



Subject Story: Design & Technology

Design and Technology

Intent - What are we trying to achieve?

At Saint Michael's we value Design and Technology because it encourages pupils to use their creativity and imagination to solve real and relevant problems both individually and as part of a team. We recognise that Design and Technology is an inspiring, rigorous and practical subject that appeals to pupils that enjoy practical learning and problem-solving. Our curriculum will teach pupils how to take risks, become resourceful, innovative, enterprising and capable citizens. We want our pupils to recognise that good design and engineering can help to solve some of the most important global issues of our time and in the future.



- I can design, make and evaluate a useful product
- I love creating nutritious meals
- I know how good design can improve the world

Implementation – How is the curriculum being delivered?

When appropriate, Design and Technology lessons are taught as part of a half-termly topic, which links with other areas of the curriculum: History, Geography and Art & Design. We recognise, however, that Design and Technology is often best taught in discrete lessons to ensure the knowledge, skills and understanding is secure.

We use the Kapow resources to support our curriculum and meet the national curriculum programme of study for Design and Technology. The curriculum objectives are divided into strands: Cooking and Nutrition, Mechanisms, Structures, Textiles, and Electrical Systems. The curriculum has been divided into year group objectives, presented on a subject progression map. All strands are taught within each phase (KS1, LKS2, UKS2), apart from Electrical Systems which only applies to KS2. This ensures that pupils are provided with a good balance of the D & T curriculum throughout their schooling at St Michael's. Planning and teaching are supported by the Kapow resources, which are designed by expert teachers but adapted as necessary by teachers at St Michael's.

A Curriculum Map for each year group is shared on the school's website so that parents are able to support their child's learning at home.

A Design and Technology Progression Map has been created to outline the curriculum objectives that will be taught in each year group, as well as the key vocabulary to be learnt, and the opportunities to develop cultural capital.

Pupils will have opportunities to use a variety of resources and use our outdoor environment (particularly in the Early Years setting) to support and inspire their learning. There is a designated D & T cupboard in The Lab, which is stocked with all the relevant resources required. Classes are able to use The Lab for practical D&T lessons.

Teachers will create a Planning Overview for their pupils and differentiate activities appropriately, to support all pupils to meet or exceed age-related expectations.

Pupils will be given feedback for each piece of work (written or oral) so that they can make rapid and sustained progress over their school life.

Impact - What difference is the curriculum making?

Pupils are able to develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They 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. Pupils critique, evaluate and test their ideas and products and the work of others. Pupils are able to understand and apply the principles of nutrition and learn how to cook - an essential life skill!

Design and Technology will promote the pupil's spiritual, moral, social and cultural development by evaluating past and present design and technology and developing a critical understanding of its impact on daily life and the wider world.

Design and Technology will promote British Values by contributing to the creativity, culture, wealth and well-being of the nation.

Design and Technology will help pupils develop a Growth Mindset by encouraging the children to take risks, become resourceful, be innovative and imaginative.

If you visited a Design and Technology lesson at St Michael's you would see:

- Enthusiastic and engaged learners
- A variety of visual aids and existing products to support learning and inspire
- Children using subject specific vocabulary and terminology confidently
- Good progression for designing, making and evaluating throughout the school
- Clear skills being taught using a range of equipment throughout the year
- Children who can confidently reflect on their learning, evaluate their ideas and products against a design criteria in order to improve their work

Pupil Voice

Year 1: It tells us how things are made and created. I liked creating my vehicle design.

Year 2: DT is helpful because we learn how to make healthy food and even biscuits!

Year 5: In DT we got to use saws, glue guns and joins to make my own bridge. We stayed safe and our bridge held up a laptop. But not Mr Parsons!

Year 6: We can learn to build things by ourselves. It's important because we might need to design something important when we're older.

An example of progression in our curriculum

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Make	Physical Development/Fine Motor Skills Use a range of small tools, including scissors, paintbrushes and cutlery Expressive Arts and Design Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function	Use a range of simple tools to cut, join and combine materials and components safely	Safely measure, mark out, cut and shape materials and components using a range of tools Choose appropriate tools, equipment, techniques and materials from a wide range	Safely measure, mark out, cut, assemble and join with some accuracy	Use techniques which require more accuracy to cut, shape, join and finish his/her work	Make careful and precise measurements so that joins, holes and openings are in exactly the right place Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them	Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities

Our Diverse Curriculum

As a school, we are passionate that our children receive a broad, balanced, inclusive and diverse curriculum. Within this subject, we will ensure:

- Where appropriate, DT lessons will focus on a diverse range of genders, ethnicities, social classes, religions and localities, in order to gain an insight into the world we live in.
- The children will learn that good design spans cultures and traditions and develop an appreciation and respect of a variety of diversity.



Saint Michael Catholic Primary School & Nursery

Excellence • Enrichment • Enjoyment

Our Ambitious Curriculum

Our curriculum is designed to give all our children the knowledge and cultural capital they need to succeed in life.

Pupils with Special Needs: In DT, children are supported to achieve through carefully chosen, differentiated tasks that may be adapted to meet their individual needs. Adult support is available in lessons, to enable children with special needs so that they can achieve alongside their peers. Pre-teaching will be delivered to children with special needs where appropriate. Other strategies to support pupils access the curriculum include:

- CT/TA modelling – step by step demonstration
- Video demonstrations from Kapow provided on laptops for a small group
- Key vocabulary on word mats
- Pre-teaching key vocabulary
- Mixed ability pairs/group work
- Peer partner support
- Specialist equipment, e.g. easy grip scissors
- Knowledge organisers

Disadvantaged Pupils: All children at St Michael's have access to the excellent resources and facilities we provide. They all benefit from excellent teaching and learning. All educational visits and workshops at school are fully funded for disadvantaged pupils so every child has access to the same high quality learning experiences.

More Able Pupils: We identify pupils that show exceptional attributes in our curriculum. In DT, more able children from Years 4, 5 & 6 had the opportunity to go to St. Paul's Catholic College to work alongside 6th form students to design and make a marble rollercoaster.

Outstanding Examples of Learning

We are making pancakes. First we need to measure the ingredients.

EYFS



We had great fun making our pneumatic toys!

Year 3

We experimented with different bridge structures, then we designed and made our own bridge.

Year 5



St Michael Catholic Primary School...
@StMichaels1953

Well done to our group of Year 4,5 & 6 pupils who attended a DT workshop @StPaulsSurrey secondary school this week. The innovative, creative marble rollercoaster designs were amazing, as was the collaborative work with the 6th form students! We ♥ DT! @naceuk

