

Vision Statement

Right now we live in a digital world where technology is at the forefront of everyday life. We use technology from ringing the doorbells of our house to paying for goods by a tap of our phones. At King David our vision is to equip the children with the skills they will need growing up in such a technological world. We recognise that as a school we have a responsibility to prepare the pupils for their future in a rapidly developing and changing technological world. By increasing their knowledge and understanding of the impact technology has on our day to day life, we are preparing them for a future in a world of technological unknowns. Our computing curriculum allows children to use computational thinking to support their social development and understanding of the wider world around them. At the core of our computing curriculum is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Through weekly computing lessons children are taught to be digitally literate; able to use and express themselves and develop their ideas through information and communication technology within a variety of contexts and subjects. Each child will be able to access the Internet and use the World Wide Web in a safe and respectful way. They will understand the necessary precautions to take, to stay safe and know where to seek help. No child will feel threatened or unsafe whilst online at school or at home. We aspire to be able to provide children with the latest technological advances to keep their knowledge constantly thriving and growing.

Intent

Aims

At King David we will ensure a broad and balanced computing curriculum is provided for all children regardless of ethnic origin, gender, class, aptitude or disability. We will meet the national curriculum requirements for Computing. Embed computing across a curriculum that acknowledges its contribution to learning in all other subjects. Equip pupils with a progression of computing skills that they can apply both in and out of school. Support all staff to make effective use of ICT at a professional level. Provide our children with an enjoyable experience of computers so that they will develop a deep and lasting interest and may be motivated to use them further. For children to use computers in experimental, imaginative, exploratory ways. This will include regular opportunities to engage with computer programming. Ensure that staff and children understand the capabilities, advantages, risks and limitations of ICT and consider the implications of its development for society. Make effective use of computers to transform teaching and learning providing opportunities that would otherwise not be possible. Ensure the safety and well-being of our pupils. Teach Computing in line with the principles of our teaching and learning policy. Ensure computing resources are relevant and up to date.

Implementation

Organisation

Computing is taught weekly across the School year. Lesson are usually around 45 minutes in length.

Curriculum

At King David Primary we follow the Teach Computing Curriculum. (teachcomputing.org/curriculum) We also follow the targets from the National Computing Curriculum.

EYFS

In EYFS, technology forms an element of the EYFS goal understanding the world. It aims to ensure that children recognise that a range of technology is used in places such as homes and schools and can select and use technology for particular purposes.

KS1

In KS1 each week children are taught one standalone computing lesson. This can take place in the computing suite or in the classroom. This might involve using ipads or other computer based skills.

By the end of key stage 1 pupils should be taught to:

- 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.

KS2

In KS2 each week children are taught one standalone computing lesson. This can take place in the computing suite or in the classroom. This might involve using ipads or other computer based skills.

By the end of key stage 2 pupils should be taught to:

- Design and write 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; generate appropriate inputs and predicted outputs to test programs
- Use logical reasoning to explain how a simple algorithm works 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
- Describe how internet search engines find and store data; use search engines effectively; be discerning in evaluating digital content; respect individuals and intellectual property; use technology responsibly, securely and safely
- Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Inclusion and Adaptive Teaching

We believe that all children have the right to access ICT and computing. In order to ensure that children with special educational needs achieve to the best of their ability, it may be necessary to adapt the delivery of the ICT and computing curriculum for some pupils. We teach ICT and computing to all children, whatever their ability. ICT and computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of ICT and computing we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Where appropriate, ICT and computing can be used to support SEN children on a one to one basis where children receive additional support. We will use adapted resources wherever possible such as visual timetables, different coloured backgrounds and screen printouts.

Spiritual, Moral, Social and Cultural Development

Computing is used in other subjects when using Ipads to research information, complete Maths times table challenges and various other subjects. Videos are also created and used in many subjects. Each day computers are used in the classroom to help teach lessons.

Impact

Progression and Continuity

Pupils will build on their skills and confidence throughout each year of learning. Continuity of the skills and repetition is important for the pupils to be able to gain confidence. This will then enable pupils to achieve the standards expected in the computing national curriculum.

Progress and Achievement

By the end of KS1

Pupils should be able to create and debug simple programs, use technology purposefully to create, organise, store, manipulate and retrieve digital content and 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.

By the end of KS2

Pupils should be able to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Pupils will be able to 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. Pupils should be able to 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.

Assessment and Recording

Key objectives to be assessed are taken from the National Curriculum. Teachers regularly assess capability through observations, discussions with pupils and looking at completed work. Regular assessment of computing work is an integral part of teaching and learning and central to good practice. It should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of the concepts of ICT and computing. As assessment is part of the learning process it is essential that pupils are closely involved. Assessment can be broken down into 2 parts.

Formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.

Summative assessment should review pupils' capability and provide a best fit level. Use of independent open ended tasks, provide opportunities for pupils to demonstrate capability in relation to the term's work. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils on Balance – showing whether the pupils have met, exceeded or not achieved the learning objectives.

We assess the children's work in computing by making informal judgements as we observe and talk to the children during lessons. Once the children complete a unit of work, we make a summary judgement of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit. On completion of each unit of work, an example of the integrated task for each ability group is placed in the Portfolio of Children's Work for which the computing subject leader is responsible. This demonstrates the expected level of achievement in computing for each age group in the school. For any lessons carried out on code.org assessment is automatic and is available for the teacher see how much progress each child is making against the objectives.

Monitoring

Monitoring computing will enable the coordinators to gain a good overview of the teaching and learning throughout the school. This will assist the school in the self evaluation process identifying areas of strength as well as those for development. In monitoring of the quality of computing teaching and learning the coordinator will: • Scrutinise plans to ensure full coverage of the computing curriculum requirements • Analyse children's work • Observe computing teaching and learning in the classroom by undertaking learning walks • Hold discussions with teachers • Analyse assessment data There is an annual review of this policy by the computing coordinator. There is a computing committee on the governing body which the subject lead attends the meetings.

Role of the Subject Leader

Roles & Responsibilities

There is a Computing subject leader who is responsible for the implementation of computing policy across the school. Their role is to:

- Offer help and support to all members of staff (including teaching assistants) in their teaching, planning and assessment of computing;
- Provide colleagues opportunities to observe good practice in the teaching of computing;
- Maintain resources and advise staff on the use of digital tools, technologies and resources;
- Monitor classroom teaching or planning following the schools monitoring programme;
- Monitor the children's progression in computing, looking at examples of work of different abilities;
- Keep up-to-date with new technological developments and communicate information and developments with colleagues;
- Lead staff training on new initiatives;
- Attend appropriate in-service training;
- Have enthusiasm for computing and encourage staff to share this enthusiasm;
- keep parents and governors informed on the implementation of computing in the school;
- Liaise with all members of staff on how to reach and improve on agreed targets;
- Help staff to use assessment to inform future planning.

Resources

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Computing network infrastructure and equipment has been sited so that:

- Every classroom from nursery to Y6 has a computer (Tv) screen connected to the school network which is an interactive whiteboard with sound and airplay facilities.
- There are 25 computers in the computer suite and 35 iPads
- There is an iPad Sync & Charge cabinet in school containing 30 USB ports
- Internet access is available in all classrooms.
- Each class from YN – Y6 has an allocated slot per week for teaching computing as a discrete subject.
- Laptops and iPads are available for use throughout the school day as part of computing lessons and for cross-curricular use
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school shares 2 computing technicians (Mr. Marks & Mrs Partington) with the High School who ensures technology is functional.
- The School has access to the teach computing curriculum.

Health and Safety

We will operate all ICT equipment in compliance with Health & Safety requirements. Children will also be made aware of the correct way to sit when using the computer and the need to take regular breaks if they are to spend any length of time on computers. Computing Suite rules are also on display within the Suite for reference along with specific rules for the use of Internet and E-mail. The school also has a 'Responsible Use of The Internet Policy' document. The school has an alarm system installed throughout to ensure the site is safe. Each computer system has individual security against access to the management system. The files and network system are backed up regularly. The virus checker is updated regularly.

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