

Design Technology



Intent



At Southway, it is our intention to provide children with a real-life purpose and context for learning in all subject areas, including in Design Technology (D.T.) lessons. As an inspiring and practical subject, we intend to prepare children to deal with an ever-changing technological world, encouraging them to become creative and **resilient** problem solvers, working both independently and with **kindness** and **respect** as members of a **team**.

We teach children to be inspired by real world opportunities and relevant problems, identifying needs and developing a range of ideas and solutions in a variety of contexts. By researching past and present technologies, where possible meeting real industry workers and applying knowledge learnt across other areas of the curriculum, children build their confidence, resilience, practical and analytical skills. Furthermore, they learn to overcome challenges and improve designs and products, all the while finding motivation and meaning for their learning. They will be on the way to becoming risk takers and innovators and will have used a range of tools, resources and materials, including the use of IT, to create effectively constructed and aesthetically pleasing results.

Food technology is also a big focus of our D.T. curriculum and we have a purpose-built kitchen in our DaVinci room. In all lessons, the children are encouraged to cook nutritious food from scratch, setting them up for a healthy future beyond the classroom.

Implementation



Design Technology (D.T.), as a discipline, aligns with the school's 'iii' pedagogical approach. Our school values are also intertwined within our D.T. lessons – children will develop their levels of **resilience, teamwork, independence** and **respect**. Lessons will follow the **design, make** and **evaluate** cycle. Each stage will be rooted in technical knowledge.

The design process should be rooted in an enquiry-based, real life, relevant contexts to give meaning to learning. D.T. is promoted through our school with a range of stimuli, including enrichment days, cross-curricular learning and discrete lessons interwoven in each year group's curriculum offer. Children will sometimes work independently and/or work as part of a group. To evaluate, children should be able to evaluate their own products against a design criteria.

Each of these steps should be rooted in technical knowledge and vocabulary. D.T. will be taught to a high standard where each of the stages should be given equal weight.

A wide range of resources will be made available for the children to use, including a dedicated D.T. room called the DaVinci. Opportunities will be made available for the children to use woodwork, textiles, kitchen equipment, technology, LEGO and iPads as part of our curriculum. By the time children reach year 6, they would have had experience of food tech, textiles, design and construction; they should be confidently performing everyday tasks and applying their knowledge, understanding and an increased level of skills as they progress through the school.

Impact

The school's long term, medium term and short term planning, followed by all teaching staff, is informed by Southway's progression of key skills document for D&T. The document has been informed and built upon the Design and Technology Association (<https://www.data.org.uk>)'s recommendations – the UK's leading D&T organisation for schools. The progression of skills ensures children revisit, revise and learn progressive knowledge, skills and understanding.

Physical products and photos will be made, shared and celebrated with the wider school community – through open afternoons, newsletters and/or social media.

There might be evidence in each of these stages in books, which should demonstrate clear progression across the key stages as they are passed up through each year group.

For food and nutrition units, booklets may evidence the process and high standards.



D&T the design and technology association

Southway Junior School

DESIGN TECHNOLOGY (D.T.) Curriculum

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 other people's 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 education, pupils 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.

KEY STAGE 3 Curriculum

Through a variety of **creative and practical** activities, pupils should be taught the knowledge, understanding and skills needed to **engage in an iterative process of designing and making**. They should work in a range of relevant contexts (for example, the home, school, leisure, culture, enterprise, industry and the wider environment).

Curriculum Progression

DESIGN AND TECHNOLOGY (D.T.) Curriculum			
Foci	Across the curriculum (All year groups)	Year 3 & Year 4 (Lower Key Stage 2)	Year 5 & Year 6 (Upper Key Stage 2)
Understanding contexts, users and purposes	Designing: Work confidently within a range of contexts, such as the home, school, industry and the wider environment Describe the purpose of their products and explain how the design features of their products will appeal to intended users	Gather information about the needs and wants of particular individuals and groups Develop their own design criteria and use these to inform their ideas	Carry out research to identify the needs, wants, preferences and values of particular individuals and groups
Generating, developing, modelling and communicating ideas	Designing: Explain how particular parts of their products work Share and clarify ideas through discussion Model their ideas using prototypes and pattern pieces Use annotated sketches, cross-sectional drawings and exploded diagrams to develop & communicate ideas Use computer-aided design to develop and communicate their ideas	Generate realistic ideas, focusing on the needs of the user	Generate innovative ideas, drawing on research
Making products; work	Technical knowledge: Know how to use learning from science and mathematics to help design and make products that work Know that materials have both functional properties and aesthetic qualities Know that mechanical and electrical systems have an input, process and output	Know how mechanical systems such as levers and linkages or pneumatic systems create movement Know how to program a computer to monitor changes in the environment and control their products	Know how mechanical systems such as cranes or pulleys or gears create movement Know how more complex electrical circuits and components can be used to create functional products Know how to reinforce and strengthen a 3D framework

Southway Three IIs

At Southway our pedagogical approach is based on three key, identifiable elements.



INDEPENDENT LEARNING MEANS...

- Teachers providing structured, well ordered classrooms
- Teachers ensuring clear routines
- Staff having consistent learning behaviour expectations
- Teachers providing high quality resources
- Teachers promoting children as teachers as well as learners
- Teachers providing appropriate tasks and learning for children to access at all levels of ability
- Staff applying the C3B4ME – ‘See three before me’ approach

INTERACTIVE LEARNING MEANS...

- Teachers finding appropriate opportunities for exploratory learning through hands on experiences
- Teachers using the outdoors as a teaching and learning space



INSIDE-OUT LEARNING MEANS...

- Children working harder than teachers
- Children investigating rather than being told
- Teachers asking more open ended questions
- Teachers focusing on enquiry based learning
- Teachers demanding excellence

Southway's Values



Kindness



Respect



Resilience



Teamwork

Curriculum Overview



Southway Junior School

"Learning and Achieving Together"

DESIGN TECHNOLOGY curriculum map

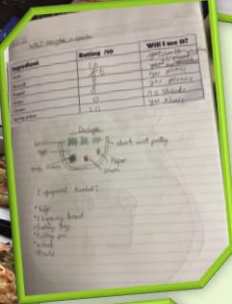
Year group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	<u>Me and My World</u> Woodwork: Picture frames		<u>Raiders & Invaders</u> Making hand and finger puppets for a production		<u>Battles and Bangs</u> LEGO	
	Food Tech: Scones & gingerbread		Food Tech: <u>Bumbo</u> drink		Food Tech: Healthy sandwich wraps	
Year 4	<u>Victorian Towns and Twisted Tales</u> Woodwork: Box with hinge and lid		<u>Mysterious Maya</u> Chocolate Day		<u>To Infinity and Beyond</u> LEGO	
	Food Tech: Victoria sponge		Food Tech: Maya guacamole		Food Tech: Space ice cream	
Year 5	<u>Power and Palaces</u> Making Tudor money pouches (textiles).		<u>We'll Meet Again</u> LEGO		<u>Seas, Storms & Survival</u> Woodwork: Bird Boxes	
	Food Tech: Cheese and onion quiche		Food Tech: VE day rations & bubble and squeak		Food Tech: Sushi	
Year 6	<u>Frozen in Time</u> LEGO		<u>Walk Like an Egyptian</u> Woodwork: crane		<u>Blood, Bones and Body Bits</u> LEGO: Overcoming contextual problems	
	Food Tech: Soup		Food Tech: Sautéed chicken and salad		Food Tech: The Great Southway 3-course-menu	

STANDARDS IN YEAR 3





STANDARDS IN YEAR 5



STANDARDS IN YEAR 6



Pupil Voice



"D.T. is my favourite subject because we get to learn about different foods, where they come from and the important of a healthy diet. My favourite part is when we get to eat our work!" (Year 5)

"The D.T. lessons where you use coding to program and control our LEGO models are the best! When making the models it is important to solve problems and follow instructions very carefully. You have to be very resilient!" (Year 6)

"I LOVED making the puppets and creating our own puppet show to show off our work! I learnt how to stitch in four different ways! I found overstitch the best for my puppet." (Year 3)

"I learnt trickier stitches in year 5 for our Tudor pouch. It was important that there were no holes – otherwise the coins would fall out! We also used new stitching techniques to make our pouch close and look attractive." (Year 5)

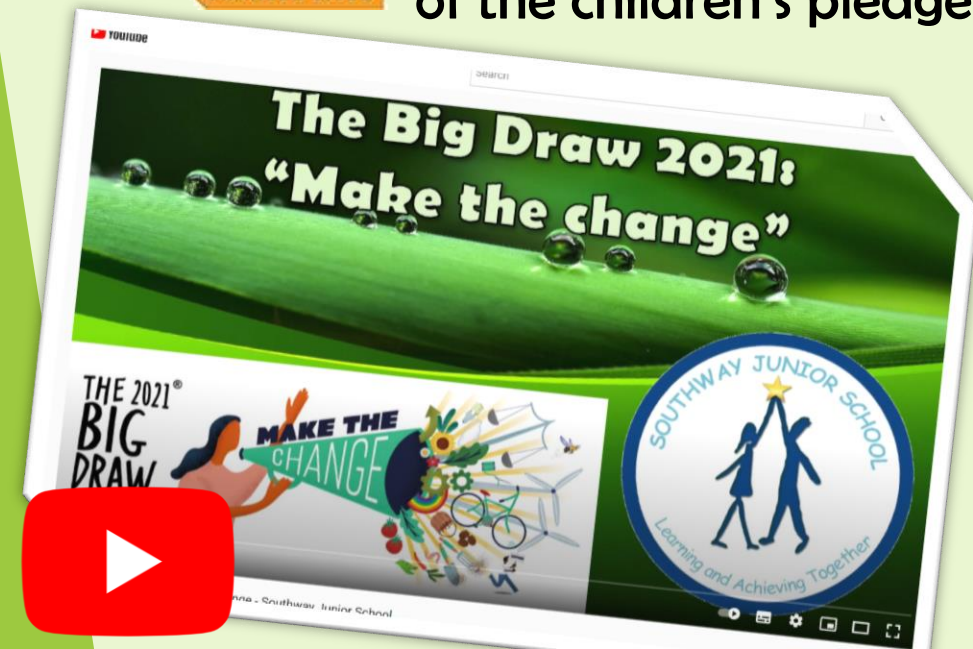
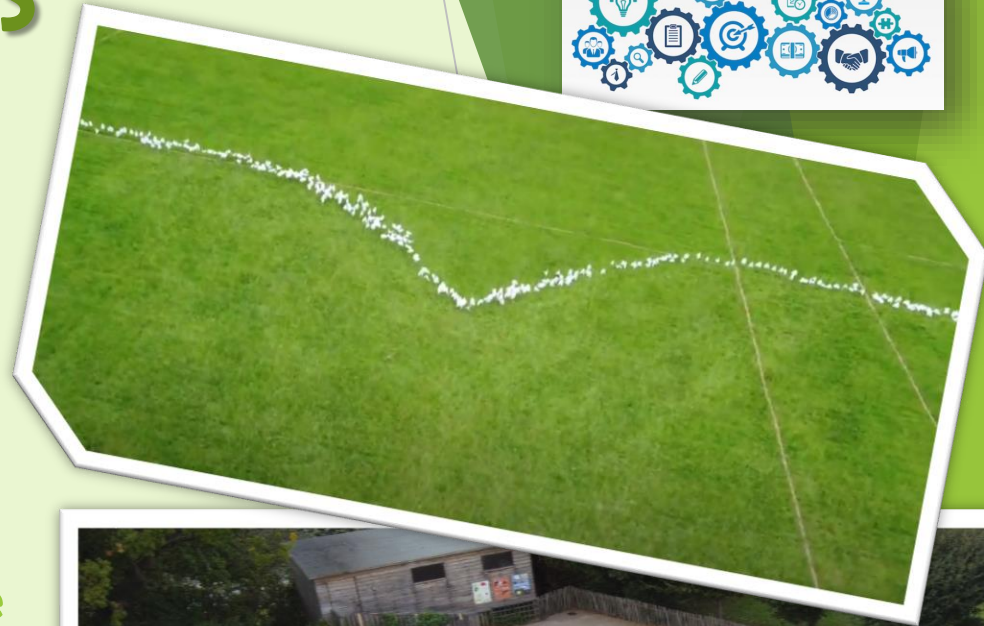
"I like the lessons where we get to use the saws. You have got to be very careful and accurate with your work, otherwise the product won't line up or look very good. I'm really proud of the bird boxes we made – I can't wait to see which bird in my garden uses it as its new home!" (Year 5)

"My favourite lessons in D.T. are when you get to make models and control them using the iPad. You have to use good teamwork and resilience as we have to solve all of the problems ourselves!" (Year 4)

Enrichment Opportunities



The theme for the Big Draw was “Make a Change”. The children repurposed plastic milk bottles into 3D bird feeding sculptures, eventually planting all 357 of them on the school field to create one giant bird! The children’s pledges were also written on their sculptures which were then taken home afterwards. A video was uploaded to [YouTube](#) of the children’s pledges & birds.



Once a week, Mrs Mottram runs an art and craft club in the DaVinci for children who show a passion for the art and DT.

Children have a wonderful time exploring and experimenting with different media, creating products, honing and developing their skills.



Dedicated D.T. Space: The DaVinci

