



## Year Six DT Progression Steps

Year 6	Developing	Expected Standard	Exceeding	Language
<b>Background Research Design</b>	With support pupils can describe the purpose of their products, indicating the design features of their products that will appeal to intended users. They can begin to explain how particular parts of their products work. With support they can share and clarify ideas through discussion and model their ideas using prototypes and pattern pieces. They can use annotated sketches, cross sectional drawings and exploded diagrams to develop and communicate their ideas. They can carry out simple research using questionnaires and web based resources.	Pupils can describe the purpose of their products, indicating the design features of their products that will appeal to intended users. They can explain how particular parts of their products work. They can share and clarify ideas through discussion and model their ideas using prototypes and pattern pieces. They can use annotated sketches, cross sectional drawings and exploded diagrams to develop and communicate their ideas. They can carry out research, using surveys, interviews, questionnaires and web-based resources. They can identify the needs, wants, preferences and values of particular individuals and groups. They can develop a simple design specification to guide their thinking. The ideas that they generate are realistic, focusing on the needs of the user. They are able to make design decisions that take account of the availability of resources.	Pupils can confidently describe the purpose of their products, indicating the design features of their products that will appeal to intended users. They can explain how particular parts of their products work. They can share and clarify ideas through discussion and model their ideas using prototypes and pattern pieces. They can use annotated sketches, cross sectional drawings and exploded diagrams to develop and communicate their ideas. They can use computer aided design to develop and communicate their ideas. They can carry out detailed research, using surveys, interviews, questionnaires and web-based resources. They can identify the needs, wants, preferences and values of particular individuals and groups. They can develop a simple design specification to guide their thinking. The ideas that they generate are realistic, focusing on the needs of the user. They are able to make design decisions that carefully take into account the availability of resources.	Think, design, sketch, annotate, label, product, develop, design criteria, discussion, requirements, diagrams, accountability
<b>Make</b>	With support pupils can select tools and equipment suitable for the task, with support they can explain their choice of tools and equipment in relation to the skills and techniques they will be using. Pupils can select materials and components suitable for the task and explain their choice of materials and components according to functional properties and aesthetic qualities. Pupils are beginning to use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components.	Pupils can select tools and equipment suitable for the task, they can explain their choice of tools and equipment in relation to the skills and techniques they will be using. Pupils can select materials and components suitable for the task and explain their choice of materials and components according to functional properties and aesthetic qualities. Pupils can use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components. They can produce appropriate lists of tools, equipment and materials that they need and formulate a step-by-step plan as a guide to making. They can use finishing techniques, including those from art and design.	Pupils can independently select tools and equipment suitable for the task, they can explain their choice of tools and equipment in relation to the skills and techniques they will be using. Pupils can select materials and components suitable for the task and explain their choice of materials and components according to functional properties and aesthetic qualities. Pupils can use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components. Pupils can successfully assemble, join and combine materials and components. They can produce appropriate lists of tools, equipment and materials that they need and formulate a detailed step-by-step plan as a guide to making. They can use finishing techniques, linking those from art and design.	Ideas, tools, materials, plan, equipment, accuracy, mechanical, electrical different techniques.
<b>Evaluate</b>	With support pupils can identify the strengths and areas for development in their ideas and products. They can consider the views of others, including intended users, to improve their work. Pupils can critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make. With support they can evaluate their ideas and products against their original design specification. Pupils will be supported to investigate and analyse: how well products have been designed and made, why materials have been chosen, what methods of construction have been used and how well products work to achieve their purposes.	Pupils can identify the strengths and areas for development in their ideas and products. They can consider the views of others, including intended users, to improve their work. Pupils can critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make. They can evaluate their ideas and products against their original design specification. Pupils will be taught to investigate and analyse: how well products have been designed and made, why materials have been chosen, what methods of construction have been used and how well products work to achieve their purposes. They will investigate how well products meet user needs and wants, how much products cost to make, how innovative products are, how sustainable the materials in products are, what impact products have beyond their intended purpose	Pupils can identify the strengths and areas for development in their ideas and products. They can consider the views of others, including intended users, to improve their work. Pupils can critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make. They can confidently evaluate their ideas and products against their original design specification. Pupils will be able to investigate and analyse: how well products have been designed and made, why materials have been chosen, what methods of construction have been used and how well products work to achieve their purposes. They will thoroughly investigate how well products meet user needs and wants, how much products cost to make, how innovative products are, how sustainable the materials in products are, what impact products have beyond their intended purpose.	Design brief, Product, analyse, compare, pros and cons, improvement
<b>Technical Knowledge</b>	With support pupils are beginning to understand how to use learning from science and math's to help design and make products that work. They know that materials have both functional properties and aesthetic qualities. Pupils understand that materials can be combined and mixed to create more useful characteristics. They are beginning to understand the processes of mechanical and electrical systems and use the correct technical vocabulary for the projects they are undertaking. They are beginning to suggest different ways to reinforce and strengthen a 3D framework. They are beginning to understand the basic steps of programming a computer to control their products.	Pupils understand how to use learning from science and math's to help design and make products that work. They know that materials have both functional properties and aesthetic qualities. Pupils understand that materials can be combined and mixed to create more useful characteristics. They understand the processes of mechanical and electrical systems and use the correct technical vocabulary for the projects they are undertaking. They understand how to reinforce and strengthen a 3D framework. They understand how mechanical systems such as cams or pulleys or gears create movement, how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products	Pupils understand how to use previous learning from science and math's to help design and make products that work. They can transfer a variety of skills. They know that materials have both functional properties and aesthetic qualities. Pupils understand that materials can be combined and mixed to create more useful characteristics. They understand the processes of mechanical and electrical systems and use the correct technical vocabulary for the projects they are undertaking. They understand how to reinforce and strengthen a 3D framework. They know that a 3D textile product can be made from a combination of fabric shapes. They understand how mechanical systems such as cams or pulleys or gears create movement, how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products	Structure, characteristics, textiles support explore, movement, mechanisms, reinforce 3D, computer, programming
<b>Cooking and Nutrition</b>	With support pupils are beginning to understand 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. They understand that seasons may affect the food available and how food is processed into ingredients that can be eaten or used in cooking. They are beginning to develop an understanding that different food and drink contains different substances – nutrients, water and fibre – that are needed for health.	Pupils understand 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. They understand that seasons may affect the food available and how food is processed into ingredients that can be eaten or used in cooking. They understand that recipes can be adapted to change the appearance, taste, texture and aroma. They understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.	Pupils fully understand 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. They understand that seasons may affect the food available and how food is processed into ingredients that can be eaten or used in cooking. They can name seasonal foods. They understand that recipes can be adapted to change the appearance, taste, texture and aroma. They understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.	Peel, cut, grate, animals, food groups, farmed, caught, variety, balance, diet, cook, savoury, sweet, healthy, adapted