Computing Policy

Next review: Spring 2025

Intent

Our school's Computing scheme aims to instil a sense of enjoyment around using technology and to develop pupil's appreciation of its capabilities and the opportunities technology offers to, create, manage, organise, and collaborate. 'Tinkering' with software and programs forms a part of the ethos of our curriculum as we want to develop pupils' confidence when encountering new technology, which is a vital skill in the ever evolving and changing landscape of technology. Through the curriculum, we intend for pupils not only to be digitally competent and have a range of transferable skills at a suitable level for the future workplace, but also to be responsible online citizens.

We enable pupils to meet the end of Key Stage Attainment targets outlined in the National curriculum and our aims align with those in the National curriculum. Our Computing scheme of work also satisfies all the objectives of the DfE's Education for a Connected World framework. This guidance was created to help equip children for life in the digital world, including developing their understanding of appropriate online behaviour, copyright issues, being discerning consumers of online information and healthy use of technology.

E-Safety

eSafety is of paramount importance at our school. Children are taught how to use technology safely and respectfully, keep personal information private and raise concerns about content or contacts online. Our eSafety policy closely adheres Local Authority guidelines. The school also raises eSafety awareness by participating in the annual 'Safer Internet Day' with whole-school and class activities.

Health and Safety

The school is aware of the health and safety issues involved in children's use of technology. All electrical appliances in school are regularly tested. It is advised that staff should not bring their own electrical equipment in to school but if this is necessary, then the equipment must be PAT tested before being used in school. This also applies to any equipment brought in to school from external providers.

Security

- The ICT and computing technician will be responsible for regularly updating school software and the upkeep of equipment.
- All pupils and parents will be aware of the school rules for responsible use of Computing curriculum and the internet and will understand the consequence of any misuse.
- The agreed rules for safe and responsible use of computing are displayed in all areas children use provided equipment.
- Access to the internet is monitored by the computing technician and the Smoothwall firewall program provides a filter that protects children from accessing inappropriate websites.

Curriculum

Early Years

Pupils are taught in EYFS about 'Understanding the World' (UW) and part of the curriculum includes a foundation knowledge on eSafety though our PSHE and Relationships education.

Key Stage 1

Pupils are taught the following targets from the National Curriculum:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key Stage 2

Pupils are taught the following targets from the National Curriculum:

- design, write and debug 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
- use logical reasoning to explain how some simple algorithms work 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 world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Implementation

The implementation of the curriculum relates to how the learning is going to be delivered across school, taking the intent of the learning, and translating it into a progressive and effective curriculum. When using a scheme, such as Kapow Primary, the majority of this aspect is taken care of. The Kapow Primary scheme of work is designed with three strands which run throughout:

- Computer science
- Information technology
- Digital literacy

Our National Curriculum mapping document shows which of our units cover each of the attainment targets as well as each of these three strands. Our progression of skills shows the skills that are taught

within each year group and how these skills develop year on year to ensure attainment targets are securely met by the end of each key stage.

The Kapow Primary scheme is organised into five key areas, creating a cyclical route through which pupils can develop their computing knowledge and skills by revisiting and building on previous learning:

- Computer systems and networks
- Programming
- Creating media
- Data handling
- Online safety

Curriculum Coverage

Our long term plan sets out the components of learning for each year group over the school year. All the components cover the attainment targets for each year as well as ensuring Online Safety is given the highest priority.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Using a computer (All 5 lessons)		All about instructions (All 5 lessons)	INTERNET SAFETY DAY	Exploring hardware (4 lessons: 1-4 only)	Introduction to data (4 lessons: 1-4 only)
Year 1	Online safety Y1 (All 4 lessons) Improving mouse skills (3 lessons: 1-3 only)		Algorithms unplugged (4 lessons: 1, 2 , 4 and 5 only)		Digital imagery (Microsoft Office 365) (3 lessons: 1-3 only)	Bee-bot (Virtual Bee-Bot) (4 lessons: 1, 3, 4 and 5 only)
Year 2	Online safety Y2 (4 lessons: Teach all five by combining lessons 3 and 4) What is a computer? (3 lessons: 1, 2 and 5 only)		Algorithms and debugging (4 lessons: 1, 2 , 4 and 5 only		International Space Station (3 lessons: 1, 3 and 5 only)	ScratchJr. (4 lessons: 1, 2, 4 and 5 only)
Year 3	Online safety Y3 (All 4 lessons) Networks and the internet (Microsoft Office 365) (3 lessons: 1, 3 and 5 only)		Journey inside a computer (3 lessons: 1, 2 and 5 only)		Video trailers (Using iPads) (4 lessons: 1-4 only)	Programming: Scratch (4 lessons: 1, 2, 3 and 5 only)
Year 4	Online safety Y4 (4 lessons: 1, 2, 3 and 5) Collaborative learning (Microsoft Office 365) (4 lessons: 1, 3, 4 and 5)		Further coding with Scratch (Microsoft Office 365) (3 lessons: 2, 3 and 4 only)		Investigating weather (3 lessons: 1, 3, 4 and 5)	Computational thinking (4 lessons: 1-4 only)
Year 5	Online safety Y5 (3 lessons: 1, 4 and 5) Search engines (Microsoft Office 365) (4 lessons: 1-4)		Mars Rover 1 (3 lessons: 1, 2 and 4)		Stop motion animation (Option 1: Stop Motion Studio) (4 lessons: 1-4)	Programming music (4 lessons: 1-4)
Year 6	Online safety Y6 (4 lessons: 1, 2, 4 and 6) Bletchley Park (Microsoft Office 365) (3 lessons: 1-3)		Big data 1 (4 lessons: 1, 3, 4 and 5)		History of Computers (3 lessons: 3-5)	Intro to Python (4 lessons: 1-4)

Teaching and Learning

The implementation of Kapow Primary Computing ensures a broad and balanced coverage of the National curriculum requirements, and our 'Skills showcase' units provide pupils with the opportunity to learn and apply transferable skills. Meaningful, units have been created to link to other subjects such as science, art, and music to enable the development of further transferable skills and genuine cross-curricular learning.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work as well as unplugged and digital activities. This variety means that lessons are engaging and appeal to those with a variety of learning styles.

Guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

Each of the components of learning includes teacher videos to develop subject knowledge and support ongoing CPD. Further CPD opportunities can also be found via our webinars with Kapow's Computing subject specialists. Kapow has been created with the understanding that many teachers do not feel confident delivering the computing curriculum and every effort has been made to ensure that they feel supported to deliver lessons of a high standard that ensure pupil progression.

Resources

There is a high level of ICT provision in school. The school has invested in a range of equipment that supports teaching and learning for all. Each classroom has a large interactive touch screen connected to a staff laptop. Children. The current list of hardware devices include:

- 32 pupil laptops
- 39 iPads, docking station and iMac. (7 staff use)
- Large interactive screen and laptop for use in the hall or meeting room.
- 2 USB Flip cameras
- 1 Digital SLR camera
- 2 USB microphones
- 30 Headphones
- 4 Data Loggers
- 10 BBC Micro-bit programmable devices.
- All laptops have access to the online software Microsoft Office 365, as well as a range of products designed to enhance various aspects of the curriculum. The school has subscriptions to other online services such as, Spelling and Maths Shed, Times Tables Rock Stars and Clicker licences that provide current materials for staff and pupils to use.

SEND

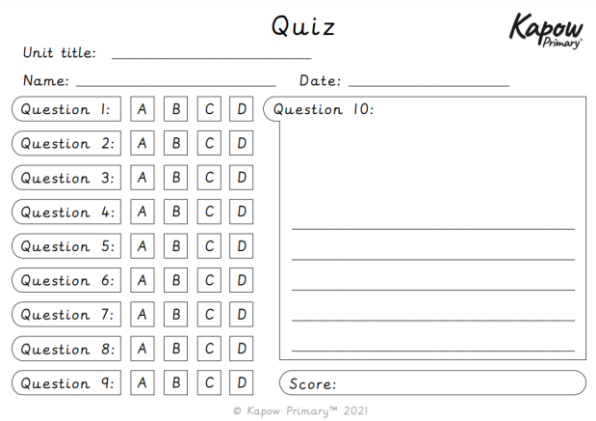
Computing forms part of our school curriculum policy to provide a broad and balanced education for all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. Its use impacts on the quality of work that children produce and increases their confidence and motivation. When planning work, we can take into account children's next steps. Computing can help children in achieving their targets and progress in their learning.

Inclusion and equity is a key part of our school ethos and we recognise the differing needs and accessibility each pupil has. We provide suitable learning opportunities for all children.

Record Keeping and Assessment

We aim for children to know, apply and understand the targets set out in their year group's programme of study. Children are assessed using formative and summative assessments that track their progress during a unit of work. Effective feedback is given throughout and children also self-assess their progress.

Each year group is responsible for creating a 'Floor book' of children's work that evidences the objectives met within the lessons. Each component of learning is assessed using a whole-class formative quiz



Quiz

Kapow Primary

Unit title: _____

Name: _____ Date: _____

Question 1:	A	B	C	D	Question 10:
Question 2:	A	B	C	D	
Question 3:	A	B	C	D	
Question 4:	A	B	C	D	
Question 5:	A	B	C	D	
Question 6:	A	B	C	D	
Question 7:	A	B	C	D	
Question 8:	A	B	C	D	
Question 9:	A	B	C	D	Score:

Below, is an example of the assessment tool used by teachers to assess each pupil against the learning outcomes from each lesson.

Kapow Primary	Computing assessment Year 3			Homepage	Assessing Pupils' Understanding and Progress	
Strand	**Unit**	**Lesson name**	**Lesson no.**	**Working towards/Learning intention (WT)**	**Secure understanding (SU)**	**Greater depth (GD)**
		Robot bop	5	Programming a game, explaining the purpose of an algorithm, decomposing a problem and using an algorithm to code a program	Explaining what an algorithm is and understanding the purpose of an algorithm. Using a class algorithm when creating a program	Beginning to form algorithms independently (as seen in the challenges)
Computing systems and networks 3	**Journey inside a computer**	Inputs and outputs	1	Recognising basic inputs and outputs and understanding that a computer follows instructions	Suggesting what input and output are and recognising that the computer sends and receives instructions	Explaining the instructions that are being sent and received with little support
		Build a paper laptop	2	Understanding that a laptop is made up of many parts and using logic to explain the purpose of some of these parts	Explaining that parts work together to make the laptop work and suggesting the role of some of the parts	Suggesting how the parts work together and what messages they send to each other
		Dismantling a tablet	5	Decomposing a tablet computer, describing similarities and differences across different types of computer	Recognising that some computer parts relate to functions and making some comparisons between laptops and tablets	Recognising that some computer parts relate to functions, and explaining what each component does and making some comparisons between laptops and tablets
Creating media	**Video trailers (Option 2: Using iPads)**	Planning a book trailer	1	Planning a book trailer, picking out the key events in a story	Creating a storyboard to plan a book trailer and describing the purpose of a book trailer	Creating a detailed storyboard for a book trailer from the main character's perspective, understanding the audience and the purpose of the trailer as well as describing the impact of music and sound effects on

Each child is assessed by teachers against whether they are 'Working Towards', 'Secure Understanding' or 'Greater Depth' and the data is monitored by the Computing Coordinator and the Senior Leadership Team.