



Design and Technology

OUR CORE AIM FOR DESIGN AND TECHNOLOGY

Design Technology should be an inspiring, relevant and practical subject. At Swiss Gardens we encourage children to learn to think and innovate to solve problems both as individuals and as members of a team. Through a process of researching, designing, making and evaluating, children have the opportunity to create purposeful and functional products considering their own and others' needs, wants and values to fulfil a design brief.

What do DT lessons look like at Swiss Gardens Primary School?

At Swiss Gardens Primary School, we value Design Technology as an important part of the children's entitlement to a broad and balanced curriculum, teaching it throughout the year. Lessons are not timetabled on a weekly basis. Instead, teachers identify when DT will be taught, generally alternating between an Art and Design unit and a DT unit each term. Our learning is often linked to our topics. As well as cross curricular themes, we aim to link work to other subjects such as mathematics, science, engineering, computing and art to help children make connections, aid their retention and support their learning. Key skills and key knowledge for Design Technology are mapped across the school to ensure progression between year groups.

Through well considered contexts children are enabled to select and use a wide variety of tools and materials for example cutting, shaping a joining using construction materials, textiles and ingredients. Children have opportunities to explore and evaluate existing products and design processes and use these to shape their own designs as well as evaluating their own and each other's work. Children develop technical knowledge including how to strengthen designs, include mechanical systems and apply their understanding of computing to program and control designs. Alongside our Science curriculum they also explore ways to process food and the nutritional qualities of products.

In DT lessons, we would expect any observers to see:

- Opportunities to solve real life problems
- Exploration of existing products and the history of products before theirs where relevant
- Talk, questioning and conversations
- Opportunities to innovate
- Varied resources and tools
- Varied approaches to the lesson (such as discussions, handling products, individual written responses, observation, sampling of products etc.)
- Curiosity for and desire to explore the world around us
- Raising of questions
- Explicit exposure to new vocabulary
- Awe and wonder
- An interest in and awareness of different cultures and ways of living and who their design would appeal to
- Learning in line with the age-expectations set out by the national curriculum in conjunction with our school progression document

What does the children's work look like in DT?

At Swiss Gardens all DT units work through 4 key stages 1) Evaluating the problem and looking at past solutions 2) Developing their design with opportunities to evaluate and adapt along the way 3) Making their product 4) Evaluating against their original brief

What does the children's work look like in DT?

Recording for DT takes many forms and can include:

- plans and diagrams
- creating prototypes
- recording evaluations
- practical work leading to a final product
- conversations and observations developing ideas and reflecting critically

DT work at Swiss Gardens is recorded in Topic books or individual folders. Children will be able to see the journey from an idea, to a design, to a product as well their reflections. Final products are celebrated and displayed where possible showing the accompanying process. Evidence is recorded in the form of photographs with appropriate annotations with children having the opportunity to keep finished products in most units.

How do the teachers plan for DT?

First and foremost, the teachers are always striving to deliver, and for children to achieve, age appropriate expectations, adhering to national curriculum requirements in conjunction with the school's Design Technology progression document.

Design Technology is planned as a progressive subject throughout the children's time at the school, building on and making links with previous learning and building on the skills they have learnt and tools they have used. To ensure staff follow the whole school progression in DT document to ensure they build upon prior skills. DT is, where appropriate taught through or alongside other subjects making strong links to maths, science, art and computing.

The subject leader sets out the whole school long-term overview of planned units of learning for the year to ensure full coverage of the learning and progression of skills. These are mapped out to ensure prior learning is built on and year leaders work alongside the subject lead to make changes when necessary to ensure the progression of skills is maintained. The medium-term plan then details finer specifics and the short-term plan sets out the fine details of the learning that must occur, the activities and tasks through which the learning will occur, the adult roles within the lessons, the key vocabulary focus, etc. The school has set planning documents used by staff throughout the school for long, medium and short term planning.

How does the school know whether children are making good progress and attaining high standards in DT?

We believe all children can achieve well in DT. Adaptations can be made to ensure all children can be included. To ensure our DT curriculum is tailored to the needs of children, teachers conduct ongoing monitoring of children's understanding, knowledge, and skills throughout lessons. This assessment is then used to inform future teaching. Design Technology is also monitored by the subject leader throughout the year in the form of book monitoring, lessons observations, looking at outcomes and pupil interviews to discuss their learning and understanding and establish the impact of the teaching taking place. Evidence of learning is collected in sketch books which move up through the school with the children and show progression over time.

What happens if a child is finding DT difficult?

We use a “mastery” approach to Design Technology, which means we are always striving for the vast majority of children to attain the same age-expected standards of learning at the same rate as each other. However, some children find DT learning more challenging than others. For these children, the subject is made accessible in its very nature of varied teaching approaches, with plenty of discussion to which all children may contribute. In some instances children are offered alternative equipment e.g. sprung scissors, safety knives to meet their needs and enable them to access the learning fully. Where necessary children’s work is differentiated offering smaller steps or greater adult support.

What happens if a child is achieving very high standards in DT?

Where children are attaining particularly highly in DT teachers extend their learning through higher level questioning and, where appropriate additional design criteria to deepen the level of problem solving required. In some circumstances higher attainers may be used as an exemplification to others and model key skills they excelled in. Where enrichment activities are available or opportunities outside of school we endeavour to take part.

How do opportunities for DT extend beyond each year group’s lessons?

When opportunities arise, we grab them with eagerness, for example Year 1/2 were recently visited by a LEGO Designer who spoke to the children about his job and showed the children photos of megastructures made from LEGO. He then set the children a challenge to build the highest tower in ten minutes! The majority of the children’s final products are displayed so we can celebrate in their achievements and share this with the school community. We endeavour for final products to fill a real life need so children take much joy in using the final product for example eating their own made food (such as bread) or drinking their own healthy drink! Much of the work is also taken home to be shared with family.

Is there anything else parents can do to support the learning in DT?

Children may continue to learn about DT at home as well as in school. There are lots of home DT project ideas e.g. The Institute of Engineering and Technology produces home learning STEM resources and activities - <https://education.theiet.org/key-stage-1-2-3-and-4-free-stem-resources/home-learning-resources-key-stage-1-and-2/> There are also plenty of websites with kid’s cooking recipes including BBC Good Food if you want to cook with your children at home: <https://www.bbcgoodfood.com/recipes/collection/kids-cooking-recipes>. Children can be encouraged to use tools safely for within their own interests or support parents in DIY projects at home.

Who to contact

If you have any questions you would like to ask about DT, please do not hesitate to email the office who can forward your queries to the DT leader, Mrs Pariser.