Design and Technology Curriculum Rationale

At St Thomas', of Canterbury school children will learn Design and Technology as a discrete subject with curriculum and real world (community) links made where appropriate. When D&T is taught as a distinct subject there are clear opportunities to develop and strengthen specific skills. Children will learn practical skills and resilience through effort in the iterative process of design, but will also be equipped with the knowledge to make products which "move, light-up, are structurally sound and meet criteria requirements including health and safety;" There will be emphasis on problem solving and children will recognise the process they went through to succeed as part of a team. They will see themselves as having the potential to be good citizens of the world, enriching society through positive contribution to their community and beyond, designing and making things for a particular purpose, with the aspirations to " make soothing that adds value to the real world" (D&T Professional Development Materials for Primary Schools)

INTENT

Alignment to National Curriculum

The school follows the National Curriculum D&T Programme of study. We use the Design and Technology Association "Projects of a Page" as a starting point to teach well-structured units.

End Points

By the time pupils move on to secondary school, they will be able to generate responses to DT tasks and challenges which show practical skills and knowledge of requirements to make sound and stable products which are fit for purpose. They will be prepared to take risks and modify their work as part of the iterative process of DT work. They will be able to reflect on and evaluate critically their own and others' work, and show resilience when working within the design process.

Sequencing

Our Design and Technology curriculum is a spiral curriculum. Through the use of the Design and Technology Association's 'Projects on a Page' vocabulary, skills and knowledge are revisited and built upon.

Addressing Social Disadvantage

A key principle of our teaching is about belief that ever child can engage with D&T. The resources used in school are suitable for pupils of all abilities. We have a firm belief that every child can achieve and that they are entitled to the same knowledge and cultural capital, whatever their background or starting point. Learning for those with low entry points is scaffolded to allow these to access and achieve.

IMPLEMENTATION

Pedagogical Approaches

D&T lessons begin with a recall activity, the purpose of which is to revisit apply previously taught knowledge and to recall skills appropriate to the task. The role of the teacher is to introduce key skills, techniques, materials and projects but to facilitate and allow pupils to take their own risks and experiment with ideas through the iterative design , test and review process.

Teachers' Expert Knowledge

The Art and Design Programme of Study and supplementing resources can be confidently delivered by specialist and non-specialist teachers alike. Subject specific professional development will take place as part of INSET training and Professional Development Meeting time.

Promoting Discussion and Understanding

Teachers will use assessment questions to ignite reflective discussion during each lesson. The questions aim to promote dialogue about the success of the focus skills, possible ideas for further improvement and opportunities for children to reflect on the materials and techniques used.

Knowing More and Remembering More

Our curriculum maps have been carefully constructed to present the content in a logical progression. The school's approach builds on current research into metacognition. This is evident in the skills progression and the way in which lessons are structured. Rosenshine's Principles are deployed to support children with regular retrieval to build and strengthen their schema.

IMPACT

Approach to Assessment

This is where we recognise the unique nature of Design and Technolgy. The approach to assessment is less formal than in core subject disciplines. In D & T, there is ongoing teacher assessment to ensure that the children are connecting with the iterative process, keeping pace and achieving goals. Success critieria for projects will be established alongside design briefs, shared and used as a self-assessment tool, with decreasing support through the years.

Performance Data

There is no published data for D&T at primary school. The school tracks foundation subjects very broadly to ensure that pupils are working within the curriculum expectations for their year group.

Pupils' Work

D & T notebooks are key to capturing pupil work. The process will be evident and including design brief, skills recording, design ideas and evaluation,
Additionally, pupil work is displayed in communal areas and classrooms through sketches and photographs.

Talking to Pupils

The subject leader talks to pupils about their learning as part of the monitoring process. This is to see if core vocabulary has been remembered and understood and to ensure that children have the confidence to communicate clearly. Pupils also will have the opportunity to talk about their work and their enjoyment and understanding of the lessons, showing much they can recall, and their responses will be used to inform teaching

Links / References

Local Context

The locality of Sheffield has a long and rich history of technological designers, craftspeople, makers and manufacturers which continues today, particularly related to steelmaking and other metalworking. All children will gain knowledge and experience of this through visits to our city's many industrial heritage sites and museums.

Teacher Assessment

The value of formative assessment cannot be underrated. At St Thomas', we use a variety of techniques, including whole-class feedback, improvement time, questioning, no opt out, exit tickets, retrieval quizzes, mini-whiteboards, and cold calling, to provide class teachers with up to the minute information about the progress, needs, and knowledge of their pupils.

The D & T Assosiation: www.data.org.uk