Bridgewater Primary School
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Computing Policy
September 2024

To be reviewed: September 2025

Introduction

The use of information and communication technology is an integral part of the national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, microbits and cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Bridgewater Primary School we recognise that pupils are entitled to quality hardware and software and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively. The purpose of this policy is to state how the school intends to make this provision.

Rationale

Our school believes that computing:
- ✓ Gives pupils immediate access to a rich source of materials.
- ✓ Can present information in new ways which help pupils understand access and use it more readily.
- ✓ Can motivate and enthuse pupils.
- ✓ Can help pupils focus and concentrate.
- ✓ Offers potential for effective group working.
- ✓ Has the flexibility to meet the individual needs and abilities of each pupil

Intent:

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. Computing 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 'paint' on the whiteboard or programme a toy. Recording devices can support children to develop their communication skills. This is particularly useful with children who have English as an additional language. Children in the Early Years have access to iPads throughout continuous provision and can use a variety of apps, including MiniMash which contains opportunities for children to explore a wide range of topics including art, phonics and maths.

Key Stage 1

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 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

Key Stage 2

By the end of key stage 2 pupils should be taught 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

Implementation:

Planning
To support the teaching of the Computing curriculum we use the Purple Mash Programme of Study to help support the teaching of the National Curriculum statements and to deliver lessons with clear progression, building upon basic skills. Lessons will be designed to enable pupils to achieve stated objectives. Pupil progress towards these objectives will be recorded by teachers as part of their class recording system and evidenced in a class computing book and by saving work electronically on the PurpleMash platform. Staff will follow medium term plans with objectives set out in the national curriculum and deliver both discrete and cross curricular lessons to ensure children develop a sense of computing in the wider world and its uses in practical situations. Computing lessons are timetabled weekly for all year groups from 1-6, and is embedded within continuous provision for our nursery and reception pupils.

Resources and Access
The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards a consistent, compatible pc system by investing in resources that will effectively deliver the strands of the national curriculum and support the use of ICT and computing across the school. Teachers are able to log any technical issues with RM (Bridgewater ID: 12876). An RM technician will attend the site once fortnightly to carry out any needed tasks.
Early years share 10 iPads and have 3 interactive boards that can access the internet and hold apps. Key Stage 1 share a class set of iPads and laptops. Key Stage 2 share a class set of laptops and Chromebooks and have 60 iPads to share across the phase. These are all kept in lockable charging trolleys and are easily accessible.

Impact:

Our Computing curriculum is high quality, well thought out and is planned to demonstrate progression. If children are keeping up with the curriculum, they are deemed to be making good or better progress. In addition, we measure the impact of our curriculum through the following methods:

- ✓ Monitoring of Computing by the subject leader, including book looks, online checks for children's work and pupil interviews;

- ✓ Children can confidently recall learning they have done throughout the years and are able to recall key knowledge for their current and previous year groups
- ✓ Children can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation;
- ✓ Children can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems;
- ✓ Children can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems;
- ✓ Children are responsible, competent, confident and creative users of information and communication technology.

Health and safety

The school is aware of the health and safety issues involved in children's use of ICT and computing. All electrical appliances in school are tested accordingly. It is advised that staff should not bring their own electrical equipment in to school, but if this is necessary, then the equipment must be pat tested before being used in school. This also applies to any equipment brought in to school by, for example, people running workshops, activities, etc. and it is the responsibility of the member of staff organising the workshop, etc. to advise those people.

All staff should visually check electrical equipment before they use it and take any damaged equipment out of use. Damaged equipment should then be reported to the ICT technician, Computing Subject Lead or Headteacher who will arrange for repair or disposal.

It is the responsibility of staff to ensure that classroom computing equipment is stored securely and when using shared equipment that their class or themselves leave the equipment clean and tidy after use.

Staff should ensure that the children are seated at the computers comfortably and be aware of the dangers of continuous use (e.g. eye/wrist strain etc).

An adult should always supervise children when they are accessing information via the Internet. RM does filter information but staff are advised to take great care on the content accessed by children and are ultimately responsible for information accessed by pupils. In line with current KCSIE guidance, live monitoring via Smoothwall is in place to ensure that any activity which would be regarding as a safeguarding concern is immediately picked up on by a member of the safeguarding team.

Food and drink should not be consumed near computing equipment.

Security
- ✓ The ICT and computing technician will be responsible for regularly updating anti-virus software.
- ✓ 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'.
- ✓ 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 agreed rules for safe and responsible use of ICT, computing and the internet will be displayed in all ICT and computing areas.

Our curriculum for Computing acknowledges that learners with additional needs are likely to have difficulties understanding new vocabulary and processing complex tasks during computing lessons. These difficulties may act as barriers to learning with regard to developing complex understanding of new tasks in Computing. When teaching Computing at Bridgewater, planning is adapted to suit the needs of all children no matter what their needs with a focus on Quality First Teaching.

Teaching is personalised and targeted including tasks, questioning and intervention in the lesson where needed. We use pre-teaching of vocabulary to help the children know and remember more, and provide guided scaffolds to ensure all children are accessing the curriculum knowledge needed for their year group. All children have access to subject specific vocabulary for reference and consolidation throughout a unit of work. Teaching uses visual and practical resources to help understanding of new content in Computing. Teachers also carefully consider adaptions – see below.

Cognition and Learning	
Barriers	**Provision**
Reading and understanding instructions Retention of key knowledge Recording of work using paper and pencil methods. Understanding the concept of time/ passage of time.	• Increasing font size or allowing pupils to zoom in on a screen to make instructions clearer • Use of coloured overlays or coloured documents to support with reading • Regular low stakes quizzes with limited information • Word banks with definitions available during lessons to support with use of new language • I do: you do modelling • Access to headphones to support with hearing instructions • Peer support/ mixed ability working • Smaller steps in success criteria • Use of retrieval practice for retention • Use dual coding (pictures and images) to support with learning of new vocabulary • Adapt pace of delivery to meet different processing needs • Opportunities to apply computing techniques (typing, databases, spreadsheets, animation etc) in other areas of the curriculum to support learning in other contexts

Communication and Interaction	
Barriers	**Provision**
Complex subject specific vocabulary/ new vocabulary.	• Recognition that language of computing can be complicated (algorithm, coding etc) and may be new concepts in a lot of instances • Pre-teaching of key vocabulary • Key language on display during lessons • Breaking complication sessions down into smaller chunks • Regular exposure to language during key knowledge quizzes . • Assess child's level of prior knowledge and vocab before the topic. • Enable additional thinking/processing time. • Give the child a whiteboard or method of jotting down ideas to support their participation.

	• Adult support or print outs containing log in information for ease of access to devices • Provide flashcards to support with understanding key vocabulary Use dual coding (pictures and images) to support with learning of new vocabulary

Physical and Sensory

Barriers	Provision
Fine motor skills may limit typing ability Unusual/ unexpected noises during coding exercises through headphones	• Larger keyboard/ split key board when using iPads • Regular access to typing practice at the start of lessons to support development of this skill • Use of ear defenders or noise cancelling headphones • Option to mute laptop/ iPad • Prior warning of anything unexpected. • Allowing children to follow instructions on their own screens rather than looking at whiteboard

Social Emotional and Mental Health

Barriers	Provision
Internet Safety sessions can contain sensitive information Accidentally accessing upsetting content online	• Prior warning of any sensitive topics. • Liaison with parents/carers in advance of any sensitive/triggering topics • Pre-teaching for children to develop an awareness of topic before hand • Opportunity to ask questions around sensitive subjects in small groups or 1:1 • Method of communicating that a topic is becoming too much/child may need time out and an appropriate/identified place to go to if needed. • Opportunities to develop social skills including being taught these discretely to support engagement in group work and collaborative learning. • Use of PSHE to discuss healthy relationships, promote well-being and explore emotive topics within learning. • Teachers to explain to pupils