



COMPUTING POLICY

Pickhurst Academy

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Computing Coordinator: Craig Hetherington



Document Purpose

This policy document sets out the school's aims, principles and strategies for the delivery of the computing entitlement. It will form the basis for the development of computing in the school over the next year. It gives guidance on planning, teaching and assessment. This policy is intended to be used in conjunction with the National Curriculum 2014, which gives details of what pupils in each age group, will cover. This policy was updated in the Summer Term 2021 by the computing Coordinator.

Audience

This policy document, having been presented to and agreed upon by the whole staff, is distributed to all members of the teaching and non-teaching staff and the curriculum committee of the Governing Body. It will also be available on the school's shared drive system.

The significance of Computing

Computers and programming skills are becoming an ever more present part of the lives of every person. Computers are everywhere, adults carry around a personal computer in their pocket, children play on games consoles and now nearly every job now requires basic computer skills to gain employment. The amount of computers and technology in our lives is growing all the time and new products are being created every day. Keeping up with this ever more essential skill is an ongoing task that children should be taught from an early age. We are entering an unknown future where the skills and adaptability taught in computing will help to take part in an ever growing, ever changing industry.

At Pickhurst we believe that learning a about technology provides an opening to new ideas and concepts, as well as contributing to the development of their ability to adapt to new problems. We recognise its importance as a life-long skill. Every pupil in Key Stage 2 has an entitlement to computing learning.



Aims

- To encourage children to develop positive attitudes to computing and to understand its importance and relevance to today's world.
- To enable children to acquire a broad range of computing capabilities and to be confident about using a range of hardware and software.
- To enable children to develop the use of technology as a tool for learning and investigation in all subject areas.
- To use technology to encourage children to work co-operatively, taking responsibility collectively.
- To use technology to develop independent ways of working which encourage children to take responsibility for their own actions.
- To set computing tasks which require flexibility of mind and open mindedness in problem solving.
- To provide a balanced range of progressively more difficult tasks that will develop children's understanding in Communicating and handling information, Controlling, Modelling and Monitoring.
- To instruct children in the use of a variety of computing equipment.
- To ensure a balance of computing activities are carried out in a range of contexts.
- To provide opportunities for children to explore the use of Technology.
- To set aside time for discussion of children's experience of using technology, both in and out of the classroom.

Delivery

All pupils have an opportunity to learn Computing. A weekly lesson of 1 hour for Years 3, 4, 5 and 6 is timetabled. Lessons are delivered by the Class Teacher.

Scheme of Work

We will be using the Kapow Primary computing scheme of learning. The scheme and accompanying lesson plans are designed to meet all the targets of the KS2 computing curriculum. Each unit focuses on a different aspect or skill in computing and works as a spiral curriculum,



meaning that software and skills are revisited in later years. This allows the children to progress their abilities and take part in ever more challenging work. The weekly lesson plans include ideas for support and extension of all types of learners in order to meet the needs of all pupils.

Intent, Implementation and Impact

As the world is becoming an increasingly technologically dependent place, we have a duty to provide our children with an understanding of basic and advanced computing skills. Learning about computers enriches the curriculum, providing excitement, enjoyment and challenge for children and teachers, helping to create enthusiastic learners, adaptable people and to develop positive attitudes to technology throughout life. The natural links between computing and other areas of the curriculum can enhance the overall teaching and learning experience. The skills, knowledge and understanding gained make a major contribution to the development of children's problem-solving skills and to their understanding of how some of their favorite types of entertainment are created.

Intent

Kapow Primary Computing provides a computing curriculum that is ambitious and designed for all pupils. It is coherently planned and sequenced towards cumulatively providing the necessary knowledge and skills for the pupils' future to empower them to take their role as future coders and app designers. It emphasizes the role of teamwork and collaborative creations to build to a final outcome and comes with suggestions for differentiated approaches to teaching. The children build on knowledge centered around a theme and revisits commonly used learning tools, such as Scratch to build a spiral curriculum. It provides concrete and abstract methods of teaching; the children are not always sat at a computer as they sometimes have physical tasks to complete related to the topic. Following the scheme will ensure pupils benefit from a curriculum that prepares them for a future where computers are at the heart of most employment opportunities and gives them the tools they need to be able to succeed in a future that is unknown.



At Pickhurst, through recognition of the need to prepare our children for their futures and the world of work, our curriculum is broad, balanced and inclusive. It has defined end points with a clear sequence and progression, with children attaining the crucial knowledge and skills they need by the time they leave our school.

Intent Statements	Aims	
Statement 1: <u>To foster effective learning behaviours (Pickhurst Core Values).</u> To develop the behaviours that learners need to succeed in the world such as: pride, respect, confidence, kindness and inquisitiveness.	<i>To be proud</i>	Sharing what they have achieved with peers and their teacher. Some work can be shared more widely, depending on the type of work produced.
	<i>To be inquisitive</i>	Manipulating programs or functions to see how they could be applied in the real world to solve real-life problems.
	<i>To be confident</i>	Encouraging them to believe in themselves and follow what they think is best. Engage in progressive sequences of learning which embed previous skills and knowledge.
	<i>To be kind</i>	Showing kindness to others when using the internet and/or online platforms, and not to spread rumours.
	<i>To be healthy</i>	Being mindful of the impact too much screentime can have on young people, and how to have a healthy balance when using devices and/or online platforms. Using technology to enhance healthy lifestyles, such as fitness and mindfulness apps.
	<i>To be understanding</i>	Accepting that not everything we read and/or see online is true, and to take a balanced view when looking at sources of information online.
	<i>To be respectful</i>	Taking responsibility for the equipment. Taking responsibility for their actions online and being respectful towards others when using online platforms.
	<i>To be successful</i>	Finding solutions to problems and creating solutions through programming. Utilising technology to complete and/or enhance a task.
Statement 2: <u>To nurture our children's learning journey.</u> To develop the appropriate subject specific knowledge, skills and understanding as set out in the National Curriculum. Layering knowledge across subjects so that it becomes embedded and children can flourish, reach and exceed their potential academically, physically, emotionally and artistically.	<i>To be trustworthy</i>	Acting appropriately if/when something causes a child concern when using the internet and/or online platforms. Children are taught how to be safe online. Understanding of the importance of safety rules when online to ensure that each child minimises risk to themselves and knows how to respond safely.
	• Subject specific knowledge and skills, built around objectives within the National Curriculum, identified within Knowledge Organisers. The skills are built upon which activates prior learning. • Rationale for the way in which Computing has been organised to best layer knowledge and concepts within and across year groups. • Computing has been used to allow for meaningful links to be made across other subject areas. • 'Sticky learning' (prior learning and key concepts) is addressed at the start of each unit and lesson. The children are encouraged to recall and retrieve prior learning to support with their new knowledge & skills • Online safety sessions are taught at the beginning of every half-termly unit of work. Metacognition The use of metacognition can be utilised to help structure thinking. This is especially applicable to coding and programming as the order of the code is critical. Using different strategies to structure children's thinking and being able to apply these will improve their ability to work and solve problems in Computing.	



Implementation

Kapow Primary Computing is designed to be delivered by non-specialists, with core computing knowledge identified and explained throughout. The lesson plans come with subject knowledge and videos for anyone less confident in using and teaching computers. The lessons, provided by the class teacher, will be 1 hour in length. A breadth of teaching approaches appropriate to the content and desired learning outcomes are used to engage all pupils and enable them to not just acquire knowledge but to apply it in meaningful contexts. The lesson plans also come with suggested differentiation opportunities to allow all children to achieve the same outcome, but at different levels. Revisiting software and skills in different, more challenging, contexts in later units. It also provides suggestions of how to assess the children's learning. Quality resources and materials are provided online to support the computing curriculum and are sequenced towards the accumulation of skills, knowledge and understanding, working towards the next key stage.

Impact

The impact of Kapow Primary Computing is evidenced through the pupils' use and implementation of key computing skills and their understanding of vocabulary and key terms. It is evidenced by the use and outcomes of the varied activities, assessments and quizzes provided. The broad range of approaches for pupils to communicate their knowledge ensures that everyone can demonstrate progression and impact. In particular, it is evidenced by the pupils' ability, willingness and confidence in using the key computing skill independently and with purpose. Pupils are offered opportunities to understand how computing skills will be key to attaining future job roles and specialisms.

Resources

Teachers and pupils will have access to all the resources that come with the Kapow computing scheme. This includes, but is not limited to:

- Planning
- Worksheets
- Links to software



- Videos
- Teaching slides

Cross-curricular

Learning about computing presents opportunities for the reinforcement of knowledge, skills and understanding in other curriculum areas. There are also opportunities to link to other subjects such as:

Writing: Creating lists of instructions.

Maths: Measurement and pattern recognition.

Geography: Using technology to make new discoveries about the world through research and apps such as Google Earth.

History: Making links to the history of computing and its implementation in major historic events.

Music: Creating synthetic music on a piece of software.

Science: Researching and discovering how things work through apps and app design.

Art and History: Creating artwork using software.

Whole school involvement

Parents and SLT are kept informed of what is being taught weekly via our School Newsletters.

Assessment

The class teacher assesses each child's progress with reference to the attainment targets of the KS2 Curriculum. By the end of each year, the stages which have been achieved for each attainment target will have been recorded. Assessment is based on class observations of children by the teacher who will keep evidence of progress through photos and screenshots of work. This information is recorded and stored in the 'Assessment Tracker' spreadsheet on the school network and this is done 3 times a year (end of Autumn, end of Spring and end of Summer).

Special Needs and Classroom Support



The teaching of Computing gives every child a chance to take part and enjoy technology. It can provide a boost to those children who have literacy/numeracy difficulties as the vast majority of pupils will have experience with computers. Some children have previous experience of using a piece of software and can apply the skills and strategies they have learnt. We also ensure SEND children will have a good understanding of the new concept by revisiting previous learning and allowing them to practise in the best way they learn, be it visual, auditory or kinesthetic.

Equal Opportunities

In keeping with the school policy on Equal Opportunities the teacher will be aware of the differences and individual needs of each child with regard to the physical, emotional, behavioral and learning needs, as well as any special abilities and any needs that may arise as a result of race or gender.

ARP

Our ARP will be given access to the Kapow curriculum for EYFS and KS1 to adapt for their pupils.

Health and Safety

Health and safety arrangements are in line with the school policy.

Role of the Computing Coordinator

- Implement the Kapow Computing curriculum
- Ensure the delivery of high-quality lessons of Computing
- Manage the provision and deployment of the resources
- Bid for and manage the budget for this curriculum area
- Provide advice about the Computing policy



- Liaise with classroom teachers and senior management to keep them informed of latest developments and pass on assessment data
- Monitor and review the Computing provision within the school
- Keep up-to-date professionally, through reading and attending local network meetings.