Digital Learning Cornwall

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Helping busy schools make informed EdTech choices

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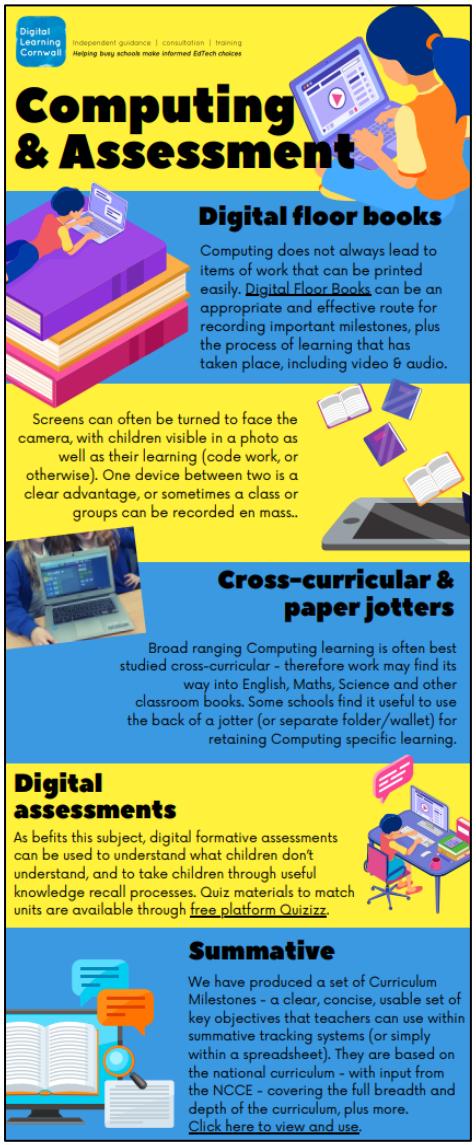

How do we ensure that children know what we need them to know?

Units of work within our collated Computing scheme build upon previously taught knowledge, extending and building upon knowledge acquired within previous blocks of learning.

Teachers will wish to gather an understanding of children's prior understanding, in order to ensure that upcoming sessions are most appropriate for children's next steps in learning. This can be an opportunity to plug any particular mis-understandings or gaps in knowledge, and to adjust future lessons appropriately to need.

The approach taken will differ depending on the age of the children, but setting time aside in the first session (or possibly in a gap in run-up days) can be a good way to ascertain prior knowledge. Questioning and discussion alongside looking at selected slides of information – possibly from previous units - can be a useful way to proceed, particularly with the youngest children.

Digital Floor Books

This collection of usable interactive materials – developed in conjunction with the main scheme of learning – provides a way not only to record activities as they progress over time, but also for children to look back on learning that has already taken place. Hosted in Book Creator, the web-based interface allows for a versatile approach whereby digital books can be used and interacted with through laptops and classroom screens, as well as tablets and children's devices. The **vocabulary** pages of these creations are distinct locations where prior knowledge can be questioned effectively, and gaps in understanding ascertained by a teacher.
Click here for the full collection.

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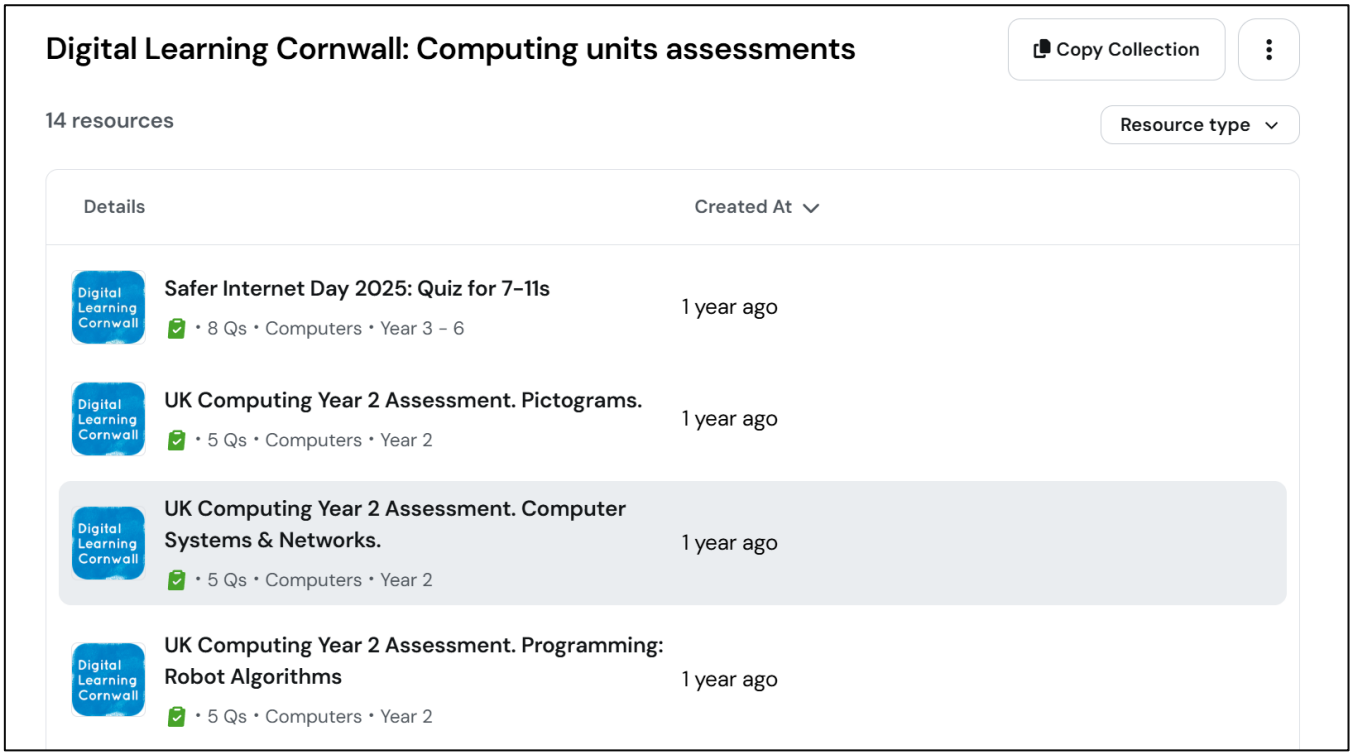
Summative / formative assessment and knowledge retrieval

Schools may wish to use the curriculum milestones as points of reference when completing formalised assessments. Such milestones allow teachers to reflect on their cohort of children, and record judgments based on what children have shown, produced and demonstrated during a unit's sequence of learning. A current and future teacher can use such information to idenify which children are working towards standards in Computing, which children are on track, and which children are exceeding / capable of being extended further.

Digital Assessments

The collated curriculum materials contain adapted digital assessments. These have been included for the most knowledge-heavy units of learning, such as understanding programming procedures and information technology terminology.

The digital assessments are hosted in the Quizizz online platform – this link will take you to the entire collection -and individual assessments are linked from **Read First** unit documents under the **Why This? Why Now?** section.



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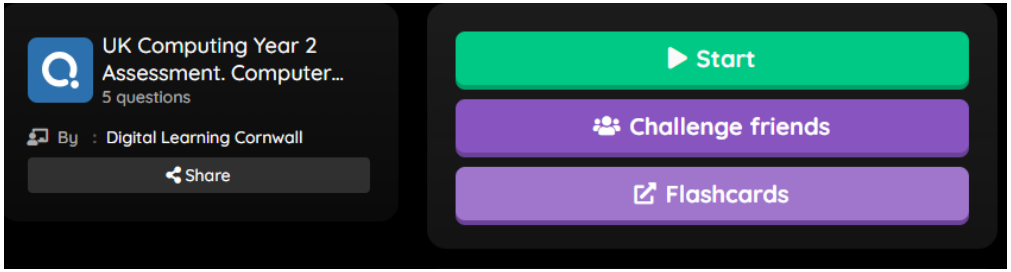

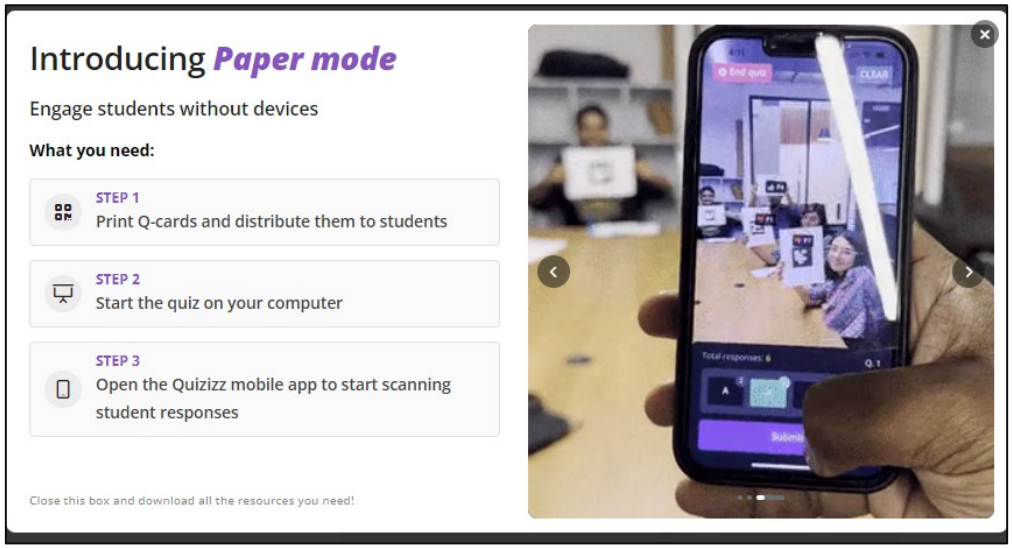

With younger children, these assessment and knowledge retrieval tools can work better when approached less formally, as Quizizz allows for a 'flash cards' process (click the preview button for your chosen quiz, and you will see the flashcards option as another clickable button). The 'paper mode' is an interesting extra option that allows teachers to simply use one device and scan the room for children's answers.

With older children, teachers can use tools such as Quizizz to formatively assess where children are with their prior knowledge during initial teaching sessions. We provide pre-made quizzes for the knowledge-dependent units at KS2, and these can be used to assess prior learning by using the previous unit's assessment. Click here to see all pre-made assessment quizzes, and refer to the ***Why This? Why Now? Curriculum Sequencing*** part of the **Read First** documents that are supplied with each unit.

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A well-implemented, cross-curricular Computing Curriculum has far-reaching impact across a school

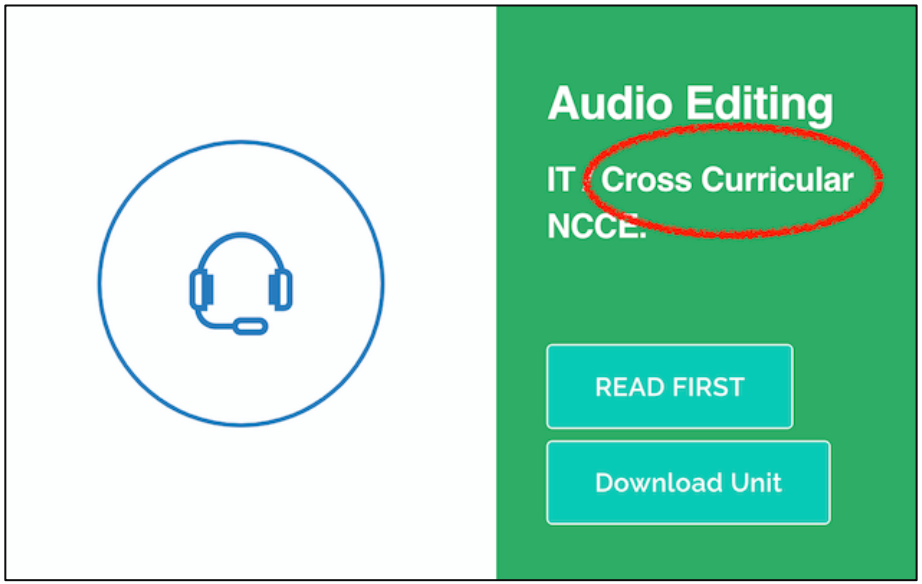
A well-considered Computing curriculum, which schools prioritise, is likely to have a huge impact on the life chances of the children who experience it. Many units of work in this collated, broad-ranging curriculum are suited to cross-curricular learning, spreading the impact of Computing education wider across a school's range of opportunities.

Units marked Cross-Curricular can be embedded meaningfully into a multitude of areas: from photo editing in art; to digital music production; to pictograms and databases in Maths; to on-screen pieces that combine words with graphic design; to animation based in a PSHE topic; to data logging in a Science experiment; to video editing a green-screen enabled interview with a historical figure; to designing and creating a fitness step-counter; or producing the graphics and web-page design for a product – the possibilities are endless and the chance to motivate children is huge.

Such links should not be spurious or distracting – they place learning within the bounds of 21st century understanding, and produce a significantly inspiring cocktail of learning for children to fathom and master.

Schools are right to point out the *impact* of creating such rich learning experiences - be proud of providing them and willing to explain this vital impact when the subject is being reviewed or inspected.

It can be incredibly satisfying for teachers and curriculum leads to continue to enhance and refine such impactful teaching sequences. Year on year, each time the lessons are delivered, the impact made can be even deeper and more purposeful.



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Relevant Cultural Capital for Children's Future Success

The Computing curriculum has the potential to expose children to a range of knowledge, skills, and behaviours that are entirely relevant for their access to the modern world, including the rapidly changing world of work. Without a decent grounding across the breadth of Computing, children are left disadvantaged as they enter into what has been dubbed the modern information age or *fourth industrial revolution*.

Whether that's staying safe on the internet; or learning how to use keyboards effectively; or publishing works to the internet, a thorough grounding in such principals opens children's eyes to the possibilities that are just around the corner for them. Secondary education now relies on mobile technologies and learning platforms for children to be informed, prepared and engaged with their studies. Education post-16 always relies on employment and understanding of digital technologies in order to progress and succeed.

Beyond education, the infiltration of technology into workplaces and occupations is all-encompassing. How many jobs rely on tech-based organisation and efficiency, or modern communication flows, or indeed the ability to sequence and program procedures? Modern occupations provide a route for many young people to travel the world, to live in major cities or make exhilarating and life-changing choices. Yet there is also the ability to make change in the world, to use tech for moral purpose and for the good of society.

Careers Links

Computing is a subject which links directly to the future life and career choices for many children. When delivering units of work, teachers should contextualise, if at all possible, discussion around the knowledge and skills being gained, and how these might help with specific career choices in future.

Making links with careers organisations is a vital way to ground learning in future opportunities and aspirations. There are various organisations that you can liaise with to help your school tap into this important area, and of course Computing is an ideal subject for making vital links to careers.

primary futures

Beyond such organisations, many schools make their own links into local careers and businesses, giving children true to life role models that may well be able to motivate them with the work and interests they have. Liaising with adults who attended your school, and getting them involved in careers fairs and demonstrations, is a great way to inspire children and stay connected with the local community.

Beyond the standard curriculum

The presence of a school's Computing curriculum can be significantly enhanced by looking to external organisations and running extra-curricular clubs that cater for Computing and related areas like STEM (Science, Technology, Engineering, Maths). Running a Code Club allows those children who are interested and/or gifted in this area to further their interest and understanding. Code Clubs and Coder Dojos has been running for several years and allow schools to get involved with volunteers in their immediate area – and sometimes further afield – to push the subject onwards within an extra-curricular capacity.

The First Lego League movement has been running for a number of years. It builds towards yearly events whereby children compete with their ingenious inventions in STEM-themed project competition days.

There have been numerous financial grants that schools can claim in recent years, in order to acquire the necessary equipment. The events continue to be well-attended and the momentum appears to be growing across the UK. Again, it's another great way to give cross-curricular clubs a specific focus.

Software Cornwall is the industry body for the tech industry in Cornwall, and has its own educational outreach department. They are often able to deliver additional workshops to children, particularly at upper KS2, which work to supplement the curriculum being delivered in school.

There are more region-specific organisations as well, looking to push forward the agenda of tech-focussed learning in schools. In Cornwall, Tec Girls has been running for a number of years, with volunteers running workshops in schools to great effect. One school commented on how the emphasis on encouraging girls has really paid dividends, with these particular learners now fully exhibiting a love of taking leading roles with all STEM-related projects.