



B: Subject Curriculum Overview

Subject: DT

Year Group: 7

Updated:

12.11.25

Subject Intent

Design and Technology equips students with the knowledge, skills, and confidence to become creative thinkers, and capable problem-solvers. Our curriculum provides opportunities to explore practical skills while nurturing personal qualities that support lifelong learning and success beyond the classroom.

Cross Curricular Links

- Maths - measurements, weighing, area, shapes, addition, subtraction
- Science - forces, levers, nutrition
- RE - cultures day of dead
- PE - nutrition, balanced healthy lifestyles •Art - drawing, rendering, shading

KS2 Links

- Design (Textiles, CAD, Mechanisms)
- Make (Graphics, Textiles, CAD, Mechanisms, Food, Workshop)
- Evaluate (Textiles & CAD project)
- Technical knowledge (Mechanisms project)

RISE Links

- Textiles - social, moral, spiritual and cultural development
- Mechanisms - employability skills - team work and problem solving
- Food - Healthy lifestyles and life skills, British values (food law), cultural awareness with different ingredients.

Literacy Links

Tier 2 and Tier 2 vocab. Links to GCSE vocab. Common threads of vocab between different subject areas are research, design, development, manufacturing and evaluation.

Numeracy Links

- Graphics - measurements mm & cm, shapes
- Textiles - measurements
- CAD - measurements mm & cm, area
- Mechanism - measurements, area
- Food - weighing, measuring,
- Workshop - measurements, addition, subtraction.

STEM Links

- Maths - measurements, weighing, area, shapes, addition, subtraction
- Science - forces, levers, nutrition

	HT1	HT2	HT3	HT4	HT5	HT6
Topic	Graphics	Textiles	CAD / CAM	Mechanisms	Food	Workshop
Key Themes / Questions	Technical drawing introduction - Creation of one point perspective street drawing.	Hand sewing techniques - Day of the Dead felt skulls. Fibres and fabrics theory.	CAD introduction - Creating a ruler on the laser cutter. CAD /CAM theory.	Introduction to mechanisms, focussing on scissor mechanism.	Food introduction - basic skills, healthy eating and balanced diets	Workshop introduction - basic woodwork skills, creation of block bot. Timbers theory.
Indicative Content	One point perspective drawings of cube One point perspective drawings of name One point perspective of a street view Shading and rendering techniques Introduction to Isometric drawing	Fibres - natural and synthetic Sources of fibres Process of fibres to fabrics Construction of fabrics Properties of fibres Hand sewing techniques - applique and embroidery Introduction to 6Rs Introduction to e Textiles Production of a felt day of the dead skull using hand stitching techniques.	How to use 2D design Difference between 2D and 3D design CAD - Computer aided design and advantages and disadvantages CAM - Computer aided manufacture and advantages and disadvantages Types of CAD programs and CAM machinery Creating on ruler - designed on 2D design and cut on the laser cutter Design work	Theory content on levers and mechanisms Different types of levers and mechanisms including pivot points Practical task to create a snapping animal using linkages and scissor mechanism Types of papers and boards and uses	Basic knife skills - bridge and claw method Use of the hob, grill and oven Boiling, baking, handling of raw meat Theory content on nutrition, food sources, healthy lifestyles.	Timbers theory Basic workshop skills Measuring, cutting wood, and sanding wood. Isometric drawings. Production of a block bot using workshop tools.

Assessment

<p>MAT Make •Students can identify and use tools, techniques, basic processes, equipment, and machinery</p> <p>NC Design •develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools</p>	<p>MAT Design •Students can use secondary research to identify user needs of familiar target groups •Students can use a design specification to evaluate products / design ideas •Students can generate ideas through basic design generation techniques [for example 4x4, weld, scribble mood boards]</p> <p>Make •Students can identify and use tools, techniques, basic processes, equipment, and machinery •Students can identify 3 key materials and their properties</p> <p>Evaluation •Students can evaluate their ideas and products against a specification •Students can understand the developments in design and technology and its impact on individuals.</p> <p>NC Design •use research and exploration, such as the study of different cultures, to identify and understand user needs</p> <p>Evaluation •understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists</p>	<p>MAT Design •Students can solve design problems set from a brief •Students can create design ideas using annotated sketches and basic design communication skills [for example isometric, 1point/2 point perspective, CAD]</p> <p>Make •Students can identify and use tools, techniques, basic processes, equipment, and machinery •Students can identify 3 key materials and their properties</p> <p>Evaluation •Students can evaluate their ideas and products against a specification •Students can understand the developments in design and technology and its impact on individuals.</p> <p>NC Design •develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations</p> <p>Evaluate •test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups</p>	<p>MAT Design •Students can use secondary research to identify user needs of familiar target groups •Students can use a design specification to evaluate products / design ideas</p> <p>Make •Students can identify and use tools, techniques, basic processes, equipment, and machinery •Students can identify 3 key materials and their properties</p> <p>Evaluation •Students can evaluate their ideas and products against a specification</p> <p>NC Technical knowledge •understand and use the properties of materials and the performance of structural elements to achieve functioning solutions •understand how more advanced mechanical systems used in their products enable changes in movement and force</p>	<p>NC Cooking and Nutrition curriculum •understand and apply the principles of nutrition and health •cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet •become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] •understand the source, seasonality and characteristics of a broad range of ingredients.</p>	<p>MAT Design •Students can create design ideas using annotated sketches and basic design communication skills [for example isometric, 1point/2 point perspective, CAD]</p> <p>Make •Students can identify and use tools, techniques, basic processes, equipment, and machinery •Students can identify 3 key materials and their properties</p> <p>NC Design •develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools</p> <p>Make •select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture •select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties</p> <p>Evaluate •analyse the work of past and present professionals and others to develop and broaden their understanding</p>
<p>One point perspective drawing using correct equipment and techniques, assessing 3D drawing and communication skills.</p>	<p>Day of the dead felt skull, assessing hand stitching and applique. Thoery assessment on fibres and fabrics.</p>	<p>Ruler produced on the laser cutter, assessing designing and CAD skills. Thoery assessment on CAD / CAM.</p>	<p>Snapping animal scissor mechanism, assessing linkage construction. Theory assessment on mechanisms and levers.</p>	<p>Food basic practical skills, assessing ability to plan and make a nutritious dish. Thoery assessment on nutrition.</p>	<p>Blockbot made out of wood, assessing use of tools and equipment in the workshop. Thoery assessment on timbers.</p>