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Technology engagement in EYFS- Reception children programming Bee-Bots

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Computer Science - Implementation

Our school uses the National Curriculum in England 2014 Framework for Computing as the basis for its curriculum planning. Medium Term Plans are developed using the Teach Computing curriculum and we aim to use computing to support and link to our curriculum where appropriate.

The approach of the school is to pro-actively identify and incorporate Computing into topic areas. It is important to give children the opportunity to use a variety of hardware and programmes/apps. While there are opportunities for children of all abilities to develop their skills and knowledge in each teaching unit, the planned progression built into the computing curriculum means that the children are increasingly challenged as they move through the school.

Long-term plans (available in the Curriculum zone of our web site) identify when the different areas and skills of the National Curriculum are taught across the year group phases and they follow a two-year cycle. Computing is taught by a dedicated ICT tutor who takes responsibility for planning, resourcing and delivering the computing curriculum as well as individual class teachers who incorporate the use of computing technologies to enhance and enrich learning within their planned topics.

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Computing – Implementation

The Approach - Coherence and flexibility

The Teach Computing Curriculum is structured in units. For these units to be coherent, the lessons within a unit is taught in order. However, across a year group, the units themselves do not need to be taught in order, with the exception of 'Programming' units, where concepts and skills rely on prior learning and experiences.

Knowledge Organisation

All learning outcomes can be described through a high-level taxonomy of ten strands, ordered alphabetically as follows:

- **Algorithms** — Be able to comprehend, design, create, and evaluate algorithms
- **Computer networks** — Understand how networks can be used to retrieve and share information, and how they come with associated risks
- **Computer systems** — Understand what a computer is, and how its constituent parts function together as a whole
- **Creating media** — Select and create a range of media including text, images, sounds, and video
- **Data and information** — Understand how data is stored, organised, and used to represent real-world artefacts and scenarios
- **Design and development** — Understand the activities involved in planning, creating, and evaluating computing artefacts
- **Effective use of tools** — Use software tools to support computing work
- **Impact of technology** — Understand how individuals, systems, and society as a whole interact with computer systems
- **Programming** — Create software to allow computers to solve problems
- **Safety and security** — Understand risks when using technology, and how to protect individuals and systems

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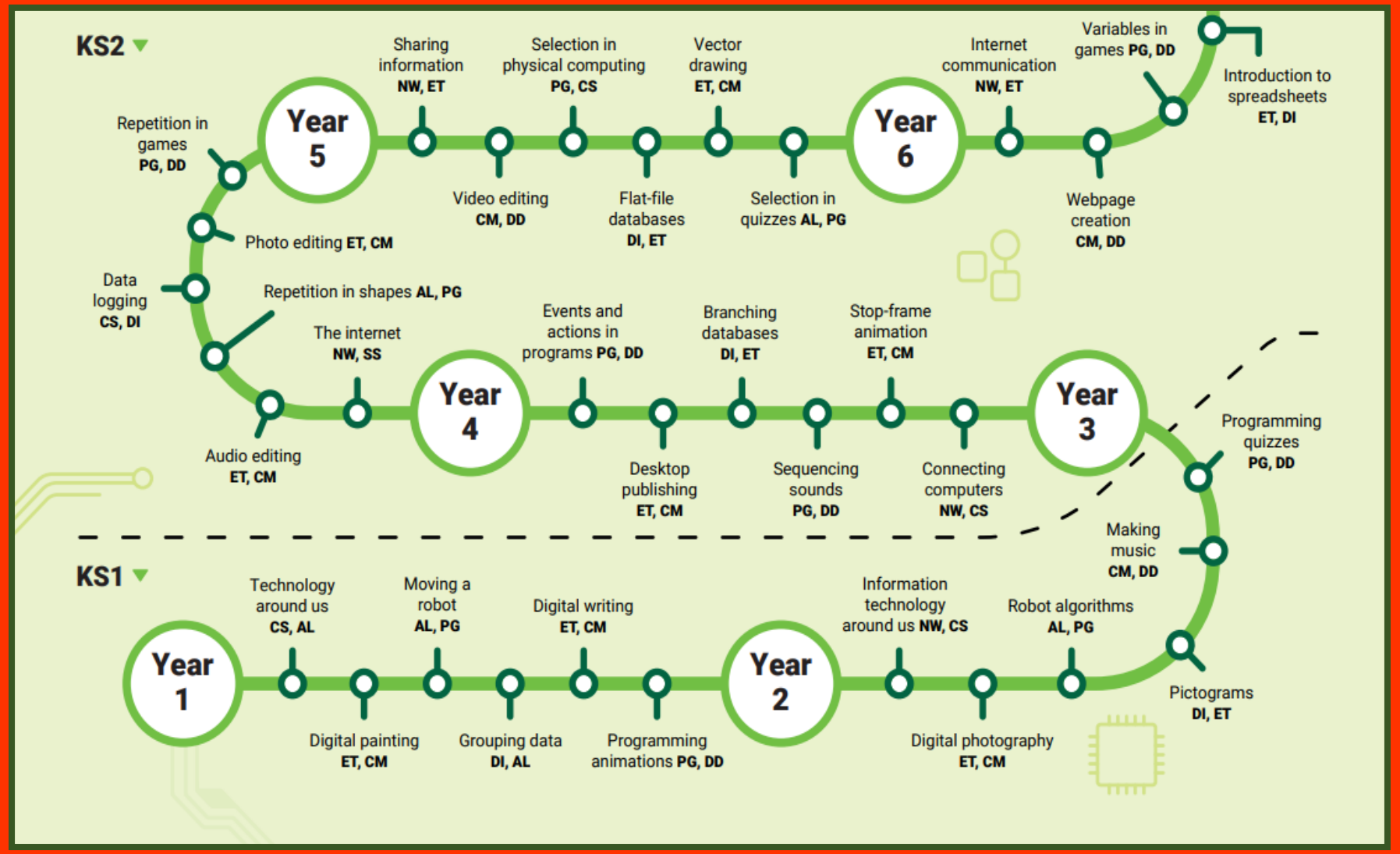
Computing Curriculum Journey – KS1 to KS2



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Computing – Implementation

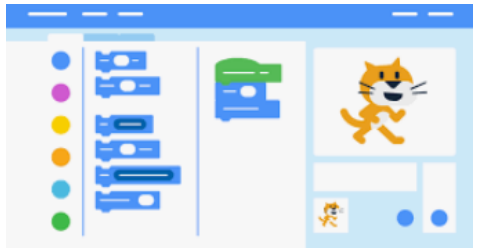
Digital Literacy

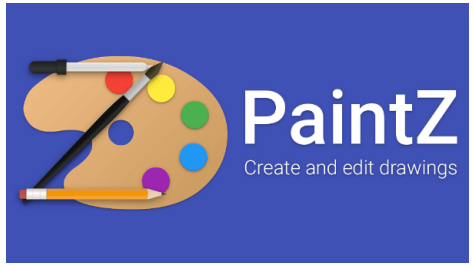
A range of hardware and software are regularly planned into lessons in other areas of the curriculum. Laptops and interactive whiteboards are integrated into learning. Children have access to class sets of laptops and iPad as well as sets of six iPads in each Stage.

Frequently used software tools include Notebook, Powerpoint and Word as well as now familiar video conferencing software such as Teams and Zoom. Socrates quizzes and Wordwall activities can be used for elicitation, recall and consolidation.

In addition, children access a variety of software tools. In Key Stage 1 these are:

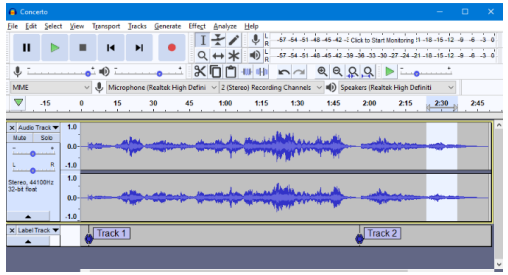
- Paintz.app
- Microsoft Paint
- Bee –Bot
- ScratchJr
- J2data Pictogram
- Chrome Music Lab





In Key Stage 2 these are:

- iMotion
- Scratch
- J2data Branch and Pictogram
- Canva.com
- Audacity
- FMSLogo
- Data logger
- Paint.NET
- Cad Cam package in Y6



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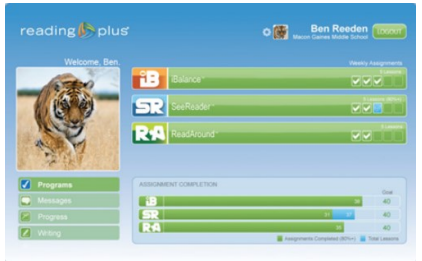
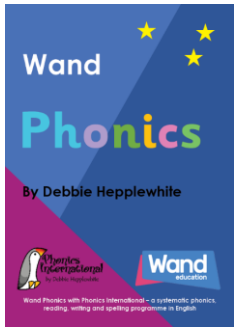
Computing – Implementation

Digital Literacy at Home

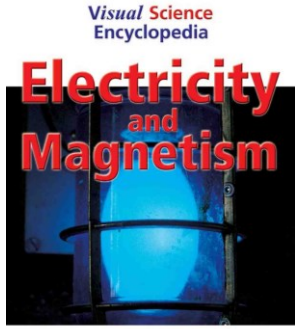
We are also currently running a remote Code Club to encourage engagement with and development of Computing skills.

At Beckstone, we use Reading Plus to improve reading fluency in KS2. Children have access to this programme at school and at home.





Children have also been given access to WAND which provides individually levelled texts and phonic activities for children to practice at home.



Similarly, Curriculum Visions is also available at home should parents and children wish to access further reading and topic books.

Every child from Year 2 to Year 6 has a Times Tables Rockstars account that they can access at home and school to practice their times tables on any device.

All of the above serve to create a cohort of digitally literate children growing up with technology.

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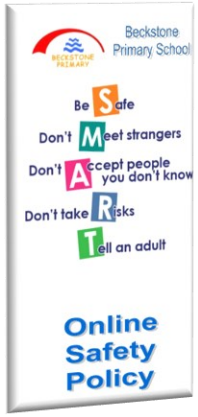
E-Safety



Computing and the use of technologies at Beckstone Primary School is underpinned by e-safety being central to the curriculum. While showing children the benefits of using new technologies we are also rigorous in teaching them about how to use technology safely and responsibly. E-safety workshops are held every year, including parent workshops. When starting a new topic, teachers discuss with the children how they can keep themselves safe when using technology. E-Safety is also taught as part of our PSHE Curriculum, for example all classes receive Kidsafe training on staying safe which includes rules for, and ways of physically and emotionally safe – including safety on-line, responsible use of ICT, the difference between secrets and surprises, and understanding not to keep adults' secrets only surprises. These important messages are also given prominence in a dedicated 'Online Safety Week' in the Spring term Our 'Online Safety Policy' outlines further information about our School's approach to Online Safety.

Special Educational Needs

We teach computing to all children, whatever their ability, in accordance with the school curriculum policy of providing a broad and balanced education to all children. Teachers provide learning opportunities matched to the needs of children with learning difficulties. Different technologies are used to allow children with special educational needs to have access and contribute to lessons.

Equal Opportunities

Ensuring equality of opportunity does not mean that all learners are treated the same. At Beckstone Primary School, in accordance with the Learner's Act 1989, children are considered as individuals with particular needs and potentialities. Each child is given encouragement and the opportunity to develop their full potential in Computing and ICT, with appropriate support provided as necessary, whatever their gender, race, religious belief, cultural background or disability.

Spiritual, Moral, Social and Cultural Development

Within computing lessons children are given the opportunity to work collaboratively and communicate effectively with each other. We encourage children to reflect on evaluate their ability to work together and to discuss how their communication had an effect on their learning. The cultural and social impact of computing and digital technology are made clear in the ability to share, add to and create content in a connected way with others.