



# Fundamental principles underpinning the curriculum across all pathways at Treloar School and College

- Developing** independence skills
- Assessment** of need, abilities and interests
- Developing** personal, learning and thinking skills
- Multidisciplinary** working
- Total** communication
- Maintaining** active links with parents
- Broad**, balanced and personalised offer
- Developing** communication skills
- Building** self-confidence and self-esteem
- Developing** literacy and numeracy skills
- Embedding** skills across the waking day
- Developing** spiritual, moral, social and cultural awareness and skills



September 2017  
Printed by TreloarPrint



## Treloar School Subject Guide: Design & Technology

### The value of Design and Technology (D&T) in the curriculum

Studying Design and Technology includes the use of a broad range of knowledge, skills, and understanding, and prompts engagement in a wide variety of activities. Students design and make products that solve real and relevant problems within a variety of contexts.

D&T gives our students the opportunity to acquire skills and abilities to engage positively with the designed and made world and to harness the benefits of technology. In D&T pupils combine practical and technological skills with creative thinking to design and make a product.

D&T is about engaging in practical problem solving situations where students solve problems as individuals and members of a team. Making mistakes along the way is regarded as a valuable part of the learning process

and they enable students to better themselves in the classroom and in everyday life. Students are motivated and encouraged to take ownership of their learning in order to become resourceful by making choices, and experiencing the outcome of their decisions first hand. Students are challenged to use all of their senses, hand function skills, and eye-hand coordination skills when completing their tasks.

D&T is an important subject – it is logical, creative, and practical. Students have the opportunity to apply what they learn, especially in maths, science and other curriculum areas.



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## The Design and Technology (D&T) Resistant Materials Curriculum

The Design and Technology curriculum takes place in a specialist room, either throughout the whole academic year or for part of the academic year (working on a carousel basis) according to class timetables. The focus for this academic year will be on designing and making activities using the three main materials (wood, plastic and metal) separately as well as combining them together.

<b>Integrated Pathway</b>	The activities are based on a multi-sensory approach and aim to enable students to use all their senses and hand function skills when completing their tasks. Throughout the year the students will be expanding and consolidating their practical skills and subject specific vocabulary/symbols as well as their core vocabulary/symbols.
<b>Key Stage 3</b>	These lessons will include: Health and Safety, research, modelling, design proposal, working with different types of wood, metal and plastic, using various hand tools and machines and evaluation in their 19 week carousel.
<b>Key Stage 4</b>	The AQA Unit Award Scheme is a modular course consisting of coursework with no exams.  Students have the opportunity to gain certificates within the Resistant Materials curriculum area by completing design and make units, showing competence using the three main materials. All courses involve the production of a three dimensional outcome/product made to a set or selected design brief and the production of design folders with varying amounts of detail.
<b>Key Stage 5 (Sixth Form)</b>	Students complete their chosen project which links to the 'Do Something to Conserve it' - one of the challenges of the John Muir Award as part of their Environmental Studies. Throughout the term the students will be expanding and consolidating their practical skills and subject specific vocabulary/symbols as well as their core vocabulary/symbols.

## Opportunities in Design and Technology (D&T)

Design and Technology offers curricular enrichment activities for all students. The 'Making and Mending' activity helps to raise awareness of resourcefulness and recycling by taking broken objects and mending them ourselves rather than buying new or throwing things away. Students repair and make objects which were sent to or ordered from form classes, music department, English/drama department, science department, residential houses, school reception and therapy departments for these sessions. Students can experience the use of various tools, equipment and processes whilst working on their projects, and raise Health & Safety awareness when working with equipment, tools and machines.

D&T Club offers Computer Aided Design (CAD) and Computer Aided Manufacture (CAM) where students can further develop their Information Technology (IT) skills by using 2D Design software and Techsoft TS-30 Milling/Routing/Engraving machine, Boxford 160 lathe, and Cube Pro Duo 3D printer.

The D&T department uses hi-low tables, adapted tools and equipment such as push-down scissors, pencil/paintbrush/spatula grips, various sizes of soft grips on tool handles, a cardboard tube as a leverage on the handle of the pillar drill, machines fixed on wheels to make the activities more accessible for our students.

