

Computing Rationale

Lister Infant Computing Rationale

“Respect for all, Learners for Life”

Our school motto is the motivation behind our school and what makes our school curriculum unique. It is our core belief that entwines and leads the curriculum at our school.

Vision

To create a safe, happy, caring and inclusive school where children, staff, parents and visitors feel valued, are encouraged to succeed, are treated with respect, love learning and actively work together to be the best they can be.

Intent

The Staff and Governors of Lister Infant School aim to offer a stimulating curriculum and environment that allows all pupils to fulfil their potential regardless of race, creed, gender or ability and to develop a sense of their own worth and respect for others. We aim to support our pupils in becoming independent, resilient, lifelong learners with a positive attitude to school and life.

The computing curriculum promotes curiosity and a love and thirst for learning. It is ambitious and empowers our children to become independent and resilient – like all curriculum areas in our school.

At our school we want our children to love computing. We want to show pupils the links between knowledge, skills and real life employment opportunities and have no limits to what their ambitions are. We want to equip them with not only the minimum statutory requirements of the computing National Curriculum but to prepare them for the opportunities, responsibilities and experiences of later life. It is a subject that not only stands alone but is woven and an integral part of all curriculum learning.

We enrich their time in our school with memorable, unforgettable experiences and provide opportunities that may be normally out of reach – we believe that this will pique our pupil's interests and passions. For example, this year we have teamed up with specialist teachers from Hi-Impact consultancy in order to deliver engaging and exciting sessions based around computing. The children will enjoy a range of fantastic, hands on sessions and will have the chance to work with a variety of equipment to tackle computing based challenges by participating in some fabulous practical activities.

We want our children to use the vibrancy of our city to learn from other cultures, respect diversity, co-operate with one another and appreciate what they have. We achieve this by providing a strong SMSC curriculum, with British Values and our core values placed at the heart of everything we do. This often feeds into the computing curriculum. For example, in the spring term the whole school will celebrate ‘Safer Internet Day’ to reiterate the

importance of staying safe online. A range of Safer Internet Day activities have been planned for such as debating key online safety issues, online safety oracy tasks and designing their very own posters to display and promote online safety.

Our computing curriculum has been carefully crafted so that our children develop their digital capital. We want our children to leave Lister Infants with cherished memories and the ability to embrace the opportunities they are presented with in relation to computing and IT.

Key drivers:

- To provide an exciting and engaging Computing curriculum that is accessible to all pupils.
- To provide a culturally rich Computing curriculum, relevant to our children so they have breadth of experience.
- To ensure there is breadth, depth and progression in teaching and learning across the Computing curriculum, within and across year groups to increase pupil's knowledge, skills and understanding.
- To have high expectations of all our pupils by providing challenge.
- To be responsible, competent, confident and creative users of information and communication technology.
- To know how to keep themselves safe whilst using technology and on the internet and be able to minimise risk to themselves and others.
- To encourage our children to persevere and aspire to be their best.
- To equip our pupils with the capability to use technology throughout their lives.
- To expose our children to a multitude of enrichment through trips, visitors, enhancements, themed weeks and days to inspire our children and switch them on to learning and achieving.

Implementation

During the academic year of Autumn 2020 a complete audit of the computing curriculum was conducted. On the back of the findings from this audit, the computing curriculum has been carefully built and the learning opportunities and key milestones for each year group crafted to ensure progression and repetition in terms of embedding key learning, knowledge and skills.

We focus our teaching on the main areas of computing- Computer Science, Information Technology, Digital Literacy and Online Safety. These areas are revisited in a variety of different ways term on term where pupils are given the opportunity to progressively build their skills and knowledge. We believe that computing is taught best when the main areas are taught little and often every term rather than completing stand-alone units that focus on one area of computing for an entire half term. We believe that this way of teaching allows children to more readily use their prior knowledge and understanding to help them to further

develop their computing skills and also gives them opportunities to consider where their learning will go next.

For example, in Year 1 in order to develop the children's skills in Control and Programming across the year the children begin by using an online coding program in Autumn Term. They then move on to using a variety of coding apps during the Spring term before moving on to use Beebots and a more complex app to help them to develop skills in sequencing and debugging directional instructions for an online character in the Summer Term. As well as this the children also access 'Code Studio' each half term. Which is a progressive web program which helps to build pupils programming and coding skills year upon year.

In addition to this we work alongside computing experts from Hi-Impact consultancy to provide specialist computing teaching to pupils in across the school and frequently revisit online safety through explicit teaching, themed days and national celebrations such as 'Online Safety Awareness Week'.

Computing subject specific Key Milestones assigned to each year group have been developed and shared with all staff. These characteristics underpin all work in computing and form a focal point for display areas and provide a common subject specific vocabulary for staff and pupils. This also allows for Key skills to be built upon each year and for progression to be demonstrated for each year group.

Computer science is taught explicitly. This helps to ensure sufficient time is allocated to computing and that computing subject matter can be revisited frequently. Computing is also taught in a cross-curricular manner whenever possible and teachers should identify this clearly in their planning. We believe that by crafting our curriculum this way, we improve the potential for our children to retain what they have been taught, to alter their long-term memory and thus improve the rates of progress they make.

As part of CPD and during specialised termly workshops staff work alongside curriculum consultants from Hi-Impact to improve their knowledge and understanding of the new proposed curriculum. We have a staff base who are securing their subject knowledge and are confident to deliver high-quality computing lessons to their pupils that build upon prior teaching and prepare them for the next stages of their learning.

Our Computing is supplemented by the Purple Mash scheme of work. Through our Purple Mash subscription our teachers can deliver thematic, cross curricular lessons that also provides flexibility. Purple Mash has an online portal of age-appropriate software, games and activities as well as topic materials to support children's learning in all key stages. Pupils at Lister Infants are fully encouraged to engage with ICT and technology outside of school. Each teacher and pupil at Lister has their own unique Purple Mash login and password. Computing work can be stored and saved using pupil log in details and accessed at home to embed their learning and deepen their knowledge, skills and understanding.

Computing teaching at Lister Infants is practical and engaging and a variety of teaching approaches and activities are provided based on teacher judgement and pupil ability. All classrooms have touch screen interactive boards to enhance learning. Key Stage 1 classrooms have computers, iPads and tablets to support learning across the curriculum. EYFS have computers, tablets and a range of technological provision to develop their knowledge and skills. We also have a wide range of resources to support our computing teaching including but not limited to, computers, iPads, iPods, tablets a range of programmable equipment, cameras/video recorders, QR codes and green screen equipment. Pupils may use technology independently, in pairs, alongside a TA or in a group with the teacher. Teachers and pupils are also aware of the importance of health and safety and pupils are always supervised when using technology and accessing the internet.

At Lister Infants we provide a variety of opportunities for computing learning inside and outside the classroom. Computing and safeguarding go hand in hand and at Lister we provide a huge focus on internet safety inside and outside of the classroom. Additional to all pupils studying an online safety unit through their computing lessons, every year we also take part in National Internet Safety Day in February. The Computing co-ordinator alongside class teachers will plan additional internet safety lessons and activities to take part in following a specific yearly theme. We also arrange for parent internet safety workshops. Furthermore, all teaching staff have received Online Safety training and will utilise online materials to encourage discussions and support issues as they arise in and out of the classroom and promote the materials to parents/carers. Finally, at Lister we actively encourage parent partnership within the computing curriculum and outside of school. Parents are made aware of online safety issues through school website links, school and class Twitter pages and newsletters. We also provide our families with a regular online safety magazine (Digital parenting produced by Vodafone).

Family Links

Parents have a considerable contribution to make to a child's success in school. They are strongly encouraged to be fully involved in their child's education. Parents are invited to review their children's school books (during open afternoons and parent evenings) and to support their child in responding to their teacher's feedback. Parent comments are added to share their view on progress, enjoyment and attainment. Parents at Lister Infants are also encouraged to support the implementation of ICT and computing where possible by encouraging use of ICT and computing skills at home during homework tasks through topics. We also encourage the home use of Seesaw, Purple Mash, Active Learn to support pupil's reading and our Maths Times Tables Rock Stars. We keep our families updated with links and events, communicated through the school newsletter, the school website and Twitter feed. This is also a way we can share lessons and activities with our families and celebrate the school successes.

Inclusion

Our school is an inclusive school and in each class there are children with a range of additional needs including ADHD, Dyslexia, Speech and Language, ASD and moderate learning difficulties. Our school recognises that children, with these different needs, benefit from an adapted lesson to allow all children to be successful and access activities at a level appropriate to their skills and needs. Resources are used to cater to the needs of individuals and support provided by staff as necessary. Any pupils with special educational needs are identified and teachers ensure lessons are catered to suit to every pupil's needs through adapting tasks, using resources and staff as necessary. We want all our pupils to apply what they know with increasing fluency and independence.

Impact

Our Computing Curriculum is high quality, well thought out and is planned to demonstrate progression and build on and embed current skills. The assessment milestones for each phase have been carefully mapped out and further broken down for each year group. This means that skills in computing are progressive and build year on year.

We focus on progression of knowledge, understanding and skills in the different computational components and alike other subjects discreet vocabulary progression also form part of the subject.

We expect all pupils to make progress which we see as knowing more and remembering more of the intended curriculum over time and we hold ambitious endpoints for our children. After the implementation of this robust computing curriculum, the majority of our pupils leave being digitally literate and able to join the rest of the world on its digital platform. They will be equipped, not only with the skills and knowledge to use technology effectively and for their own benefit, but more importantly – respectfully and safely. The biggest impact is they are ready for the digital world and that they are also aware of how to keep themselves safe online.

As children become more confident in their abilities in Computing, they will become more independent and key life skills such as problem-solving, logical thinking and self-evaluation become second nature.

Assessment is key to driving pupil learning forwards and to ensure we cater to every child's needs by identifying the next steps in their learning journey. Feedback contributes to every child achieving the progress and attainment they are capable of.

During the Foundation Stage and Key Stage 1 teachers complete ongoing informal assessment to support each child's learning and development and identify the next steps in their learning. Opportunities include teacher observation, questioning, child discussions and

oral feedback against the learning objective and assessment criteria for the lesson. Teachers share these next steps with pupils to support children in moving their learning on.

Children are assessed by their class teacher at the end of each term and the data is logged onto the school system mid-year and end of year and used by the Computing Lead, Assessment Coordinator and Senior Management team who track pupil progress. Children not meeting the expected levels are targeted and will receive additional support through precision teaching or continuous provision support to strive towards meeting the expected levels.

The assessment milestones for each phase have been carefully mapped out and further broken down for each year group. This means that skills in Computing are progressive and build year on year. Our staff use Computing milestones when assessing the children at the end of each term and support those who are not working at the expected standard.

At the end of each year teachers complete summative assessments against EYFS and National Curriculum level descriptors. Teachers must make a judgement as to whether the child's learning and development is best described by:

- the description of the level of development expected at the end of the year (expected);
 - not yet at the level of development expected at the end of the year (emerging);
 - or beyond the level of development expected at the end of the year (exceeding).
- (See assessment policy for further details)

The school implements a termly programme of prioritised monitoring, review and evaluation which includes:

- Book scrutiny (where appropriate)
- Lesson Observations where appropriate
- Pupil Voice
- Learning walks

The coordinator feeds back to the Senior Leadership Team each term by completing a termly report monitoring data for all children including specific groups. As a result of analysing data, actions are shared with staff and monitored by the co-ordinator. Additionally a learning walk takes place where lessons, books and pupil voice are triangulated to ensure high quality learning is happening.

At the end of each year, a subject action plan is devised, monitored throughout the year and reviewed at the end of the following year.

We ensure all staff receive regular CPD in order to provide the highest quality of education to our pupils. Staff who have attended CPD training feedback to other members of staff at

staff meetings to ensure good practice is implemented by all. We also invite experts into school to lead whole staff training and the subject lead attends meetings throughout the year with the Local Authority.