Sholing Junior School

'Achieving Together'

Design & Technology

Pippa Carden Noad

Primary Design Technology Curriculum 2014:

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Intent Statement

At Sholing Junior School, we aim for DT to develop children's critical thinking, evaluation skills, imagination, creativity, innovation and resilience. We would like children to leave the school as pro-active problem-solvers who develop ideas and solutions for real-life practical challenges. Children will develop their ability to design and make products using skills that will often link to many other subjects including English, mathematics, science, art, computing and history. Children are encouraged to learn from and adapt other people's designs and work individually or as part of a team with ever-improving accuracy, reflecting critically on their practice and outcomes.

"Technology makes possibilities. Design makes solutions."

John Maeda (Designer and Technologist)

Our Aims

The D&T curriculum - at Sholing Junior School - aims to ensure that all pupils:
- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

At Sholing Junior School, our Design Technology curriculum is composed of four parts:
Children are taught to:

Design
• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer-aided design

Make
• select from and use an increasingly wide range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) accurately and safely
• select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate
• investigate and analyse a range of existing products
• evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
• understand how key events and individuals in design and technology have helped shape the world

Technical knowledge
• apply their understanding of how to strengthen, stiffen and reinforce more complex structures
• understand and use mechanical systems in their products
• understand and use electrical systems in their products
• apply their understanding of computing to program, monitor and control their products

"Design is not just what it looks like and feels like. Design is how it works"
Steve Jobs (Co-Founder of Apple)

Our Strategies

At Sholing Junior School, we seek to involve a wide range of strategies to meet the individual needs of our pupils in DT by providing:

Activities that support inclusion. All learners will have the opportunity to develop their DT capability. Gifted and able learners to be provided with valuable extension opportunities that evaluate the use of DT for different purposes.

Key skills and key knowledge for Design and Technology have been mapped across the school to ensure progression between year groups. This also ensures that there is a context for the children's work in Design and Technology; that they learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study, building on prior knowledge and skills.

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in the process of designing and making. The children work with a range of relevant contexts (for example home, school, leisure, culture, enterprise, industry and the wider environment). The children's experience of Design and Technology in real-life contexts is also enhanced wherever possible through group work projects with outside agencies or educational visits, for example to Paulton's Park to investigate the inner workings of theme park rides. Design and Technology is taught as 'blocked' lessons where appropriate, with year groups covering two or three topics per year

Our DT Subject Leader

Design Technology at Sholing is led by Pippa Carden-Noad. She will:

- Seek to enthuse pupils and staff about DT and promote high standards of achievement and high quality provision.
- Advise and support staff in the planning, delivery and assessment of DT.
- Manage and develop all resources for DT.
- Monitor and evaluate DT throughout the school, ensuring continuity and progression.
- Keep up to date with current developments by attending courses, liaising with colleagues from other schools, and use this as a basis for staff development activities.
- Provide opportunities for our gifted and talented pupils to participate in DT activities both in and out of school.
- Continue to promote and raise the profile of DT throughout the school.

Assessment, Record Keeping and Reporting: In order to ensure continuity, progression and high standards of achievement in Computing, assessment for every child will include:

- Ongoing formative assessment through observations and dialogue with children – to form basis for individual targets / 'next steps'
- A summative assessment of each child's progress in DT over the year will be provided in their end of year report.
- Summative assessments of each child at the end of each unit to ensure that planning is accessible and accurately pitched.
- A portfolio of work will be collated to see the progress of DT over the time in school and ensure units are completed accurately.

SEN, Pupil premium & Greater depth in Design Technology at SJS

At Sholing Junior School, we aim to:
- provide any additional resources to support children with SEN to ensure an inclusive approach to the subject;
- support and extend children through the use of technologies and adult support;
- deepen children's knowledge by asking non-routine questions within the topic of focus and providing high-level questioning for the children to explore;
- set tasks which will allow children to work at a greater depth to their peers with greater independence and ownership of tasks.

Our Success Criteria: We expect 90% of our children to attain standards in line with or above those stated in the NC end of key stage age related expectations