Curriculum Subject Overview
Subject: Computing

Intent:

ICT has become an essential vehicle for life and life long learning, and as such Bramley Park Academy embraces, promotes and celebrates the use of information and communication technology skills across the curriculum and throughout the school community.

Our purpose is to have a high-quality computing curriculum that equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing 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. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

We believe children should be empowered to put themselves at the centre of their digital world. This is evident in each strand of our computing curriculum. As users of increasingly complex data driven and ever evolving technology we believe our children should leave in year 6 as competent and responsible digital citizens. Our curriculum has been designed and developed to build on what has come before using research informed teaching strategies that foster and develop a deep understanding and mastery of the computing curriculum.

Our curriculum is designed to address the three main strands of the computing curriculum helping children to develop an understanding of the nature and purpose of the digital world; how it affects lives. Being digital literate is widely recognised as valuable as traditional primary subjects. Our ambition is that children develop their computational thinking skills to enable them to think critically about their online and digital worlds but

also to be able to embed and develop key life skills becoming effective problem solvers.

Implementation:

Our Teaching will follow the three key areas of Digital Literacy (DL), Computer Science (CS) and Digital Citizenship (DC) and our pupils should be able to organise their knowledge, skills and understanding.

The vertical accumulation of knowledge, vocabulary and skills from Years 1 to 6 can be seen in our clear long term plan that maps skills that build year on year.

Teaching of Computing will take the form of fortnightly lessons and cover all three key components across a key stage (Key Stage One, Lower Key Stage Two and Upper Key Stage Two.) We also ensure that our computing skills are adopted and promoted in all subject areas and our Chromebooks are used to enable learning across the curriculum.

EYFS - Although technology is no longer a separate ELG our children will continue to use directed teaching sessions, enhanced provision and Chromebooks to develop the following:

- Our children in EYFS will explore different types of technology to allow them to recognise that a range of technology is used in places such as homes and schools. This will allow them to select the correct technology for a purpose.
- They will develop a basic understanding of computer science using floor robots and sequencing of instructions.
- Young children will look at stories and websites to aid their understanding of online safety.
- They will begin to become digital literate by taking photographs and documenting their learning journey within the classroom setting.

KS1

- In Key Stage 1 the children will learn to understand what algorithms are; how they are implemented as programs on digital devices; and that

programs execute by following precise and unambiguous instructions.

- They will be taught to create and debug simple programs and use logical reasoning to predict the behaviour of simple programs.
- They will be shown how to use a range of technology purposefully to create, organise, store, manipulate and retrieve digital content as well as recognise common uses of information technology beyond school.
- They will be taught to 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 Key Stage 2 the children will design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- They will use sequence, selection, and repetition in programs, use logical reasoning to explain how some simple algorithms work and correct errors in algorithms and programs.
- Children will be taught to understand computer networks, including the internet, and the opportunities they offer for communication and collaboration.
- They will use search technologies effectively, learn to appreciate how results are selected and ranked, and be discerning in evaluating digital content.
- Children will be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to create a range of programs, systems and content that accomplish given goals.
- They will use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Both staff and children have a sound understanding of the safeguarding risks linked to online safety and through direct teaching in the computing curriculum children are equipped with an understanding of the dangers and how to stay safe. Every computing lesson starts with an E-safety recap to ensure knowledge is up to date and reflective of any issues that arise in the local area or any trends picked upon in school.

Staff are regularly updated and briefed on online safety and complete annual training updates.

Impact:

Our computing journey so far has enabled all staff to complete their Google Level One training and they are now equipped with the skills to use a range of tools and features such as: creating site, documents, quizzes and slides.

The curriculum gives a clear and structured approach to teaching all three strands of computing and vocabulary and skills are carefully mapped across each year group to ensure progression across the school as well as widening and depth of knowledge.

Regular QA cycles have shown that children are able to use technical vocabulary naturally as well as demonstrating how to use a range of programmes and tools effectively. Children use skills learnt in the computing curriculum across a wide range of subjects.

Children across school had a sound knowledge of how to be good Digital Citizens and the use of the e-safety starters has ensured this is reflective and responsive to the needs of the class / cohort and community. Regular updates to parents are provided on newsletters to support screen time and social media guidance and through sessions such as Family Fun are used to highlight the importance of online safety to our community.