COMPUTING
AT
TORKINGTON PRIMARY SCHOOL

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INTENT

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INTENT

- At Torkington, we are aware that most pupils have access to IT at home. In fact, a lot of children are using devices on a daily basis. It is, therefore, our intent to deliver a computing curriculum that teaches our children how to be masters of technology, not slaves to it. We ensure children are taught about the power of technology and the ways in which it can be used to support and enrich both our learning and our lives. With children at our school being so familiar with technology and using it so regularly, we also ensure that our computing curriculum effectively teaches them about the importance of being safe online.

The National Curriculum for Computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

At Torkington we have been following the NCCE's 'Teach Computing' scheme of work for computing from Year 1 to Year 6, but as these resources are no longer updated we are now moving over to the new and updated Oak National Academy resources, which mirror the structure and content of the NCCE resources very closely.

Teach Computing

RaspberryPi

National Centre for Computing Education

Oak National Academy

INTENT

- We have recently transitioned to the Oak Academy computing curriculum, which aligns with our school's four-part lesson structure through the use of built-in 'anchor' and 'reflection' quizzes. This scheme maintains the spiral curriculum approach previously established by the NCCE, ensuring children revisit and build on their knowledge in a clear progression of skills. To ensure our curriculum remains at the forefront of modern technology, we have adapted these units to include bespoke learning on Artificial Intelligence (AI) and Cyber Security, replacing outdated network units. Furthermore, we have integrated Project Evolve as a weekly 'jumpstart' to every lesson, ensuring that online safety is a constant, reinforced thread throughout every year group.

How does the computing curriculum take account of the needs of all pupils, including your most disadvantaged and SEND pupils?

- Inclusion in computing is achieved through a flexible approach to support and challenge that prioritizes access over simplified tasks. We recognize that literacy can be a barrier to digital success; therefore, we have moved away from written-heavy evidence in favor of electronic recording.
- In Key Stage 1, the use of floorbooks and photographs captures learning without the need for writing, while in Key Stage 2, children build digital portfolios on Google Slides and Google Classroom, allowing them to demonstrate technical proficiency regardless of their reading or writing ability.
- We employ purposeful mixed-ability pairings and targeted 1:1 support for pupils with specific needs to ensure they access the same ambitious curriculum as their peers.
- Beyond the computing discrete lesson, we leverage technology as a vital scaffolding tool across the wider curriculum. For pupils with SEND who struggle with fine motor skills or literacy, the consistent use of Chromebooks and accessibility tools allows them to achieve learning outcomes in subjects like English and History that might otherwise be inaccessible, ensuring technology acts as an equalizer across the school.

IMPLEMENTATION

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IMPLEMENTATION

Spiral curriculum

The units for key stages 1 and 2 are based on a spiral curriculum, and all feature the computing 'threads' running through them. This means that each of the themes is revisited regularly (at least once in each year group), and pupils revisit each theme through a new unit that consolidates and builds on prior learning within that theme. This style of curriculum design reduces the amount of knowledge lost through forgetting, as topics are revisited yearly. It also ensures that connections are made even if different teachers are teaching the units within a theme in consecutive years.

The lessons taught through this scheme cover all three strands of the computing curriculum (computer science, information technology and digital literacy) to ensure that children have a broad and deep understanding of computing as they progress to secondary school.

Whole School Computing Progression

This whole school progression allows for the children to build a solid foundation of skills that is then development and enhanced as they move through each key stage.

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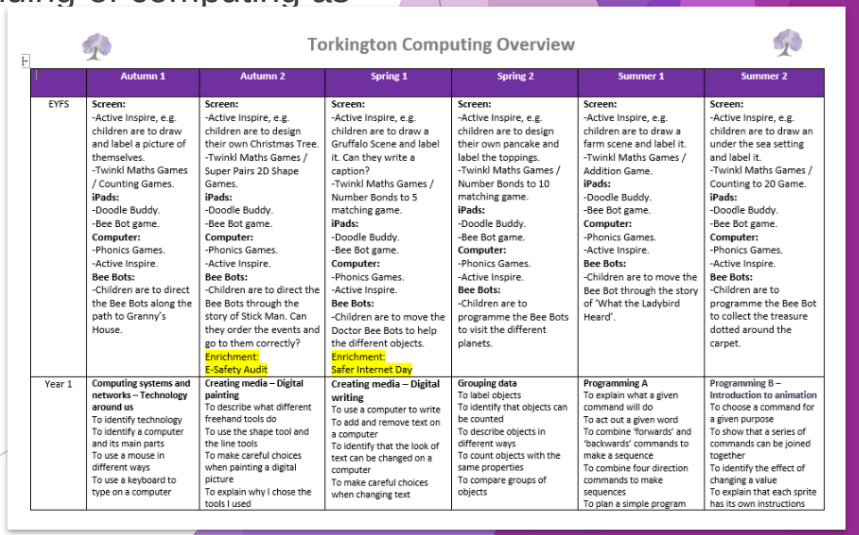

Torkington Computing Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**Screen:** -Active Inspire, e.g. children are to draw and label a picture of themselves. -Twinkl Maths Games / Counting Games. **iPads:** -Doodle Buddy. -Bee Bot game. **Computer:** -Phonics Games. -Active Inspire. **Bee Bots:** -Children are to direct the Bee Bots along the path to Granny's House.	**Screen:** -Active Inspire, e.g. children are to design their own Christmas Tree. -Twinkl Maths Games / Super Pairs 2D Shape Games. **iPads:** -Doodle Buddy. -Bee Bot game. **Computer:** -Phonics Games. -Active Inspire. **Bee Bots:** -Children are to direct the Bee Bots through the story of Stick Man. Can they order the events and go to them correctly? Enrichment: E-Safety Audit	**Screen:** -Active Inspire, e.g. children are to draw a Gruffalo Scene and label it. Can they write a caption? -Twinkl Maths Games / Number Bonds to 5 matching game. **iPads:** -Doodle Buddy. -Bee Bot game. **Computer:** -Phonics Games. -Active Inspire. **Bee Bots:** -Children are to move the Doctor Bee Bots to help the different objects. Enrichment: Safer Internet Day	**Screen:** -Active Inspire, e.g. children are to design their own pancake and label the toppings. -Twinkl Maths Games / Number Bonds to 10 matching game. **iPads:** -Doodle Buddy. -Bee Bot game. **Computer:** -Phonics Games. -Active Inspire. **Bee Bots:** -Children are to programme the Bee Bots to visit the different planets.	**Screen:** -Active Inspire, e.g. children are to draw a farm scene and label it. -Twinkl Maths Games / Addition Game. **iPads:** -Doodle Buddy. -Bee Bot game. **Computer:** -Phonics Games. -Active Inspire. **Bee Bots:** -Children are to move the Bee Bot through the story of 'What the Ladybird Heard'.	**Screen:** -Active Inspire, e.g. children are to draw an under the sea setting and label it. -Twinkl Maths Games / Counting to 20 Game. **iPads:** -Doodle Buddy. -Bee Bot game. **Computer:** -Phonics Games. -Active Inspire. **Bee Bots:** -Children are to programme the Bee Bot to collect the treasure dotted around the carpet.
Year 1	**Computing systems and networks – Technology around us** To identify technology To identify a computer and its main parts To use a mouse in different ways To use a keyboard to type on a computer	**Creating media – Digital painting** To describe what different freehand tools do To use the shape tool and the line tools To make careful choices when painting a digital picture To explain why I chose the tools I used	**Creating media – Digital writing** To use a computer to write To add and remove text on a computer To identify that the look of text can be changed on a computer To make careful choices when changing text	**Grouping data** To label objects To identify that objects can be counted To describe objects in different ways To count objects with the same properties To compare groups of objects	**Programming A** To explain what a given command will do To act out a given word To combine 'forwards' and 'backwards' commands to make a sequence To combine four direction commands to make sequences To plan a simple program	Programming B – **Introduction to animation** To choose a command for a given purpose To show that a series of commands can be joined together To identify the effect of changing a value To explain that each sprite has its own instructions

IMPLEMENTATION

- Our curriculum transition to Oak Academy ensures a rigorous progression of knowledge and skills, where each unit is strategically mapped to build upon prior learning. To activate this prior knowledge, every lesson begins with a digital 'anchor' quiz, allowing children to retrieve and discuss previous concepts before moving forward.
- We have moved away from traditional assessment tests in favour of a final 'assessment piece' or project for each unit. This allows pupils to demonstrate their technical proficiency in a tangible way, which is then evidenced individually on Google Classroom (KS2) or within a class floorbook (KS1).
- These outcomes, combined with lesson-specific 'reflection' quizzes, enable teachers to make accurate assessment judgments, track progress on the school-wide spreadsheet, and immediately identify and address any gaps in knowledge.
- **Resources**
- We have a class set of ChromeBooks and two class sets of iPads which are utilised in computing lessons and in other areas of the curriculum as well.
- The Oak Academy scheme of work has a list of apps and programs which are referred to and used within the planning, and these are all accessible on either the ChromeBooks or iPads as appropriate.
- In KS2, the ChromeBooks are more regularly used for computing lessons than the iPads, whereas in KS1, it is sometimes more appropriate to use the iPads. However, children in Year 1 and 2 still regularly use the ChromeBooks and are increasingly more confident in using them as they near the end of KS1.
- We also have a class set of BeeBots which are used regularly across EYFS and KS1 to support learning in all areas of the curriculum, as well as computing.
- We have a class set of Micro:Bits which are used across KS2 to enhance the teaching of coding, physical computing and data logging.
- Where available, TAs are used to support the children during computing lessons and intervene with any difficulties or issues the children come across.

EYFS

Although there are no early learning goals directly related to Computing at Torkington, we take a holistic approach as we believe it is an integral part of the children's everyday life. Children therefore have Computing experience across the provision and links to how ICT is used in the world we live in are established. Here at Torkington, we strongly believe that immersing the children in computing and technology as part of their continuous provision enables us to help develop the seven areas of learning, with particular emphasis on Personal, Social and Emotional Development; Physical Development; Understanding the World; and Expressive Art and Design.

Our curriculum for our youngest learners is underpinned by the **Barefoot Computing** principles. We focus on developing core "computational thinking" skills—such as pattern recognition, abstraction, and logic—through both digital activities and "unplugged" play-based learning. By mapping these principles across our EYFS provision, we ensure children build a solid conceptual foundation that prepares them for the more formal computing curriculum in Key Stage 1. Progress is captured through observations and pupil voice, which are proudly displayed in our whole-class floorbooks.

A range of technology is available for children to use including: Tablets, Cameras, Torches, Beebots, Interactive Touch Screen Display Access to such items allow children to feed their curiosity and see how things work (Understanding the World), as well as encouraging them to try new activities and show independence, resilience and perseverance in the face of challenges (Personal, Social and Emotional Developement).

One example would be through the use of Beebots. Independently accessing and following verbal rules recorded on sound buttons (again, Personal, Social and Emotional Development), children are encouraged to program the Beetbot to carry out certain tasks. This not only encourages collaboration, but also requires the children to deploy their fine motor skills to use this technology competently (Physical Development). By attaching pens to the Beebots, children can explore and investigate how to create shapes and patterns (Expressive Arts and Design), and can then use other technologies to record their work.

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IMPLEMENTATION

Computing across the curriculum
Children are offered opportunities within the curriculum to use their IT skills in other lessons. For example they might create a presentation about a topic they are learning, or make a spreadsheet when learning statistics or use animation or programming software for D&T.

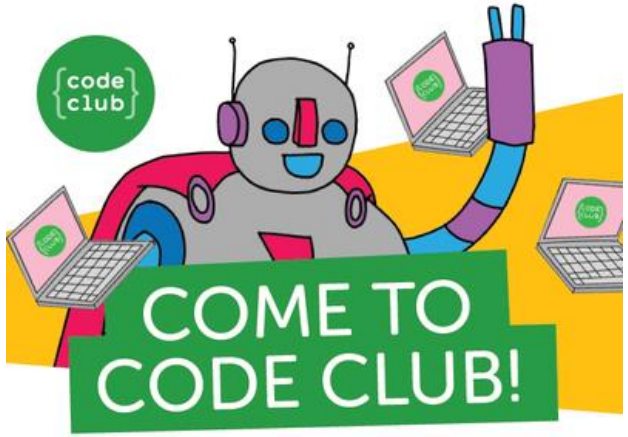
Research and Reading in Computing
Many of the Oak Academy units of work involve elements of researching, particularly those units that hit the digital literacy and information technology strands. During these units, children are required to use a web browser and search engine in the ways that they have been taught to research and locate information they need to help them with their learning of a certain topic. Children are encouraged to also use these researching skills at home, particularly when completing their History or Geography home learning projects. They often demonstrate their learning and present their findings through creating presentations which they can then share with their class.

How is Computing assessed?
EYFS: We focus on the foundational computational thinking principles mapped through Barefoot Computing. Progress is captured through pupil voice and observations, which are recorded in class floorbooks. These are cross-referenced with the EYFS areas of development to ensure children are prepared for the Year 1 curriculum.
KS1: Assessment is integrated into our four-part lesson structure. Every lesson features an 'anchor' quiz to assess prior knowledge and a 'reflection' quiz to evaluate immediate understanding. Teachers use class floorbooks to capture photographic evidence and group work, and occasionally Google Classroom for individual work (where appropriate). At the end of each unit, children complete a final assessment piece (such as a creative project), which the teacher uses to provide a summative judgment of emerging, meeting, or exceeding expectations on the school-wide spreadsheet.
KS2: We have transitioned to a fully digital assessment model. Children maintain individual digital portfolios within Google Classroom, documenting their progress each lesson through a variety of different tasks. The "little and often" assessment is managed through Oak Academy's built-in anchor and reflection quizzes. We have replaced traditional summative tests with a final 'assessment project' for every unit. This allows pupils to demonstrate their skills in a practical context. These final projects inform the teacher's overall judgment of whether each child is emerging, meeting, or exceeding year group expectations.

EXTRA CURRICULAR OPPORTUNITIES

- Children in Years 4, 5 & 6 are offered Code Club as an after school club on Tuesdays and children in Years Reception, 1 & 2 are offered Mini Coding Club. This is an opportunity for those children with a particular interest in Computing and programming to delve deeper into the world of coding and use their skills to create exciting games and computer programs.

- Each year we celebrate Safer Internet Day and children are immersed in a range of activities related to e-safety.



IMPACT

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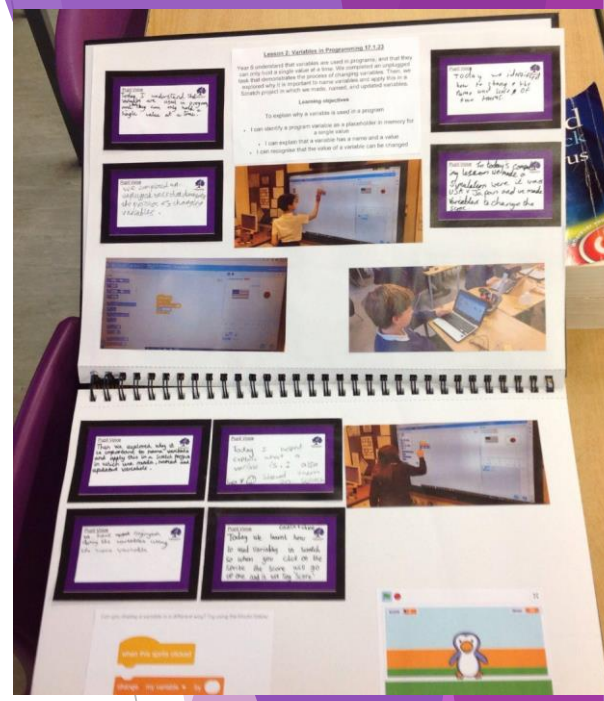
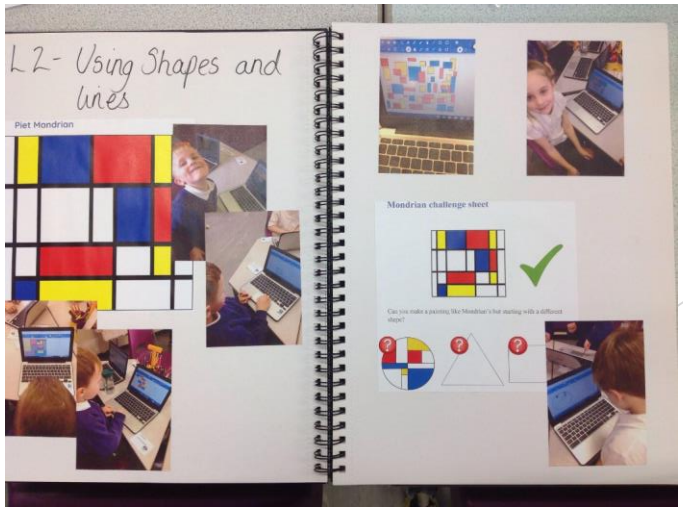
- Computing learning is recorded in many different ways depending on the activities taking place during the lesson (videos, audio recordings, online coding programs, quizzes, worksheets, physical activities etc), but all of this work is collated in a whole class Computing floor book. Each lesson, examples of a range of pupil work (this could be worksheets, screen shots, printed word documents, presentations, spreadsheets etc) and pupil voice will be stuck into the floor book to demonstrate and celebrate the children's learning.

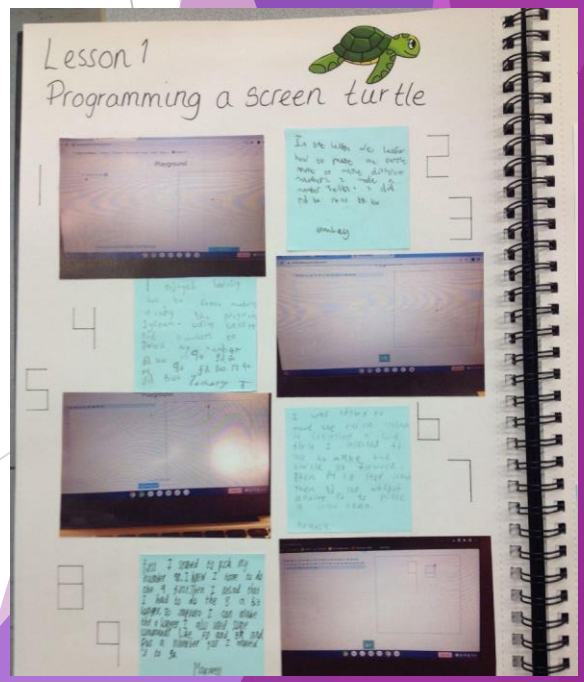
- Teachers assess progress by monitoring children's technical proficiency during lessons and through our integrated four-part lesson structure. Each session begins with a digital 'anchor' quiz to assess prior knowledge and concludes with a 'reflection' quiz, allowing for immediate, automated feedback and pupil self-assessment.

- Feedback is tailored to the digital nature of the task: teachers provide live verbal guidance, or comments on work uploaded to Google Classroom portfolios. We have moved away from traditional summative testing in favour of a final 'assessment piece' for every unit, which is evidenced individually and marked to inform our school-wide tracking spreadsheet.

- This data, alongside Project Evolve knowledge maps, is regularly analysed to identify gaps in understanding using these insights to provide staff with targeted feedback and to ensure our curriculum remains impactful and responsive.







IMPACT – PUPIL VOICE/BOOK LOOK

- At the end of each term, the content and quality of our Computing lessons are monitored.
- Children's work and pupil voice in the whole class Computing floorbooks and on Google Classroom is reviewed by the subject leader and further pupil voice is gathered to assess children's progression in and enjoyment of Computing.
- This allows the children to express their views on the Computing knowledge and skills they have developed, as well as gauging enjoyment levels. This information is then assessed by the subject leader to influence future planning.

IMPACT – Readiness for future learning

- The impact of our Computing curriculum is evident in our pupils' transformation from passive users of technology into creative, responsible, and critical digital citizens. By the time children leave us at the end of Year 6, they possess a robust toolkit of transferable skills and a deep understanding of the digital world.
- Our curriculum ensures that every Year 6 pupil departs with a solid foundation in **Computer Science**, having mastered complex concepts such as variables, sensing, and selection through hands-on programming. They are proficient in **Information Technology**, able to navigate various software—from 3D modelling and spreadsheets to advanced video production—with confidence and independence.
- Crucially, our heavy focus on **Digital Literacy** and the "little and often" approach to **Online Safety** (supported by Project Evolve) means our leavers are acutely aware of their digital footprint and the importance of cyber-security. They are equipped to handle the challenges of social media and the internet with resilience. Furthermore, our recent integration of **AI education** ensures they understand the emerging technologies that will shape their future. Torkington pupils leave us not just "secondary ready," but prepared to excel as innovative and safe leaders in an ever-evolving technological landscape.