

# Progression Map - D&T



		Implementation	Intent
Subject	Year Group	Knowledge - Declarative (Factual information) and Procedural (Skill/application of skills)	Applied Learning and Skills - Used for assessment and retrieval
D&T - 1. Design	Y3	<p>Declarative: To know that a product's function can be determined by the wider environment.</p> <p>Declarative: To know that annotated sketches are drawings where key information is written on.</p> <p>Declarative: To know that cross-sectional drawings is the flat surface made when cutting through an object then a drawing is made of it.</p> <p>Declarative: To know that criteria can be created to ensure a successful product.</p> <p>Procedural: To label a design with the design features and their intended function.</p> <p>Procedural: To generate ideas for an item, considering its purpose and audience.</p> <p>Procedural: To explain their choice of materials and components including function and aesthetics.</p> <p>Procedural: To follow design criteria for a particular purpose.</p>	To be able to successfully design a product that is fit for purpose and communicates ideas through discussion and annotated sketches.
D&T - 1. Design	Y4	<p>Declarative: (vocabulary) To know the meaning of the key words: design criteria, success criteria, target audience</p> <p>Declarative: To know that products must consider target audience and to know the importance of design criteria and success criteria.</p> <p>Procedural: To select appropriate materials, tools and techniques</p> <p>Procedural: To be able to begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.</p> <p>Procedural: To know how to measure accurately and that measuring, marking and cutting different materials will have an impact on the quality of the finished product</p> <p>Procedural: To know that different materials and joining techniques will affect the function and aesthetic of their products</p> <p>Procedural: To know how to select a range of finishing techniques.</p>	To be able to develop design criteria to inform the design of innovative, functional and appealing products.

D&T - 1. Design	Y5	<p>Declarative: To know the different stages in the process of creating a product  Declarative: To know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose</p> <p>Procedural: To be able to use results of investigations, information sources, including ICT when developing design ideas.  Procedural: To be able to start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.  Procedural: To be able to produce a detailed step-by-step plan  Procedural: To be able to suggest some alternative plans and say what the good points and drawbacks are about each  Procedural: To be able to explain how their product will appeal to the audience</p>	To be able to research and generate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams in order to create a product aimed at a particular individual or group.
D&T - 1. Design	Y6	<p>Declarative: To know that lives have improved due to inventions throughout history.  Declarative: To know that designs should include intended use, final appearance and target audience, showing consideration to culture and society in design  Declarative: To know that the design process involves changing and improving upon the original design  Declarative: To know that sustainability of a product is important to the environment  Declarative: (vocabulary) To know the meaning of the key words: specification, annotate design brief</p> <p>Procedural: To know how to justify plans to someone else  Procedural: To know how to design a product in accordance to a specification linked to a set of design criteria.  Procedural: To know how to annotate designs, to explain their decisions.  Procedural: To know how to write a design brief from information submitted by a client, developing design criteria to fulfil the client's request.  Procedural: To know how to develop a product idea through annotated sketches.  Procedural: To know how to use a range of materials to reinforce and add decoration to structures.  Procedural: To know how to choose materials as part of a product concept.  Procedural: To know how to build a range of structures drawing upon new and prior knowledge of structures.  Procedural: To know how to cost of products need to be worked out in order to make it affordable and profitable</p>	To use research and develop design criteria in order to generate prototypes and use computer-aided design.

D&T 2 - Make	Y3	<p>Declarative: To know that triangular shapes of card are stronger than squared</p> <p>Declarative: To understand how to reinforce and strengthen a 3D framework.</p> <p>Declarative: To develop weaving, overlapping and layering techniques.</p> <p>Declarative: To use key vocabulary to demonstrate knowledge and understanding in this strand: colour, fabric, weave, pattern.</p> <p>Procedural: To select a wider range of tools and techniques for making their product using construction materials and fabrics.</p> <p>Procedural: To explain their choice of tools and equipment in relation to the skills and techniques they will be using.</p> <p>Procedural: Work safely and accurately with a range of simple tools.</p>	<p>To be able to strengthen products using a range of materials and components.</p> <p>To be able to use a variety of strategies to make a woven product.</p>
D&T 2 - Make	Y4	<p>Declarative: To know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.</p> <p>Declarative: To know how to use simple mechanisms to make a product move.</p> <p>Declarative: To achieve a quality product with confidence.</p> <p>Procedural: To select a wider range of tools and techniques for making their product safely.</p> <p>Procedural: To join and combine materials and components accurately in temporary and permanent ways.</p> <p>Procedural: To select a wider range of tools and techniques for making their product using construction materials and correctly select and use tools for making a product accurately.</p> <p>Procedural: To explain their choice of tools and equipment in relation to the skills and techniques they will be using.</p>	<p>To be able to use mechanisms within a product.</p> <p>To be able to create a felted product using a wider range of tools and equipment.</p>

D&T 2 - Make	Y5	<p>Declarative: To know the features of a torch: battery, switch, reflector, lamp, lens (science topic).</p> <p>Declarative: To know how to use mechanisms, including pneumatics, to make a product move.</p> <p>Declarative: To know how to use strengthening techniques to accurately build their product.</p> <p>Procedural: To know how to create a simple circuit that lights a bulb (Science topic)</p> <p>Procedural: To know how to create a range of different shaped frame structures.</p> <p>Procedural: To select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p> <p>Procedural: To aim to make and to achieve a quality product</p>	<p>To create a fairground ride using mechanisms and electrical components.</p> <p>To develop textile skills in order to create a sewn circuit.</p>
D&T 2 - Make	Y6	<p>Declarative: To know that recipes can be adapted to change the appearance, taste, texture and aroma.</p> <p>Declarative: To know that different food and drink contain different substances – nutrients, water and fibre – that is needed for health.</p> <p>Declarative: To know that ingredients and supply changed throughout history and seasonally.</p> <p>Declarative: To know that a product can be coded and programmed using ICT.</p> <p>Procedural: To know to prepare and cook a variety of predominantly savoury dishes safely and hygienically: including using a heat source.</p> <p>Procedural: To How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Procedural: To confidently select appropriate tools, materials, components and techniques and use them.</p> <p>Procedural: To use tools safely and accurately.</p> <p>Procedural: To assemble components to make working models.</p> <p>Procedural: To use ICT to control a product.</p>	<p>To be able to explore the impact of War on food supply and ingredients.</p> <p>To be able to use CAD to create a programmable product to a specific design criteria.</p>

D&T 3 - Evaluate	Y3	<p>Declarative: (vocabulary) To know the meaning of the key words: product, compare, design criteria  Declarative: to know that existing products have strengths and weaknesses in relation to their given function.</p> <p>Declarative: to know that criteria can be used to evaluate their own design work.  Procedural: to know how to evaluate work against own design criteria.  Procedural: To know how to establish and use design criteria to test and review products and suggest points for improvements.  Procedural: To know how to analyse and evaluate an existing product.</p>	To be able to explain strengths and weaknesses of existing products
D&T 3 - Evaluate	Y4	<p>Declarative: to know that criteria can be used to evaluate their own design work.</p> <p>Procedural: To know how to consider effective and ineffective designs.  Procedural: To know how test and evaluate the success of a final product.  Procedural: To know how to analyse whether changes in configuration positively or negatively affect an existing product.  Procedural: To know how to recognise good/bad workmanship</p>	To be able to evaluate work against own design criteria
D&T 3 - Evaluate	Y5	<p>Declarative: (vocabulary) To know the meaning of the key words: analysis, function  Declarative: To know that certain products are designed for a specific audience.</p> <p>Procedural: To know how to evaluate the strengths and weaknesses of products in relation to their intended audience.  Procedural: To be able to use appropriate tools and equipment, weighing and measuring with scales.</p>	To be able to evaluate existing products in relations to their purpose and audience
D&T 3 - Evaluate	Y6	<p>Declarative: (vocabulary) To know the meaning of the key words: concept, client, customer  Declarative: To know that products can be sustainable in their design.  Declarative: To know that different people may have different opinions about the same product  Declarative: To know that certain designers have had a significant impact on our world and the products we use: Victorian inventors  Procedural: To know how to explain the key functions and features of their product to the client as part of a product concept pitch.  Procedural: To know how to test and adapt a design to improve it as it is developed.  Procedural: To know how to collate feedback from others about their own work.</p>	To be able to explore impact of well-known designers and inventors' products

D&T 4 - Cooking	Y3	<p>Year Group Focus: Origins of food and processing</p> <p>Declarative: To know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.</p> <p>Declarative: to know that different foods grow at different times of year and that seasons will affect which food is available.</p> <p>Declarative: to know that some foods need to go through a process in order to preserve them/ make them more appealing.</p> <p>Declarative: to know that food is processed into ingredients that can be eaten or used in cooking i.e. flour, sugar, chocolate.</p> <p>Declarative: To know how food is processed into ingredients that can be eaten or used in cooking</p>	To be able to understand how ingredients are grown, reared caught and processed.
D&T 4 - Cooking	Y4	<p>Year Group Focus: A healthy and varied diet.</p> <p>Declarative: to know that to be active and healthy, food and drink are needed to provide energy for the body (and begin to distinguish healthy high energy foods)</p> <p>Declarative: to know that different food and drink contain different substances (nutrients, water and fibre) that are needed for health</p> <p>Declarative: to know the main food groups and how the body uses them.</p>	To be able to understand the principles of a healthy and varied diet.
D&T 4 - Cooking	Y5	<p>Year Group Focus: Baking bread</p> <p>Declarative: to know that bread has certain ingredients including a raising agent.</p> <p>Declarative: to know that bread requires kneading and baking</p> <p>Procedural: to know how to use scales to measure ingredients accurately</p> <p>Procedural: to be able to mix ingredients, knead, and bake bread using a heat source</p> <p>Procedural: To be able to use appropriate tools and equipment, weighing and measuring with scales.</p>	To be able to prepare and cook bread based on Ancient recipes.

<p>D&amp;T 4 - Cooking</p>	<p>Y6</p>	<p>Year Group Focus: Preparing and cooking a savoury dish.</p> <p>Declarative: To know what vegetables were available seasonally, during WW2 Declarative: To know a variety of wartime recipes.</p> <p>Procedural: To know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing and spreading Procedural: To know how to prepare food safely and hygienically Procedural: To Know how to prepare and cook a savoury dish to their design specification, including the use of a heat source Procedural: To be able to evaluate a meal and consider if they contribute towards a balanced diet Procedural: To be able to explain what times of year particular foods are eaten in Procedural: To be able to describe what to do to be hygienic and safe Procedural: To be able to use appropriate tools and equipment, weighing and measuring with scales.</p>	<p>To be able to prepare and cook a savoury dish including the use of a heat source To be able to evaluate a meal and consider if they contribute towards a balanced diet.</p>
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D&T 5 - Technical Knowledge	Y3	<p>Declarative: To know that a free-standing frame structure is a structure that stands on its own foundation or base without attachment to anything else. Declarative: (vocabulary) To know the meaning of the key words: frame structure, air resistance</p> <p>Procedural: To apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p>	To be able to include different shapes in products to strengthen them.
D&T 5 - Technical Knowledge	Y4	<p>Declarative: To understand mechanical systems in products.</p> <p>Procedural: To know how to use levers and linkages to make an object move Procedural: To know how mechanical systems such as cams, pulleys or gears create movement.</p>	To be able to use linkages and levers to control a product.

D&T 5 - Technical Knowledge	Y5	<p>Declarative: to know that mechanical systems such as levers, linkages and pneumatic systems create movement Declarative: To know that kinetic energy is the energy something has created by being in motion. Declarative: To know that shape of a moving object will affect how it moves due to air resistance. Declarative: To know that electrical conductors are materials which electricity can pass through and that insulators are materials which electricity cannot pass through (science topic) Declarative: To know that an electrical circuit must be complete for electricity to flow through, and that a switch can complete and break a circuit (science topic)</p> <p>Procedural: To know how to create a circuit that lights a bulb, sounds a buzzer (science topic) Procedural: to know how more complex electrical circuits and components can be used to create functional products</p>	To use electrical systems in their products such as buzzers, lights and motors.
D&T – 5 Technical Knowledge	Y6	<p>Procedural: To know how to program a computer to control their products</p> <p>Declarative: Apply their understanding of computing to program, monitor and control their products.</p>	To use CAD to program products for a specific purpose.

