Crich Junior School

Computing

Crich Junior School

Our Curriculum

Our curriculum is designed using and extending the National Curriculum and conforms to the Equality Act and SEND regulations 2014, which ensures accessibility and inclusion to all children.

At Crich Junior School, our curriculum is designed to build on children's prior learning, provide meaningful and memorable learning experiences where our children are taught to be independent, confident and resilient learners.

Our curriculum has been designed to ensure that all children leave us with a wide body of knowledge, and the skills needed to be successful, lifelong learners with a real curiosity about the world around them.

The curriculum encompasses all the planned learning that is sequenced to promote learning, personal growth and development. Whilst fully including all statutory elements of the National Curriculum, our curriculum also gives our children the chance to explore a variety of additional 'enrichment' experiences, learning and opportunities to ensure all our children thrive and find their passion.

Our children are at the heart of every aspect of our curriculum. Developing the children's ability to learn more, know more and remember more is underpinned by quality first teaching of a broad body of knowledge and vocabulary. We provide engaging opportunities where children are immersed in independent problem solving techniques. We are committed to developing the whole child. Children have a strong awareness of their local community, their role within it and the value they bring to it. Children leave our school with a sense of belonging to an inclusive tightly-knit community where they have the confidence, knowledge and skills to make decisions, self-evaluate, and feel valued.

Our curriculum is based on the following key principles:

- A clear, shared vision of the knowledge and skills our children need to take advantage of future opportunities, responsibilities and experiences of later life.
- Commitment to a rich, varied, academic, practical problem-solving curriculum experience, which is inclusive for all our children.
- A curriculum that reflects the needs of the local community context.
- Planning and sequencing. Knowledge builds on previous learning.

Our Unique Intent:

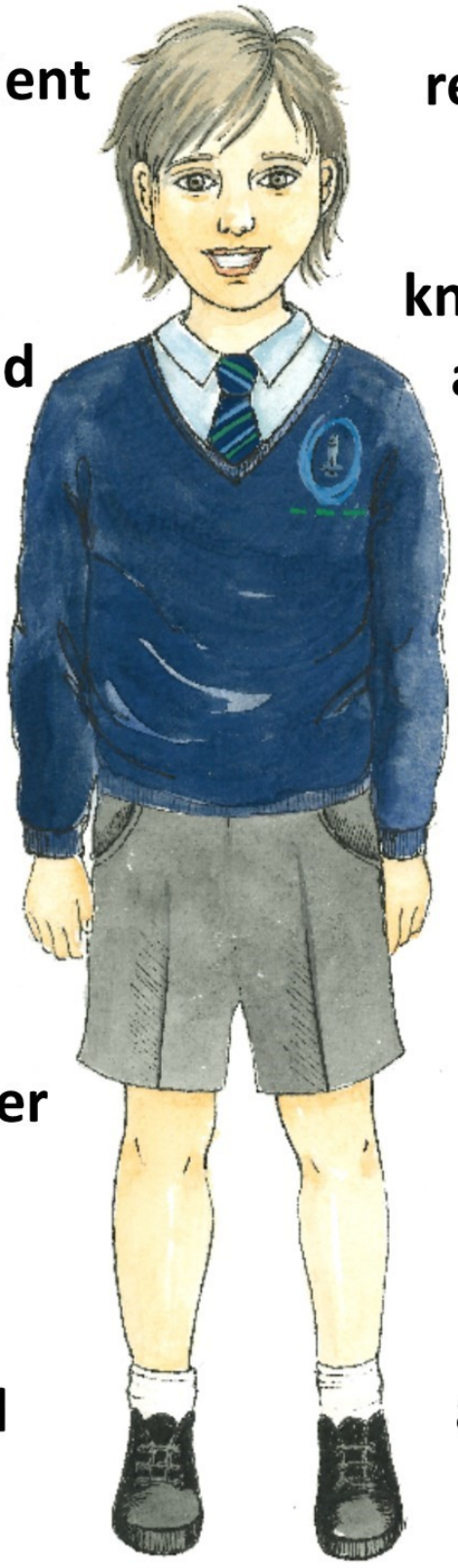
•Practical Problem Solving rich curriculum

•Bushcraft, gardening, cookery, STEM technologies, local community projects etc

•Develop self worth

•Timetable designed to enable creative curriculum.

I want to be:



an independent learner

resilient

knowledgeable and curious

respectful and tolerant

confident

happy

creative

a team player

kind

healthy and active

a problem solver

Crich Junior School Computing

Introduction

Our vision for Computing at Crich Junior School is for all our children to develop an understanding about the importance of computing in our day-to-day lives so that they can live in an ever-changing digital world. We want all our children to develop the knowledge and skills needed to safely live in a life where technology is continually changing. Computing is an essential part of the curriculum, giving children the education needed to allow them to use technology positively, responsibly and safely. By studying Computing, children will hopefully develop positive and tolerant attitudes when using the internet. Developing the skills needed to be able to code is important as many jobs involve this and children are becoming increasingly interested in this area. Children are going to come across many problems in life using computers, whether that be how to do something on the computer or when using social media. Therefore, it is very important that children are given opportunities to develop these problem solving skills when in school. Through the teaching of Computing, we strive to provide children with the knowledge of what to do if problems arise when gaming or using social media and provide them with sensible strategies for different situations. The children have a 2 hour computing lesson every 3 weeks where they are taught carefully planned and sequenced lessons, building on prior learning and developing appropriate vocabulary. We believe that teaching Computing will broaden children's creativity, resilience, confidence and problem solving skills and it will hopefully help children develop positive attitudes towards other people when online.

Aims

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

Online Safety

Online safety is taught throughout our computing curriculum and links to our PSHE lessons and assemblies. We hope to enable our children to have the right to enjoy childhood online and be safe on online spaces that are appropriate for their age. As they grow older, this will support them making positive contributions online and have an awareness of both theirs and other people's presence online. Every year we take part in 'Safer Internet Day' to increase awareness of the importance of online safety across our school community. Our planning follows 'The Education for a Connected World 2020 Framework.' We use Project Evolve Resources to support our planning. (To begin in September 2024)

Our planning and teaching of online safety covers 8 key areas:

- Self Image and Identity
- Online Relationships
- Online Reputation
- Online Bullying
- Managing Online Information
- Health, Well-being and Lifestyle
- Privacy and Security
- Copyright and Ownership

Crich Junior School — Computing

Intent

At Crich Junior School, we understand the immense value that technology plays in the day-to day life of our children. Ours aims are to fulfil the National Curriculum requirements for computing whilst also providing the children with the knowledge and skills that will equip them for an ever-changing digital world. Technology is everywhere and will play a pivotal part in children's lives. Therefore, our aim is to model and educate our pupils on how to use technology positively, responsibly and safely, at the same time as developing the key vocabulary for the different areas of computing. All children are given the same opportunities to allow them all to make progress while at our school and are provided with carefully planned/ sequenced lessons which allows children to build on prior learning. Lessons are adapted appropriately to ensure they reflect local and national issues if they arise. We want our pupils to be fluent with a range of technology tools and hope that by year 6, the children will have become independent and confident in using a variety of ICT tools. We also want them to develop creativity, resilience and problem solving skills and it is our intention that children have every opportunity available to allow them to do this.

Implementation

We teach all aspects of the National Curriculum, supported by the 'Teach Computing' scheme of work and a clear skills progression document. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children. 'Teach Computing' provides a spiral curriculum where key skills and concepts are revisited and built on over time. Through the sequence of lessons, we intend to inspire pupils to develop a love of the digital world, see its place in their future and teach them the knowledge and skills needed to become confident, independent, safe users of the internet. The National Curriculum can be broken down into 3 strands: Computer Science (Coding and Computer Networks), Information Technology (Multimedia and Handling Data) and Digital Literacy (Online Safety). Our curriculum ensures that all 3 of these strands are taught and revisited throughout years 3 to 6. This ensures the learning is embedded, skills are successfully developed and key vocabulary is understood. Online safety education is embedded into our computing lessons, sometimes full stand alone lessons, sometimes a recap alongside another computing aspect. Our online safety lessons are supported by Project Evolve materials which enhance the children's learning. It is further consolidated by elements of our PSHE curriculum and in assemblies. During our half termly Metacognition days, computing is often one of the activities for children to choose, giving children another chance to practise their skills.

The children are provided with a Knowledge Organisor for each topic which includes prior learning, key knowledge/ skills and key vocabulary, as well as hints and tips to help them in their lessons. The children have access to a wide range of good quality resources, including a large number of laptops, IPads and microbits. The children are encouraged to use a variety of learning programmes and apps like TTRockstars and Edshed to further enhance their learning.

Impact

The impact of computing will be shown through the enjoyment of the lessons across the school. Teachers will have high expectations and evidence will be presented in a variety of forms - saved on the school server in the individual child's folder, work printed out or photos of the children working as evidence. Children will use digital and technological vocabulary accurately, alongside a progression in their technical skills. Children will see the digital world as part of their world, extending beyond school, and understand that they have choices to make. They will be confident, respectful, resilient digital citizens going on to lead happy and healthy digital lives. Children will be confident, independent users of technology and will be able to solve problems they come across. They will be able to use the internet safely and be equipped with a secure knowledge and wide range of skills to be able to live and work in an ever changing digital world. Children will be prepared for both future education and jobs, with a bank of computing skills and knowledge. They will be able to use their computational thinking and apply this to everyday lives. To measure this impact, we have discussions about the learning at the beginning, end and throughout the lessons. We recap what has previously been learnt to ensure this knowledge is embedded and developed. Post it notes and quizzes are used as evidence, alongside the work in their books, on the computer and on display. The 'Teach Computing' scheme of work has summative and rubric assessments that are sometimes used to measure progress.

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Computing Curriculum Planning

At Crich Junior School, Computing is taught in classes, on a three weekly cycle, through a two year rolling programme, covering the National Curriculum expectations.

Progress, Achievement & Assessment

Children are monitored on a regular basis to check progress and all children are encouraged to take responsibility for their own learning. Children are encouraged to make personal assessments of their own work, through evaluating activities and identifying what could be done to improve it. With coding, they need to be continually checking their work to ensure their coding works. If it doesn't, they need to try and decide what to do to allow it to work. We also look back at prior learning with questioning, quizzes, and post-it notes on a regular basis as evidence to see what they can remember. Children and adults are also able to recognise the progress being made by regular discussions with the teachers and evidence in their books, on the computer and at times, on display.

Assessment is an integral part of the teaching process. It is used to inform planning and to facilitate differentiation. The assessment of children's work is on-going to ensure that understanding is being achieved and that progress is being made. Feedback is given to the children as soon as possible—this is mostly in verbal form due to the nature of the lesson. The 'Teach Computing' scheme of work has summative and rubric assessments that are sometimes used to measure progress.

Spiritual, Moral, Social and Cultural Development

Spiritual development: Students look at how computing can bring rapid benefits to our lives. Students are also exposed to the limitations and abuse of the internet where they question and justify their own and others' beliefs. Within discussions in school, it is hoped that children develop an appreciation for telling the truth in situations they may come across. We also hope that children show respect for themselves and others while using the internet, being kind and respectful to others is hugely important. We hope to promote self-esteem through the presentation of the children's work to others.

Moral development: Children are given opportunities to explore the difference between right and wrong when using the internet and they are given many opportunities to discuss the implications to certain behaviours online and they are taught to take responsibility for their actions. Children are given opportunities to recognise the needs and interests of others as well as themselves and develop characteristics such as truthfulness, kindness and unselfishness. The whole school has a 'Computing Code of Conduct' that they are expected to follow. They are taught the importance of Internet and online safety and this is continually referred to throughout the year.

Social development: Children complete a lot of their work in pairs within lessons. This allows children to work with each other to help solve problems they may come across, particularly when coding. Children are encouraged to take turns so that all children get a chance to practise and develop the skills needed. Students will need to work with a variety of people when they go into the world of work and these exercises will develop their social skills. Also, students are required to understand about social media and the advantages these sites have, as well as the numerous problems that may arise from it, such as cyber bullying. By highlighting and teaching ways to stay safe when using online services and social media, it prepares the children for the challenges of living and learning in a technologically enriched increasingly interconnected world and it will hopefully give them a bank of good strategies when working online, e.g. what to do if someone asks for personal information.

Cultural development: Children are encouraged to sensibly use digital technology in the classroom and homework situations. They are encouraged to use of a variety of websites to find information. They are also encouraged to think about how the development of technology has impacted different cultures and backgrounds in different ways. More developed countries are able to keep pace with the developments in technology whilst less developed ones can't. Students learn about how this can impact on the people in the country and form larger skills gaps. The children are given the opportunity to learn about different cultures through the use of the Internet and online platforms – such as Newsround. Students explore how developments in technology have changed our culture, particularly the rise in social networking sites and the ability to communicate instantly.