

Cambridgeshire Progression in Computing Capability

Technology in the Early Years Foundation Stage

Children growing up today are immersed in new technologies. In the home, going shopping, at the doctors and in the street - technology is embedded in children's everyday experiences sometimes to the point where it is almost invisible to them. As part of some of their first activities, early technology experiences will include push button activities, remote control devices, musical keyboards, televisions, cash registers, microwave ovens, tills, scanners and interactive books, as well as computers, tablets and phones.

Forever mindful of the recommended times for screen viewing for children of this age group and for children to be sometimes screen free, engagement with technology achieves the best outcomes for young children when it is not a solitary, isolated encounter but enhanced by supported interaction with adults and collaboration with peers.

The best practice would be where technology:

- is a co-operative activity shared with another child or an adult
- involves doing things together and giving opportunities to take turns
- provides opportunity for talking and listening together -explaining, confirming, elaborating,
- feeds the imagination
- encourages further investigation and exploration
- challenges and encourages solving problems



This document is intended for Early Years teachers and practitioners who are trying to determine how and where technology fits with the Early Learning Goals. To that purpose, we have chosen just some of the statements relating, in our view, to the four aspects of the Computing Curriculum as contained in the Cambridgeshire Progression in Computing Capability Materials for primary schools. This therefore provides a continuous approach for the 3 – 11 age range for Cambridgeshire schools and support transition from Reception to Year 1. We have intentionally not provided any further breakdown of the Early Learning Goals as this would perhaps result in early technology experiences being too granular - technology experiences need to be embedded and not isolated into skills development with no context or purpose.

Practitioners will also need to consider that any reflections or observations about children's early experiences with technology should take account how children demonstrate learning with reference to the Characteristics of Effective Learning:

- playing and exploring
- active learning
- creating and thinking critically

The Cambridgeshire Progression in Computing Capability Materials were developed by the Elearning Team at The ICT Service to help schools deliver the Computing curriculum with a focus on pupils' Computing capability and with a strong emphasis on progression. More information about the approach, including materials and resource suggestions can be found at www.ccc-computing.org.uk

	Understanding Technology	Programming	Digital Literacy	E-safety
Relevant Early Learning Goals	<p>ELG 13 People and communities: children talk about past and present events in their own lives and in the lives of family members. They know that other children don't always enjoy the same things, and are sensitive to this. They know about similarities and differences between themselves and others, and among families, communities and traditions.</p> <p>ELG 15 Technology: children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.</p>	<p>ELG 02 Understanding: children follow instructions involving several ideas or actions. They answer 'how' and 'why' questions about their experiences and in response to stories or events.</p> <p>ELG 04 Moving and handling: children show good control and co-ordination in large and small movements. They move confidently in a range of ways, safely negotiating space.</p>	<p>ELG 16 Exploring and using media and materials: children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>ELG 17 Being imaginative: children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories.</p> <p><i>NB: Aspects of almost all of the other ELGs could be enhanced or evidenced through the use of technology e.g. ELGs 01, 02, 09 and 10 would all benefit from the use of eBooks and recording devices.</i></p>	<p>ELG 06 Self-confidence and self-awareness: children are confident to try new activities, and say why they like some activities more than others. They are confident to speak in a familiar group, will talk about their ideas, and will choose the resources they need for their chosen activities. They say when they do or don't need help.</p> <p>ELG 07 Managing feelings and behaviour: children talk about how they and others show feelings, talk about their own and others' behaviour, and its consequences, and know that some behaviour is unacceptable. They work as part of a group or class, and understand and follow the rules. They adjust their behaviour to different situations, and take changes of routine in their stride.</p>
What might this look like in the EYFSE?	<p>Children's natural curiosity has always driven them to develop an understanding of the world around them and this is no different when it comes to understanding technology; both how it works and what it can do for us. From their first, early experiences with technology, pupils begin to make sense of how it works and the opportunities it can provide.</p> <p>Children's experiences in this area should include exploring:</p> <ul style="list-style-type: none"> the technology they encounter at home and school (e.g. role play toys, photocopiers, automatic doors, dismantling old phones and laptops etc.) how technology has changed over time and how it differs across cultures by sharing artefacts, photos and videos, and asking others. 	<p>Children in Early Years are already immersed in a programmed world. They experience it every day of their lives when:</p> <ul style="list-style-type: none"> the doors at the supermarket open automatically when they approach, the hand drier starts when they place their hands underneath the price of an item shows as you scan the streetlights come on automatically when it gets dark. <p>In the EYFS, continuous provision draws on these common uses of control technology for children to experience first-hand and to explore their uses through play. Additional experiences might also include:</p> <ul style="list-style-type: none"> 'programming' friends by telling them how to move around like a robot or make a pretend sandwich use of control toys like remote control cars, Beebots or Early Years Roamer. 	<p>Practitioners will need to support the youngest children as they explore digital apparatus with discussion about what it does, how it works and how to use it safely. Children in Early Years will explore mark making programs on screens, tablets or interactive whiteboard to experiment and communicate their ideas.</p> <p>They will interact with adults and their peers and explore their environment using multimedia equipment, including digital and video cameras, microscopes, webcams and visualisers to capture still and moving images. With help, they will play back their captured recordings, demonstrating confidence and increasingly in control. They will be encouraged to explore ways of making and listening to sounds using simple programs, apps and devices, e.g., karaoke machines, music mats and age appropriate apps.</p>	<p>It is important for children to learn to be e-safe from an early age. Practitioners and teachers of children in Foundation and Year 1 play a vital part in starting this process and involving parents in recognising their responsibilities just as they do when thinking about other aspects of children's safety when crossing the road safely, handling potentially dangerous equipment in the home or at the swimming pool.</p> <p>With the very youngest children, many of the key e-safety messages will be conveyed through guided use, continuous provision and adult modelling in the school or setting. Additionally, and importantly, this will be alongside and with the involvement of parents and carers at home. Listen to young children talking about their online world and use this overheard talk to engage with them and find out more about their practice and behaviour.</p>

	Understanding Technology	Programming	Digital Literacy	E-safety
Resource Description	<p>Examples of appropriate resources include:</p> <ul style="list-style-type: none"> Role play toys (e.g. hoovers, microwaves, tills, old mobile phones, washing machines etc.) 'Real' technology in their home and school (e.g. photocopiers, automatic doors, mobile technology – tablets and phones, hand dryer) Primary and secondary sources of information about technology in different cultures and in the past (e.g. BBC Bitesize: How Computers have changed, or What are the parts of a computer?) 	<p>Examples of appropriate resources include:</p> <ul style="list-style-type: none"> Simple control toys: Beebot, Infant Roamer, remote control vehicles...  <ul style="list-style-type: none"> On screen simulations such as Beebot, Trucks from Duck Duck Moose or Toca Boca (digital toys and games for kids) and simple problem solving games such as Jumbo the Elephant. 	<p>Examples of appropriate resources include:</p> <ul style="list-style-type: none"> Online, interactive stories and rhymes Screens, IWBs or tablets with mark making software and apps. Equipment or apps for recording voice Digital cameras or tablets to record still and moving images Programs / apps such as Sock Puppets, Puppet Pals and Drawing Pad on tablets or as Photostory, Smart Notebook gallery or a selection of age appropriate software such as that produced by 2Simple. Websites which encourage early exploration such as free content on Poisson Rouge or from suppliers such as Yellow Door. 	<p>Examples of appropriate resources include:</p> <ul style="list-style-type: none"> An age appropriate Learning Platform to model and practise safe use of communication tools age appropriate resources such as Hector's World stories such as Digiduck (a story of friendship and responsibility online) and Smartie the Penguin using child friendly search engines such as Kidrex <p>Visit www.ccc-computing.org.uk for more links to useful e-safety resources.</p>  
Y1 Capability Statements	<p>(Y1) Pupils recognise and can give examples of common uses of information technology they encounter in their daily routine.</p>	<p>(Y1) Pupils create, debug and implement instruction (simple algorithms) as programs on a range of digital devices.</p> <p>Pupils understand that digital devices follow precise and unambiguous instructions.</p> <p>Pupils understand that digital devices simulate real situations.</p>	<p>(Y1/2) Pupils increasingly use a range of technology to enquire with purpose, accessing and creating digital content such as still and moving images, video, audio and text.</p> <p>With appropriate levels of support, pupils collect data (e.g. numerical, research facts etc.) which they are able to retrieve, store and manipulate.</p> <p>They can present and communicate their learning to others in a variety of ways.</p> <p>With support, pupils are beginning to access and retrieve online content, making appropriate choices to achieve specific goals.</p>	<p>(Y1/2) Pupils understand that information about themselves may be personal and they can choose who to share it with.</p> <p>With support, pupils can manage can their online activity safely, recognising which information should be kept private. They can explain what it means to stay safe online and older pupils identify some of the potential risks associated with the online world.</p> <p>They communicate safely and respectfully using a range of digital devices, making links to their behaviour in the physical world. Pupils start to develop strategies for managing concerns about online content or contact; seeking help and support when needed.</p>

Starting to plan:

Class:		Date:	Teacher:	
		Continuous Provision	Enhanced Provision	Resources
Und. Tech.	ELG13, ELG15			
Prog.	ELG02, ELG04			
Digital Lit.	e.g. ELG16, ELG17			
E-safety	ELG06, ELG07			
Notes:				