

### KS3 D&T - Graphic Products

The table below sets out the content of the KS3 SOL for D&T - Graphic Products. The topics covered will be delivered along side a Design and Make Assignment that will cover key designing and making skills. The topics covered below are either Graphic Products subject specific ie printing in industry or general D&T topics ie The 6Rs. Other KS3 D&T subjects will also be covering areas specific to that subject area and D&T as a whole.

Area to investigate	Year 7	Year 8	Year 9
Design	Using colour to increase impact and to convey meaning.	Corporate/brand image incl monolithic brand image	Corporate colour and its uses ie black = death.
Make (Including tools and equipment)	Hand tools and equipment in Graphics Products including modelling tools.	Nets/developments and cutting them out scissors and laser cutter. Making a range of items with a single brand image. The safe use of craft knives to cut straight and curved lines.	Focused practical tasks to understand card engineering to produce a 3D outcome ie Pop-up card/book.
Industrial world	Quality assurance and control	Printing using colour laser printer	CAD/CAM in the form of laser cutting.
Materials	The safe use of 3D block modelling material - Styrofoam. The use of aluminium foil and paper.	The use of paper and card to produce a variety of products in model form.	The use of models to prove an idea before the idea is taken through the final idea stage.
The Environment and society	The work of the Fairtrade organisation.	The need for age specific films.	One off use plastics and their effect on the environment.
Drawing techniques	Oblique drawing using grid paper and freehand sketching.	Oblique drawing using grid paper and freehand sketching. Isometric drawing using grid paper	Oblique drawing using grid paper and freehand sketching. Isometric drawing using grid paper Orthographic drawing using grid paper
Sketching skills	2D Sketching (DMA)	3D Sketching (DMA)	Developing ideas sketching (DMA)

## KS3 D&T - Resistant Materials

The table below sets out the content of the KS3 SOW for D&T - Resistant materials. The topics covered will be delivered along side a Design and Make Assignment that will cover key designing and making skills. The topics covered below are either Resistant Materials subject specific i.e. timbers and manufacturing board, plastic bottle manufacturing or general D&T topics i.e. sustainability. Other KS3 D&T subjects will also be covering areas specific to that subject area and D&T as a whole.

Area to	Year 7	Year 8	Year 9
Design	Use a client specified theme as design inspiration for a product	Use of client specified theme and pro/cons of existing products to influence clock design	Use of 'work of others' regarding influential designers from technology for a 'design influence' point
Make (Including tools and equipment)	<p><b>Marking out</b> using steel rule and try square (timber).</p> <p><b>Cutting</b> using tenon and coping saw (timber).</p> <p><b>Finishing</b> using belt sander, sand paper and paint (timber).</p> <p><b>Fixing technique</b> glue and nail and screws (basic).</p> <p><b>Drilling</b> using pillar drill and hand drill (basic).</p> <p><b>CAD</b> implement a design to clear Perspex using the laser cutter</p>	<p><b>Marking out</b> using template, permanent marker/ scribe (plastic).</p> <p><b>Cutting</b> coping saw (advanced) (plastic).</p> <p><b>Finishing</b> using files and emery paper (plastic).</p> <p><b>Fixing technique</b> glue and nail and screws.</p> <p><b>Drilling</b> using pillar drill and hand drill.</p> <p><b>CAD</b> use of 2D Techsoft to produce either timber or plastic components.</p>	<p><b>Marking out</b> using template, permanent marker/ scribe (plastic) and pencil (timber) (advanced).</p> <p><b>Cutting</b> Junior Hacksaw (Metal), Hegna (timber/ acrylic).</p> <p><b>Finishing</b> use of varnishes and quality control to enhance finish quality for all materials.</p> <p><b>Fixing technique</b> glue and nail and screws (advanced), nut &amp; bolt.</p> <p><b>Forming</b> use of strip heater to manipulate plastic.</p> <p><b>CAD</b> use of 2D Techsoft to produce detail components.</p>
Industrial world	Manufacture of usable timber section and manufactured board sheets	Manufacture of plastic, highlighting drinking bottle industrial construction	Manufacture of metal, highlighting various products and their methods
Materials	The origins of timber and its conversion to usable piece ready for construction in a variety of fields. Including manufactured boards and additional uses over ordinary timber	The origins of plastic and the various methods/ types. Including different categories and environmental and moral issues	The origins of metal and the various methods/types. Including different categories and environmental and moral issues
The Environment	Sustainability regarding forestry	Wastage minimisation – use of templates	Recycling of materials, mainly metal products
Drawing techniques	2dDsketching and colouring, simple Techsoft 2D design	2D sketching and colouring, part drawing of design, more advanced Techsoft 2D design	2D/3D sketching with exploded drawing for extended pupils
Sketching skills	2D Sketching (DMA)	3D Sketching (DMA)	Developing ideas sketching (DMA)

## KS3 D&T - Textiles

The table below sets out the content of the KS3 SOW for D&T - Textiles. The topics covered will be delivered along side a Design and Make Assignment that will cover key designing and making skills. The topics covered below area either Textiles subject specific i.e. fibres and fabrics, printing in industry or general D&T topics ie The 6Rs. Other KS3 D&T subjects will also be covering areas specific to that subject area and D&T as a whole.

Area to investigate	Year 7	Year 8	Year 9
Design	Use a chosen theme as design inspiration for a product	Use of art movements as design inspiration for clothing	Use of influential designers beyond clothing into interior design
Make (Including tools and equipment)	Hand tools and equipment in Textiles incl temporary and permanent joining methods  Decorative technique—resistance method using elastic bands tie dye.  Use of Pins to hold, Needle and thread to tack, Scissors to cut and trim, Sewing machines for permanent stitching. Use of irons and ironing	Templates and fixing and cutting them out in school and industry. scissors/laser/die cutter.  Use of scissors, pins, needle and thread to tack, sewing machines.  Print techniques— block, stencil, direct and pens.  Craft knives, safety rulers and cutting mat.  Glue, polystyrene, mdf blocks, textile paints, textile pens and paint brushes. Use of itons	More complex machinery—overlocker. Use of more technical skills.  Use of scissors, pins, needle and thread to tack— temporary, sewing machines—permanent.  Decorative Techniques—Applique— satin stitch and fray, reverse applique, embellishment stitches. Use of sewing machines for decoration and permanent joining.  Use of irons
Industrial world	Manufacture of fibre into fabric	Use of bonded fabrics	Blended/ mixed fabrics— cotton & cotton polyester
Materials	The origins of fibres and fabrics— natural and synthetic. Types of construction. Use of cotton	Bonded felted fabrics and uses	The categories, names and uses of the main materials used in Textiles
The Environment	Natural and Synthetic Fibres	Wastage minimisation – use of templates	Waste and the effect on the planet
Drawing techniques			
Sketching skills	2D Sketching (DMA) and 3D crating	2D and 3D Sketching (DMA)	Developing ideas sketching (DMA) possibly sections or detail views—e.g. magnified
Theory of Design and Technology		Colour theory including colour wheel	

## KS3 D&T - FOOD

The table below sets out the content of the KS3 SOW for D&T - Food. The topics covered will be delivered along side Practical Assignments that will cover key skills.

Area to investigate	Year 7	Year 8	Year 9
Food Nutrition and Health	The importance of breakfast An introduction to the Eat well Guide Hydration and the reduction of sugary drinks	Fibre Experiment An in-depth look at the Eat well Guide Pupils analyse their own diet in relation to the Eat well Guide	Looking at micro nutrients and why we need them Evaluating which nutrients are present in the dishes pupils are making
Food Science		Heat transfer – Conduction Radiation Convection	The theory of gluten Enzymic browning How cheese is made and the science behind it
Food Safety	Knife skills Identifying hazards in the kitchen	4 C's Prevention of food poisoning- cooking, cleaning, cross contamination and chilling Recap knife safety	Best before and Use by dates Key temperatures for storing food What happens to pathogenic bacteria at different key temperatures Food poisoning- types, sources and incubation periods
Food Choice	Why we chose certain breakfasts	Sensory analysis Food labelling and allergens	Buying and storing food
Food Provenance	Breakfasts from around the world	Fair trade Reduction of food waste	Primary processing of milk into cheese- practical and theory
Making (includes tools and equipment)	Bridge and claw technique on a variety of fruit and vegetables Use of the hob Use of the oven Ragu sauce Creaming method cakes	Bread making – shaping the dough Ragu sauce extended into a pasta bake Rub in method- crumble All in one method using the electric whisk Brown sauce	Use of the cooks knife Roux sauce Use of raw chicken Brown sauce – curry Extending the rub in skills to shortcrust pastry Use of the electric whisk – cream for cheesecake
Design	Research skills Production and analysis of a questionnaire Using analysed results to produce a product design	Planning – pupils sequence making tasks. Considering the logical order and times	Evaluating products/dishes production. Then suggesting developments for improvement.