**INTENT**

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| **Purpose of Study** |
| A high-quality Computing education 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. |
| **Intent from Subject** |
| The curriculum at Roby Park is designed to provide a broad and balanced education that meets the needs of all children. It provides opportunities for children to develop as independent, confident and successful learners, with high aspirations, who know how to make a positive contribution to their community and the wider society. The curriculum ensures that academic success, creativity and problem solving, reliability, responsibility and resilience, as well as physical development, well-being and mental health are key elements that support the development of the whole child and promote a positive attitude to learning. The curriculum celebrates the diversity and utilises the skills, knowledge and cultural wealth of the community while supporting the children’s spiritual, moral, social and cultural development, ensuring that children are well prepared for life in modern Britain.  The curriculum at Roby Park is designed to provide a broad and balanced education that meets the needs of all children. It provides opportunities for children to develop as independent, confident and successful learners, with high aspirations, who know how to make a positive contribution to their community and the wider society. The curriculum ensures that academic success, creativity and problem solving, reliability, responsibility and resilience, as well as physical development, well-being and mental health are key elements that support the development of the whole child and promote a positive attitude to learning. The curriculum celebrates the diversity and utilises the skills, knowledge and cultural wealth of the community while supporting the children’s spiritual, moral, social and cultural development, ensuring that children are well prepared for life in modern Britain.  Roby Park Primary School will provide a high-quality Computing education which will teach pupils key knowledge about how computers and computer systems work, and how they are designed and programmed. By the time pupils leave our school, they will have knowledge and skills in the three main areas of the Computing curriculum: computer science (programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully. We aim for our learners to be digitally literate and competent users of technology and through our computer science curriculum, to also develop creativity, resilience and critical thinking skills. A breadth of experience will enable them to develop an understanding of themselves as individuals within their community but also as members of a wider global community and as responsible digital citizens. |
| **Aims from National Curriculum** |
| The national curriculum for Computing aims to ensure that all pupils:   * Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation * Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems * Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems * Are responsible, competent, confident and creative users of information and communication technology. |

**IMPLEMENTATION**

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| **Teaching & Learning** |
| Computing is taught in discrete sessions using the Knowsley CLC Scheme of Work. Each unit is taught through a one day Computing workshop.  Across Key Stage 1 and Key Stage 2, our pupils will use technology to:   * Learn Programming by using programmable toys, program on screen, through animation, develop games (simple and interactive) and to develop simple mobile apps. * Develop their computational thinking through filming, exploring how computer games work, finding and correcting bugs in programs, creating interactive toys, cracking codes and developing project management skills. * Develop Computing creativity by illustrating an eBook, taking and editing digital images, shooting and editing videos, producing digital music, creating geometrical art and creating video and web copy for mobile phone apps. * Investigate computer networks through finding images using the Web, researching a topic, finding out how the school network operates, editing and writing code, creating an e-safety micro-site, and planning the creation of mobile apps. * Communicate and collaborate by producing a talking book, communicating clues, use email, produce wikis, create and write blog pages and design interfaces for apps. * Understand the need for productivity as a life skill through creating a card electronically, record bug hunt data, create surveys and analyse results, record and analyse weather data, create virtual spaces and research the app market.   Teacher’s planning is differentiated to meet the range of needs in each class. A wide range of teaching and learning styles are employed to ensure all pupils are sufficiently challenged. Pupils may be required to work individually, in pairs or in small groups according to the nature of the task. Different outcomes may be expected depending on the ability and needs of the individual child.  CPD for staff is provided by an external company, EduConnect, who team teach with each staff member on one unit per year. |
| **Cross Curricular Links** |
| Employing cross-curricular links motivates pupils and supports them to make connections and remember the steps they have been taught. Links with maths, science and technology are promoted through STEAM themed weeks and through extracurricular clubs. |
| **Inclusion** |
| Work in Computing is frequently group or paired work and independent activities should take place at available points for assessment purposes.  At Roby Park, all children have the right to access the computing curriculum. 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 computing curriculum for some pupils. We teach computing to all children, whatever their ability. Computing forms part of the national curriculum to provide a broad and balanced education for all children. Through the teaching of 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, computing can be used to support SEN children on a one to one basis where children receive additional support.  Additionally, as part of our approach to teaching and learning, we will use adapted resources wherever possible such as visual timetables, different coloured backgrounds and screen printouts. |
| **Equal Opportunities** |
| Roby Park will ensure that all children are provided with the same learning opportunities regardless of social class, gender, culture, race, disability or learning difficulties. As a result, we hope to enable all children to develop positive attitudes towards others. All pupils have equal access to computing and all staff members follow the equal opportunities policy. Resources for SEN children and children who are working at greater depth are made available to support and challenge appropriately. |
| **British Values** |
| Pupils at Roby Park Primary School demonstrate the following values whilst learning about Computing by:  **Democracy**   * Listening to everyone’s ideas in order to form a majority. * Working as part of a team and collaborating to use Computing devices effectively.   **Rule of Law**   * Developing knowledge of lawful Computing behaviours. * Demonstrating respect for Computing laws.   **Individual Liberty**   * Taking responsibility for our own Computing behaviours. * Challenging stereotypes and bias. * Exercising rights and personal freedoms safely through knowledge of E-safety.   **Respect and Tolerance**   * Showing respect for other cultures when undertaking research using Computing devices. * Providing opportunities for pupils of all backgrounds to achieve in Computing. |
| **Enrichment Opportunities** |
| At Roby Park, we believe that children learn best when they are engaged, inspired and motivated to learn. We offer a wide range of experiences and challenges that enrich our core curriculum. This allows our pupils to learn outside the classroom and develop the skills for the world beyond the primary education. Below are some examples of how we achieve this through:   * Theme weeks – STEAM week, World Religion Week, Growing Up Week * WOW days at the entry and exit points of topics – art gallery exhibitions, workshops, dress up, food tasting * Celebration afternoons to celebrate and exhibit our learning with the wider community * Invite visitor’s in – local artists, historians * Educational visits, workshops and residential trips – art galleries and museums * Fundraising and awareness days – Harvest/food banks, Macmillan Coffee Mornings, Yellow Day, Sports Relief, Comic Relief, CiN, Cycle4Sepsis, Christmas Jumper Day * Enterprise week – Y5/6 Fiver Challenge * ‘Keep safe’ curriculum – Bikeability, Friendship Week, Road Safety, Bonfire Night safety, Internet Safety, Gang Awareness, Say No to Knives workshops * Wider opportunities – Languages Day, Musical Instruments, Extra-curricular club offer * Sporting events – inter and intra competitions with the collaborative schools and KSSP * Collaborative events with local schools * Festivals, celebrations and performances – Musical concerts, Peace Proms, Pantomimes, Christmas productions, Easter celebrations, class assemblies   Opportunity for enrichment within the Computing curriculum is planned for using our external provider who is able to deliver elements of the curriculum with the most up to date hardware.  STEAM extra-curricular clubs will be provided for Key Stage 1 and Key Stage 2 throughout the year.  Cultural Capital events will be planned for throughout the year including workshops, visitors and themed days. |
| **Community Links** |
| Parental involvement is highly encouraged, especially if there is a specialist subject being taught within a class. Workshop mornings have been held previously and parents can be encouraged to learn things such as coding along with their children at home.  We will hold events throughout the academic year to support parents and members of the school community in developing their own computing abilities. |
| **Wellbeing** |
| At Roby Park, we are committed to supporting the positive mental health and wellbeing of our whole school community (children, staff, parents and carers). We recognise that mental health and emotional wellbeing is just as important to our lives as our physical health.  At Roby Park, we endeavour to ensure that children are able to manage times of change and stress. We ensure that children learn about what they can do to maintain positive mental health, what affects their mental health, how they can help reduce the stigma surrounding mental health issues, and where they can go if they need help and support. The promotion of positive wellbeing is woven throughout our curriculum. |

**IMPACT**

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| **Impact** |
| The innovative practice across the school provides a strong foundation and opportunities for children to collaborate and develop social skills both indoors and out. This curriculum design ensures that the needs of individual and small groups of children can be met within the environment of high quality first wave teaching, supported by targeted, proven interventions where appropriate. In this way it can be seen to impact in a very positive way on children’s outcomes.  Enjoyment of the curriculum promotes achievement, confidence and good behaviour. Children feel safe to try new things. High quality visits and visitors to the school enhance the curriculum and provide opportunities for writing for a purpose.  Children have opportunities to share their learning with each other, their parents and carers and other learners through school-based and external exhibitions, performances, competitions and events involving other schools. Developing their independence and motivation as learners and their sense of responsibility as future citizens is at the heart of all our teaching and learning**.** |
| **Assessment** |
| Staff are provided with the curriculum framework from the Knowsley CLC Scheme of work which ensures that pupils across all key stages are provided with opportunities to achieve end of key stage expectations. This framework includes a clear progression of skills which ensures that pupils are making progress. Staff can therefore use the progression documents to ensure that any gaps in pupils learning are targeted and filled.  Half termly assessments of objectives taught will be updated on Insight for foundation subjects. Steps that children are working at will be recorded at the end of each term. Teachers will record children’s performance against the age related objectives for the curriculum and decide whether children are working towards, at or above age related expectations. Assessments are used to inform planning and close gaps, in order to accelerate progress. Subject leaders will analyse termly data and address areas for curriculum development.  Pupils’ work is recorded on Seesaw where pupils are able to self and peer assess. |
| **Monitoring and Evaluation** |
| Monitoring standards of teaching and learning within Computing is the primary responsibility of the Computing Leader. Monitoring termly enables the subject leader to gain an overview of Computing 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.  Subject leads play an active role in the school self-evaluation cycle and throughout the year they will participate in:   * Ensure there is clear progression throughout the school * Creation of termly data reports * Reporting to SLT & Governors * Pupil voice * Work samples * Learning exploration blinks * Developing cultural capital opportunities and events * Identify any training needs and offer extra support and guidance to staff when it is appropriate * Ensure that there are suitable resources to help with the teaching and learning of their subject |
| **Review Date** |
| **Policy Agreed:** July 2020  **Policy Review:** July 2021 |

**Appendices**

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| **Computing Curriculum Map** | **Computing Progression Map** |
| [**Roby Park Computing Curriculum Map**](https://drive.google.com/file/d/1ozSFv4unTBEQPBaeUV0cffrGXq0k1kC2/view?usp=sharing) | [**Roby Park Computing Progression Map**](https://drive.google.com/file/d/1hE-0Xz6xTnqMPENH-guHkMyW3MtN92LA/view?usp=sharing) |

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| **Computing Resource List** | **Computing Cultural Capital Events** |
| [**DT Resource List**](https://drive.google.com/file/d/1DFAgXmE-yCqPjGjFZ4wAtX1chKty9LqN/view?usp=sharing) | [**Roby Park Cultural Capital Enhancement Events**](https://drive.google.com/file/d/1nCXox1DVwIC9kT7r0N5ziYOvMiFfhk2U/view?usp=sharing) |

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| **Subject Lead Monitoring Schedule** |
| **[Annual Subject Leader Monitoring Cycle](https://drive.google.com/file/d/1rNFQAjuGBkGk-GE4Lrixdd4OF6sK3fOO/view?usp=sharing)** |

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| **Computing Knowledge Organisers….Coming Soon!** | | | |
| **Year 1** |  |  |  |
| **Year 2** |  |  |  |
| **Year 3** |  |  |  |
| **Year 4** |  |  |  |
| **Year 5** |  |  |  |
| **Year 6** |  |  |  |