Saint Joseph's Catholic Voluntary Academy

How we teach Design Technology at Saint Joseph's

A Lesson Handbook: Guidance and Resources for Teaching Staff

Vision: Intention, Implementation, Impact	**<u>Intent</u>:** Design Technology (DT) forms an integral part of our curriculum, with a clear intent to equip our pupils with the knowledge, skills, and creativity necessary to engage successfully in the rapidly evolving technological world. Our DT curriculum aims to foster curiosity, resilience, problem-solving, and critical thinking skills in our pupils, empowering them to become innovative and resourceful designers. By focusing on the intent of our DT curriculum, we strive to provide our pupils with the necessary foundation to thrive in a technologically advanced society. • We ensure that our DT curriculum is connected to real-world contexts and industry practices, enabling our pupils to make meaningful links between theory and practice. • We provide a carefully sequenced progression of skills and knowledge, allowing pupils to develop their capabilities in DT from the early years through to upper key stage 2. • We encourage cooperative learning and independent thinking, promoting teamwork, communication, and self-reflection in the design process. **<u>Implementation</u>:** We employ a range of effective strategies to implement our DT curriculum and ensure its successful delivery. These strategies include: **Curriculum Design:** Our curriculum is carefully designed to provide a broad and balanced DT education, encompassing the areas of designing, making, evaluating, and technical knowledge. We follow the National Curriculum for Design and Technology, ensuring coverage of key concepts, processes, and skills. Our curriculum is enriched with local, national, and global design examples to inspire pupils and broaden their understanding of cultural and historical influences. **Building Knowledge and Skills:** We provide a progressive and well-structured DT curriculum that builds upon prior knowledge, allowing pupils to develop a sound understanding of key design principles and technical skills. Practical workshops and hands-on activities are incorporated into lessons to enable pupils to apply theoretical concepts and develop practical making skills. We promote the use of modelling, prototyping, and iterative design processes to encourage pupils to think critically, evaluate their work, and refine their designs. **Resourcing:** Our school is well-equipped with dedicated DT spaces, tools, and workshops, creating an environment conducive to practical experimentation and creativity. We maintain an up-to-date inventory of resources, including materials, tools, ICT equipment, and specialist software, to ensure pupils have access to appropriate resources for their design projects. **Teaching and Learning**: Our teachers are knowledgeable and passionate about DT, engaging in continuous professional development to remain up to date with the latest industry practices and trends.

DT lessons are delivered in an inclusive and engaging manner, catering to the diverse needs and abilities of all pupils.
Teachers utilise a range of teaching strategies, such as demonstrations, practical activities, group discussions, and multimedia resources, to facilitate active learning and deepen pupil understanding.

Assessment and Feedback:

We employ a variety of formative and summative assessment methods to assess pupils' progress and understanding in DT.
Teachers provide constructive and timely feedback to pupils, enabling them to reflect on their work and identify areas for improvement.
Pupil self-assessment and peer assessment are encouraged to develop their ability to evaluate their own designs and provide constructive feedback to their peers.

Impact:

The impact of our outstanding DT curriculum can be observed through the achievements and outcomes of our pupils, as well as the positive attitudes towards design and technology.

Attainment and Progress:

Pupils demonstrate a secure understanding of DT concepts, principles, and skills, as evidenced by their attainment in both practical and theoretical assessments.
Pupil progress in DT is consistently strong, with the majority of pupils making rapid and sustained progress across their primary education.

Engagement and Enjoyment:

Pupils are enthusiastic and actively engaged in DT lessons, demonstrating a genuine enjoyment for creative thinking, problem-solving, and practical making.
Pupils' positive attitudes towards DT extend beyond the classroom, as they independently explore and pursue their own design projects at home and within the local community.

Transferable Skills:

Pupils acquire a wide range of transferable skills, such as resilience, teamwork, critical thinking, and communication, which are applicable across various subjects and future careers.

Cultural Capital:

Pupils develop a strong understanding of the cultural, social, and environmental impacts of design and technology, fostering responsible and ethical attitudes towards consumption and sustainability.

Medium Term Planning: Steps in books

We follow a blocked curriculum which includes the National Curriculum. To facilitate teaching and learning, we have a Design Technology sticky knowledge document that outlines the knowledge taught in each topic.
This document is accompanied by a mapping of key vocabulary, which works alongside the sticky knowledge document.

Given the mixed-year classes in our school, we have two cycles: Cycle A and Cycle B. These cycles alternate each year to ensure full coverage in both Key Stage 1 and Key Stage 2.

Cycle A;

Drawing: Self-portrait Food technology: Healthy Sandwich	Mechanisms: Pop-up toy	Painting: Colour mixing Textiles: Join by glue	Sculpture: Recycled materials Structures: Swing - axle

Cycle B:

	<table><tr><td>Drawing: Oil pastels Food technology: Afternoon Tea</td><td>Mechanisms: Lever</td><td>Painting: Pointillism Textiles: Running stitch</td><td>Sculpture: Coiled clay pot Structures: Tall and stable</td></tr></table>
Lesson Approach **Weekly Planning** **Adapted Learning**	Design Technology is taught through four main topics: food, mechanisms, textiles, and structures. To ensure a comprehensive approach, each topic is planned in six stages: link it, research it, design it, resource it, make it, and evaluate it. For each topic, we provide a knowledge organiser that includes a key question, the key vocabulary and the sticky knowledge. In Key Stage 1 and Lower Key Stage 2, these knowledge organisers are displayed on working walls, and they are referred to when something new is taught or during space learning sessions. In Upper Key Stage 2, students use these knowledge organisers in their books and make annotations to highlight the key knowledge taught. Overall, this approach helps our students develop a strong foundation in Design Technology.
Prior Learning/Recap	To start the lesson, there should be a recap of prior learning. We have a spaced learning Long Term Plan which allows children to revisit prior learning and embed their understanding of topics from previous years, as well as taught in their current year.
Key Vocabulary	The vocabulary for each topic is identified on the medium-term plan and vocabulary document. This should be added to the working wall and displayed on the lesson slides.
Assessment	**Assessment for learning** Children's assessment in Design Technology is ongoing throughout the topic. Children are assessed against the sticky knowledge for that topic of work and given a grading of 1-4, in line with the St Ralph Sherwin Catholic Multi Academy Trust Assessment Framework. **1-** Means that a child is remembering all elements of the sticky knowledge and is applying it across DT lessons and the rest of the curriculum where appropriate. **2-** Means a child is remembering most elements of the sticky knowledge and is applying most of their learning across DT and the rest of the curriculum where appropriate. **3-** Means a child is struggling to remember much of the sticky knowledge and is not applying what they have learnt in their DT lessons and across other areas of the curriculum. **4-** Means a child is unable to remember and apply the sticky knowledge. They may be struggling to access the learning and will need to have an adapted curriculum. Live marking also forms part of assessment in Design Technology. Staff, give verbal feedback to all pupils during the lesson where possible. Staff use a yellow highlighter for elements which need pupils to revisit. Green highlighter identifies successful elements which link to the learning outcome. Sticky knowledge is assessed through 'spaced learning' sessions. 'Do Now' activities have been created to match the curriculum sticky knowledge. Teachers follow a Spaced Learning medium term plan to assess key knowledge and vocabulary. This can be recorded in 'Spaced Learning' books.

	In addition to this a teacher is continuously assessing sticky knowledge through all lessons and assesses against Insight objectives.
How do we cater for all pupils?	**Differentiate the learning environment** For learners working towards: • Create a safe environment where children can make mistakes. • Allow them time to process. For learners working at greater depth: • Make the environment less safe through questioning: "Are you sure?" "Is that always true?" "How do you know?" • Challenge their thinking. **Support for learners 'working towards'** These pupils will not be able to complete the final task on their own. • Give adult support through the independent task, so that it becomes another model or guided activity. • Provide additional scaffold through questioning or resources. • Break the task down for them into smaller steps. • Model how to respond when we don't understand something. **Digging Deeper: Catering for all pupils, including those working at Greater Depth** Challenge should be present throughout each aspect of the lesson, ***not seen as something which comes at the <u>end</u> of the sequence.*** Challenge may be present through the task itself, how the teacher asks for the task to be completed, or by supplementary questioning Additionally, opportunities to dig deeper within the learning objective should be provided wherever relevant. These should be open to all, but only once a pupil has demonstrated a sound understanding of the essential teaching point.
Homework	<u>Homework</u> Design Technology homework may be given as part of the end of term project, completed over half term.