Computing Overview 23-24 .docx - Curriculum Overview

The Computing Curriculum at Blackpool Gateway Academy for 2023/24 has been adjusted with a focus on ensuring that any knowledge missed is prioritised. There is a particular emphasis on the hierarchical aspects such as programming, algorithms, understanding computers, and data. Priority has also been given to using computing devices safely and responsibly. This document has been hyperlinked to demonstrate cross curricular links, and prior learning in other subject areas.
At key stages 1 and 2:
• Teachers should give priority to developing pupils' knowledge of algorithms, notably sequencing in key stage 1.
At key stage 2:
• Teachers should focus on sequencing, selection and repetition.
• Pupils should be given enough time to practise programming to secure knowledge of key programming constructs.

📘 Computing Cross Curricula Overview 2024/25

Our computing curriculum is designed to provide students with a comprehensive understanding of technology, from Early Years through Key Stage 2, using the structured Teach Computing Curriculum by the National Centre for Computing Education (NCCE).

Key Stage 1 (KS1): In KS1, children build on their early experiences, using BeeBots more precisely. They learn programming basics by directing BeeBots to specific destinations and debugging when needed. Each class has a set of iPads, allowing effective access to various media and supporting cross-curricular learning opportunities.

- **Year 1:** Students start with understanding technology around them, digital painting, and basic programming using floor robots like BeeBots. They explore grouping data and digital writing, and design simple animations using ScratchJr.
- **Year 2:** Children advance to learning about information technology around them, digital photography, and creating more complex programs with BeeBots. They also work with pictograms, digital music, and develop quizzes using ScratchJr.

KS1 students also learn about online safety, understanding personal information, and how to react to uncomfortable online encounters. They practise logging in securely with personal usernames and passwords. The curriculum includes a strong emphasis on safety and security, supporting all pupils with scaffolded activities and ensuring inclusivity.

Key Stage 2 (KS2): KS2 students continue to build on their computing skills, starting each year with a recap on online safety. They progress to more complex coding, create basic games, and become familiar with software programs beneficial for secondary education. They use spreadsheets, Microsoft Excel, and Google Sheets to create and save work over a series of lessons, and they also create their own blogs.

- **Year 3:** Focuses on connecting computers, stop-frame animation, sequencing sounds in block-based programming, and creating branching databases.
- **Year 4:** Explores the internet, audio production, repetition in shapes using text-based programming, and data logging.

- **Year 5:** Covers systems and searching, video production, selection in physical computing with microcontrollers, and flat-file databases.
- **Year 6:** Includes communication and collaboration online, webpage creation, variables in games, spreadsheets, 3D modelling, and sensing movement.

To support learning, the curriculum incorporates physical computing, such as using BeeBots in KS1 and microcontrollers in KS2. This hands-on approach helps engage students and develop their understanding creatively. The curriculum is designed with a spiral approach, ensuring themes are revisited to reinforce and build on prior learning.

The NCCE's Teach Computing Curriculum provides all necessary resources, including lesson plans, slides, and assessment opportunities, which are regularly updated based on feedback. The curriculum is inclusive, research-informed, and time-saving for teachers, focusing on reducing workload while delivering high-quality education.

Curriculum Impact

Our measures of success for Computing are that:
- ❏ the curriculum for Computing is well-constructed and well-taught
- ❏ all pupils, including those deemed disadvantaged and those with SEND acquire the knowledge and cultural capital they need to succeed in life
- ❏ pupils are making progress in that they know more, remember more and are able to do more - they are learning what is intended in the curriculum - so that learning in Computing is building to the end points outlined earlier and that pupils are being prepared for their next stage of education
- ❏ pupils will develop skills and attributes they can use beyond school and into adulthood.

The impact of our computing curriculum can not only be seen in displays around school and on the children's individual Google Classroom accounts, but also can be measured by speaking to the children themselves. The teaching of the computing curriculum enables our children to use a computer with confidence.

We measure the impact of our curriculum using the following methods:
- Formative assessment of pupil discussions about their learning.
- Images of the children's practical learning in a class portfolio.
- Children's work saved onto their individual accounts.
- Interviewing the pupils about their learning (pupil voice).
- Class portfolios are scrutinised and there is the opportunity for a dialogue.between teachers to understand their class's work.

Inclusion

At Blackpool Gateway Academy, we provide opportunities for all pupils to reach their potential in computing, no matter what their starting points. All children are provided with equal access to our computing curriculum. As a school we are committed to providing a high quality education to all the children living in our local area, and to ensure that high quality learning opportunities are available for all.

We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background. The computing curriculum is designed to enable all pupils to access it, including disadvantaged pupils, pupils with SEND and those who do not speak English as their primary language. For many children, computing offers the opportunity to achieve without the pressures that may be placed upon them in written subjects.

Pupils who are underachieving will be identified and strategies put in place in order to help them improve their attainment. Work is scaffolded and facilitated so these pupils can take part in lessons alongside their peers building up their skills and knowledge at an appropriate level and speed.

Gifted children will be identified and suitable learning challenges provided at the earliest opportunity.

Nurture

The ongoing work and Ethos of Nurture that supports all children's learning and behaviour at Gateway threads into our Computing policy. All teaching staff will skillfully offer nurture and support where needed to remove barriers to learning.

To offer social and emotional support within the school environment for every child is the most effective way to address any unmet social, emotional and behavioural and mental health needs of children and young people.

Through a nurturing experience children become more socially adept, emotionally resilient and self- confident. Encouraging children through nurture also allows them to learn how to engage with their peers and to take pride in their achievements.

Consequently, pupils' learning outcomes are more successfully met.

All staff will refer to the Nurture Principles and the **features of effective practice** to support the teaching and learning in Computing.