**Computing Intent**

At Bedford Drive Primary, we have constructed an ambitious Computing curriculum that follows the content of the EYFS statutory framework and the National Curriculum.

The Computing curriculum supports the focus firstly on ‘Self’, the ‘Society’, and then ‘Global’. Our knowledge-engaged curriculum means that our children learn skills alongside knowledge, ensuring that both are explicitly developed. It builds on children’s prior knowledge, development and understanding.

Values are also a crucial element of the curriculum and these are woven through it, linking with our UNICEF Rights Respecting School status. We provide additional learning opportunities within the curriculum to ensure the children can develop the values that are at the core of our curriculum, such as resilience, wellbeing, participation, relationships and self-esteem.

We provide a range of experiences for pupils to enhance the Computing curriculum. We work closely with the computing team at Hi-Impact to provide high quality workshops. Our Spring STEM (Science, Technology, Engineering and Mathematics) projects, provide many opportunities that our children. They also experience a wide range of equipment, such as robots and virtual reality.

Our vision is to support children in becoming creative, independent learners and ensure they develop a healthy relationship with technology. At our school we value and recognise the contribution that technology can make for the benefit of all pupils, staff, parents, governors and society. We strive to provide safe opportunities in computing to motivate, inspire and raise standards across the curriculum. Everyone in our school community will be equipped with the digital skills to meet developing technology with confidence, enthusiasm and prepare them for a future in an ever-changing world.

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We provide an inclusive curriculum, ensuring those who have special educational needs and/or disabilities and those who are disadvantaged can all receive the same opportunities as their peers in Computing. Expectations are high for every pupil with appropriate levels of challenge and support. The schemes of work help children, many of whom start at Bedford Drive below age related expectations, to quickly gain knowledge and skills. We want our children to know more, understand more and remember more.

Our curriculum supports the key aims of the government’s Internet Safety Strategy (Digital Literacy / UK Council for Child Internet Safety (UKCCIS) framework) of supporting children to stay safe and make a positive contribution online, as well enabling teachers to develop effective strategies for understanding and handling online risks.

The schemes of work are ambitious and engaging. Many of our children start at Bedford Drive with prior skills, development and knowledge that are well below those expected for their age but our computing curriculum is carefully coherently planned to enable our pupils to quickly gain the knowledge and skills that will equip them for the next stage of their education. Every year, pupils gain knowledge about the four main strands of Computing; computing systems and networks, creating media, data and information and programming.

We are implementing the DfE validated NCCE (National Centre for Computing Education) scheme of work because it builds in complexity enabling pupils to progressively develop their knowledge, skills and understanding of computing. This planning constantly revisits and reuses prior learning, to ensure that the knowledge, skills and understanding become embedded. To aid understanding subject specific vocabulary is taught explicitly within every lesson. We have end points for each topic and milestones for the end of each year to show what pupils should know and can do (see below).

**EYFS End Point:**

By the end of Foundation Stage 2, pupils will be ready to access the KS1 programme of study. Despite the removal of the ‘Technology’ strand from ‘Understanding the World’ in the new Early Years Foundation Stage curriculum (September 2021) we believe Computing and technology are still vitally important subjects to deliver to Reception children. Not only will teaching a well-planned Computing curriculum ensure that children enter Year 1 with a strong foundation of knowledge, but Computing lessons in the EYFS also ensure that children develop listening skills, problem-solving abilities and thoughtful questioning - as well as improving subject skills across the seven areas of learning.  They will confidently know about a range of technology and be able to control aspects of it. At the end of each term they will be assessed to ensure they are making progress.

**KS1 End Point:**

At Bedford Drive Primary School, formative assessment happens regularly and summative assessment takes place termly. Teacher wills ensure that by the end of the Key Stage, pupils will be confident and knowledgeable to enable then to access the Key Stage 2 curriculum. They will have the skills to understand what algorithms are, create and debug programs, use logical reasoning in programming, use technology purposefully, recognise common uses of information technology beyond school and use technology safely and respectfully.

**KS2 End Point:**

At Bedford Drive Primary School, formative assessment happens regularly and summative assessment takes place termly. Teachers will ensure that by the end of the Key Stage, pupils will be confident and knowledgeable to enable then to access the Key Stage 2 curriculum. They be able to design, write and debug programs, use sequence, selection, repetition and abstraction, use logical reasoning, understand how computer networks work, use search technologies effectively, select, use and combine a variety of software and use technology safely, respectfully and responsibly.

The key focus throughout every key stage and every subject is the children are “Never too small to make a difference.”

We have carefully analysed and discussed our pupils’ backgrounds, life experiences and cultures which has helped us to design a Computing curriculum which is ambitious. It will ensure our children can successfully meet the challenges in the next stage of their education and lives. It will, crucially, empower them to feel that their Computing education has purpose and value. They will develop experiences in which they can be of service to the community and wider world.

Oracy is a key element of the curriculum and the development of vocabulary is paramount. For Computing, we have clearly identified vocabulary that builds up progressively. Children also get opportunities to develop oracy skills through working collaboratively e.g. pair programming.

Through Computing, we intend that the children should become:

**Self - Successful learners** – we want our children to be knowledgeable, articulate and curious, having a sense of achievement in Computing. We provide opportunities and experiences for our children to see possibilities available for their future and for their world.

**Self - Confident individuals** – we want our children to enjoy coming into school and have constructed a Computing curriculum to promote and develop a love of learning and encourage curiosity; whilst ensuring they live safe, happy, healthy and fulfilling lives.

**Society - Responsible citizens** – we aim to offer experiences which help them become resourceful learners who use their initiative, and make a positive contribution to society.

**Global -** Cultural capital is a key feature within our Computing scheme of work. Children are exposed to a range of people who have influenced Computing, who reflect diversity in modern Britain and attributed to some of the greatest achievements of mankind.

**Computing Implementation**

At Bedford Drive Primary, we have a strong approach to supporting and training our staff in Computing. To help staff to continually improve their subject knowledge, we work closely with Curriculum Consultants Hi-impact to provide CPD. Staff attend CAS local and regional meetings and we utilise training through Barefoot Computing and NCCE resources.

We are determined that our pupils are taught by knowledgeable experts in the different subjects. Every member of staff is trained in areas that they are less confident in. Those who are not experts are helped through planning meetings, shared teaching and courses to improve their subject knowledge.

At Bedford Drive, we support and advise staff in how to demonstrate and explain concepts to pupils in Computing. Teachers use a range of resources to help them to develop pupils’ discussion and oracy; such as video clips, images, computer software and opportunities to present to others. Teachers demonstrate and explain key vocabulary that the pupils will need to access the lesson.

Teachers use common misconceptions to plan lessons that will avoid common errors such as using ‘if’ blocks in the wrong place when programming.

We implement our Computing curriculum through well-structured lessons. In addition, each lesson involves revising and building on prior learning, teachers use strategies to develop pupils’ memories such as games, quizzes, online learning and recapping previous lessons. This helps to develop memory and ensure knowledge, skills and understanding becomes part of the long-term memory.

Teachers have created a learning environment and lesson plans in Computing to ensure that children are not merely covering content but also achieving a depth to their learning. Our careful curriculum design and planning means that we build in opportunities for repetition and practise essential knowledge, skills and understanding across the curriculum. This enables them to use their knowledge, skills and understanding across all areas of the curriculum.

We use a ‘mastery’ approach in Computing. This ensures that pupils are able to revisit previous learning and help them to remember in the long term, content taught and how to integrate new knowledge into larger concepts. We want to move our pupils’ thinking to a higher level in order to develop a deep understanding rather than just acquiring new facts and knowledge.

Teachers use assessment well. They flexibly reshape the lesson, when they identify an error and then use questioning well to identify if it is a misconception or can be corrected easily. This is then tracked through our robust assessment system and can inform future teaching and learning to ensure progression.

Key computing vocabulary is identified and used appropriately. As oracy is an important part of our curriculum, we have made sure that in computing lessons there are chances to discuss, debate, present and to use the vocabulary in increasingly complex sentences.

Reading across the curriculum is a key feature of how we implement our intent. Reading is supported through Computing particularly with research skills and to enhance cultural capital e.g. learning about the importance of Tim Berners-Lee.

**Self - Successful learners** – we teach lessons that have chances for pupils to be creative, curious and to articulate their thinking and ideas.

**Confident individuals** – we teach lessons that provide pupils with some opportunities to work individually and together to solve problems and be creative so that they will enjoy Computing and will help them to love learning.

**Society - Responsible citizens** – we teach pupils to be resourceful learners who use their initiative, and make a positive contribution to society.

**Global -** Cultural capital is a key feature in our lessons. In each subject we teach pupils about a range of famous and not so famous people who have made a significant contribution to the world for example: Konrad Zuse.

**Impact**

At Bedford Drive, we want our children to know more and remember more. Therefore, we use formative and summative assessment information to inform planning and short-term interventions.

Our tracking system, Insight, allows staff to assess systematically what they children know as the unit of work progresses, which is then used to inform future planning. Staff can quickly see, which child or group of children need further support within their Computing unit of work. These formative assessments, then inform our summative assessment judgements, in each subject.

As part of our monitoring cycle, SLT and Subject Leaders monitor all subjects over the academic year. Monitoring includes: books looks, learning walks/lesson observations, pupil voice and/or parent voice. Our Governors are also part of this process. Through this rigorous monitoring cycle, we have the opportunity to see the impact of our curriculum upon the children.

We believe that through the Computing curriculum, we can impact on what a child is feeling about themselves so that they feel confident and competent; ready to tackle any challenge that they may face. Our curriculum ensures that every child receives an appropriate mix of academic and personal development and here at Bedford Drive, we place high priority on ensuring children’s physical and mental well-being needs are being met.

Our full and rich Computing curriculum, with its excellent range of experience ensures that every pupil at Bedford Drive Primary School makes good progress both academically and personally. Our unique curriculum ensures that every child is given the opportunity to shine and flourish.

We will see:

**Successful learners** – as children confidently and passionately talk to us about their Computing learning. Children who have a wide technical vocabulary. Computing skills taught will enable children to move to the next stage of their learning and knowledge will equip our children to be good citizens in a multi-cultural Britain.

**Confident individuals** – who enjoy coming into school and are invested with their computing learning, showing a resilient, can do attitude.

**Responsible citizens** – who confidently talk about a difference they can make for **themselves**; through learning about how to be a good learner and a kind friend; our **society** through projects such as ‘STEMTERPRISE’ where all children learn about designing, making and marketing a product in order to raise money to improve an aspect of local life; and **globally**, where all children learn about how computing has improved and shaped the world we live in today

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