Eden Primary Curriculum: Computing

Intent

At Eden Primary, we intend for our learners to become autonomous, independent users of computing technologies, gaining confidence and enjoyment from their activities. It is our intention that the use of technology supports learning across the curriculum and ensures that our curriculum is accessible to every child.

Eden Primary's Computing curriculum focuses on a progression of skills in digital literacy, computer science, information technology and online safety to ensure that learners become competent in safely using, as well as understanding, technology. These strands are revisited repeatedly through a range of themes and research opportunities during children's time in school to ensure the learning is embedded and skills are successfully developed. Our intention is that Computing supports and develops children's creativity, collaboration, and cross curricular learning to engage children and enrich their experiences in school.

At Eden we follow the Purple Mash scheme of work in line with the National Curriculum with some thematic adjustments. The Computing curriculum is structured to be progressive in knowledge and skills across all phases and is closely aligned to the National Curriculum Programmes of Study. Knowledge, skills and vocabulary are sequenced to build on prior learning and the subject is taught through a series of units. Computing knowledge and skills are taught creatively, and children work towards clearly defined end points, creating opportunities to make connections within and across their learning.

Our Computing progression model is broken down into three strands that make up the curriculum: Computer Science, Information Technology and Digital Literacy. Computer Science underlines the knowledge and skills relating to programming, coding, algorithms and computational thinking. Information Technology underlines the knowledge and skills relating to communication, multimedia and data representation/handling. Digital Literacy underlines the knowledge and skills relating to online safety and technology uses.

EYFS

The scheme for Early Years (Reception) shows opportunities for using Mini Mash or Purple Mash as part of the Early Years classroom to support children in working towards early learning goals.

Key Stage 1 Outcomes

- 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 Outcomes

- 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 worldwide 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.

We intend for our graduates to have knowledge and skills to not only consume technology but question, manipulate, change and develop it. Eden Primary graduates will have confidence in using these transferable skills away from digital devices.

Implementation

The curriculum is delivered through the Purple Mash progression model which highlights the knowledge, skills and vocabulary for each year group. This provides clear coverage of the curriculum, including support and training for staff to ensure they have secure subject knowledge to deliver each lesson. Computing units are broken down into weekly lessons, usually with two units taught per half-term (see Appendix 1)

Units are practical and engaging and cover a broad range of computing components including: coding, spreadsheets, internet and email, databases, communication networks, touch typing, animation and online safety. When delivering the curriculum, teachers adapt the context of the lessons to link to their broader topic to ensure that learning is engaging, broad and balanced. We have a wide range of resources to support teaching and learning, including Thinkpads, Ipads, bee-bots and cameras. Pupils may use the Thinkpads or Ipads independently, in pairs or in an adult-led group.

Online safety is taught explicitly throughout all areas of the Computing curriculum and children study discrete online safety units through their computing lessons. We take part in National Internet Safety Day each year and the Computing leader and class teachers plan additional internet safety lessons and activities linked to a specific yearly theme. Online

Safety assemblies and workshops are held for children and parents and other enrichment opportunities, such as coding workshops take place.

Blended Learning

Reception to Year 3 use the online learning platform, Seesaw, and from Year 4 upwards Google Classroom is used. Both platforms are using in school to support the children's learning across core and foundation subjects and are used at home for periods of remote learning when necessary. When using Seesaw, the children learn to log in independently and can use a variety of tools to capture and present their learning. Google Classroom allows the children to independently organise, save and retrieve their work using a variety of programs.

Home-School Partnership

Children are encouraged to engage with Computing and technology outside of school. All children have their own login details for Purple Mash and can access and complete tasks at home that link with their current class learning. We actively encourage parent partnership within the computing curriculum and outside of school. Parents are made aware of e-safety issues through the school website, letters, information newsletters, parent presentations, shared activities and updated guidance.

Impact

Formative Assessment

- Self and peer assessment is used in Computing lessons to support the children to reflect on whether they have met the learning objective. Children have opportunities to respond to feedback and evaluate their work.
- Teachers make careful observations of the children's work during lessons and assess children's work that is saved in their folders on Purple Mash. Teachers then reflect on areas for development for individual children and their class as a whole, which is then used to inform future planning and adaptations that may need to make to the next lesson plan from Purple Mash.
- Teachers ensure they cater for the needs of all the children in their class, including those with SEN and high prior attainers. This may mean adapting the hardware a child uses to complete the task, for example, a child whose fine motor skill development is delayed may benefit from working on the interactive whiteboard rather than a tablet. For high prior attainers, this may mean adapting the level of challenge, for example, using higher levels available in the 2Dos on Purple Mash or applying the skills acquired to a different context.

Summative Assessment

At Eden Primary class teachers write annual school reports mid-year, detailing each child's strengths and areas for development. The areas for development for each child are then the focus for the Summer term's learning and incorporated into the teacher's Computing

plans. At the end of the school year, class teachers have detailed handover sessions with the next teacher and will

Role of the Subject Leader

The Computing Subject Leader monitors standards of achievement by observing lessons, sampling learners' work saved on Purple Mash, speaking to learners and staff. Where needed the Computing Subject Leader will take action to raise standards by supporting teachers to improve their subject knowledge, planning alongside teachers and working together to problem solve and overcome challenges in teaching the Computing curriculum.

Appendix 1 – Computing Long Term Plan

Key

	Digital Literacy
	Information Technology
	Computer Science

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Garinim Reception	Mini Mash exploration to support the areas of learning in the Early Years Framework					
Shorashim Year 1	Online Safety Grouping and Sorting	Pictograms	Lego Builders Maze Explorers	Animated Story Books	Coding	Spreadsheets Technology outside School
Shtillim Year 2	Online Safety	Effective Searching Making Music	Spread sheets	Creating Pictures Presenting ideas	Questioning	Coding
Anafim Year 3	Coding	Online Safety Spreadsheets	Touch typing Email	Email (cont.) Branching databases	Simulations Graphing	Presenting
Nitzanim Year 4	Online Safety Effective Searching	Writing for different audiences	Spreadsheets	Logo	Making music	Animation
Prachim Year 5	Coding Online safety	Spreadsheets	Databases	Game Creator Modelling	Concept Maps	Word Processing

Year 6	Coding	Online Safety	Spreadsheets	Blogging	Quizzing	Understanding Binary