DT Subject Progression Guide

	Practical Skills	Design Process	Understanding of food and technology	Key Objectives to be assessed ALL TERMS
Y1/2	**Designing and manufacturing products** **Key skills:** + Use a ruler to draw straight lines Term 2, A, Term 2, B + Follow lines with scissors to cut shapes Term3, A **Woodwork and textiles:** + Use embroidery thread and an embroidery needle to join pieces of fabric together with running stitch Term 1, A + Use a template to cut an appropriately sized and shaped piece of fabric Term 1, A + Use a ruler to add markings to materials for cutting to appropriate lengths Term3, A Term 1, B Term 2, B + With assistance, use a saw and a hand-drill on wood Term 1, A Term 1, B, Term 2, B + Use glue and card to join small pieces of wood Term 1, A Term 1, B **Food preparation** + Pour out appropriate amounts of liquids Term 2, A + With assistance, weigh out appropriate amounts of food ingredients Term 2, A Term3, A + With assistance, safely chop and peel fruits and vegetables Term 2, A Term 1, B	**Research** + Explore and take inspiration from existing products **Design** + Design and produce a product according to given design criteria (ranging across visual appeal and functionality) + Produce products intended to appeal to users other than themselves (eg, a friend or family member) **Communication** + Draw what they would like to create, labelling the materials and listing the equipment they plan to use + Communicate ideas through templates, mock-ups and IT **Evaluation** + Comment on the success of a product according to the design criteria and suggest what they might change for next iteration	**Technology** + Explain how structures can be made stronger, stiffer or more stable Term3, A Term 2, B + Explore and use mechanisms such as levers, sliders, wheels and axles in products Term 2, A Term 1, B **Food** + Wash hands well before preparing food and explain, in simple terms, why this matters Term 2, A Term3, A + Use the basic principles of a healthy and varied diet to prepare dishes Term 1, B + Understands where a range of food items come from, including the farming of crops and the origins of animal-based products	**Objective and critical reflection:** S: Can say what they like and dislike about their own product D: Can make a simple judgement about their products **against some individual design criteria** P: Makes simple judgements about their products against individual design criteria **and suggests simple improvements**
Y3/4	**Designing and manufacturing products** **Key skills:** + Use a ruler to draw straight lines **accurate to ± 2mm** Term 2, A Term 1, B Term 2, B + Use the grid lines on a page to ensure that drawn lines are perpendicular Term 1, B Term 2, B **Woodwork and textiles:** + Use thread and a needle to join pieces of fabric together with a running stitch **or back-stitch, and tie off the thread securely once finished** Term3, A + Use a template to cut an **accurately** sized and shaped piece of fabric Term3, A **Food preparation** + Pour out **accurately measured** amounts of liquids Term 2, A + **Independently** weigh out accurately measured amounts of food ingredients Term 2, A Term 1, B + **Independently** and safely chop and peel fruits and vegetables Term3, A Term 2, B + With guidance, safely use a variety of heat sources to prepare food Term3, A Term 2, B	**Research** + Carry out research of existing products, analysing them against agreed design criteria + Use market research to inform and justify design decisions **Design** + With guidance, agree on design criteria based on a design brief + Build working prototypes for their ideas to inform the design process **Communication** + Communicate ideas through annotated sketches, cross-sectional and exploded diagrams, with estimates for dimensions **Evaluation** + Comment on the success of a product according to the design criteria and draw diagrams to communicate improvements for the next iteration	**Technology** + Design products that rely on an understanding of the stability of frame structures, including weight distribution and the use of diagonal rods for extra stability. Term 1, A Term 1, B + Design products that rely on an understanding of nets to produce 3D shapes from 2D materials Term 2, A + Design and build a series circuit with multiple components, including a switch **Food** + Use the basic principles of food groups to ensure that dishes include a balanced variety of nutrients. Term 1, A, Term3, A + Use the basic principles of food hygiene when cooking with meat Term 1, A Term 2, B + Demonstrate an understanding of how different foods need to be stored for safety Term 1, A Term 1, B	**Objective and critical reflection:** S: Starts to evaluate their product against some of the design criteria and can make a simple suggestion for improvement D: Evaluates their product and ideas against **all** design criteria, including suggestions for improvement **that refer to specific design criteria** P: Evaluates their product and ideas against design criteria, **making improvements as the product is being developed**
Y5/6	**Designing and manufacturing products** **Key skills:** + Use a protractor to draw angles in plans, accurate to ±2 degrees Term 1, A, Term3, A + Use a compass to draw circles or arcs of a given radius Term3, A **Woodwork and textiles:** + Use a thread and needle to join pieces of fabric together with cross stitch, and tie off the thread securely once finished Term3, A Term 1 B + Independently and safely use a hand-saw to follow a marked line on a piece of wood for an accurate cut Term 2 B + Independently and safely use a file or sandpaper to finish a cut piece of wood Term 2 B **Food preparation**	**Research** + Critically analyse existing products based on their own design criteria **Design** + Create individual and detailed design criteria based on a design brief **Communication** + Communicate ideas through scaled drawings, with accurate measurements **Evaluation** + Reflect on their chosen design criteria + Write explanations, accompanied by diagrams where appropriate, of specific problems encountered during the design process and explain how these problems can	**Technology** + Explore and use mechanisms such as pulleys or cams in products, and modify the mechanism to best meet design criteria Term 1, A + Modify the faces and dimensions of simple nets to better meet design criteria Term 1, A Term 1 B Term 2 B + Design and build a parallel circuit with multiple components, including self-built switches that are designed to meet specific design criteria Term 2, A **Food** + Clean cooking equipment to a good standard of hygiene, ready for use again Term 2, A Term 1 B Term 2 B + Prepare work surfaces for hygienic cooking Term 2, A Term 1 B Term 2 B	**Objective and critical reflection:** S: Evaluates their product and ideas against design criteria and makes simple suggestions for improvement D: Evaluates their product and ideas against design criteria, including suggestions for improvement **that refer to specific design criteria** and **making improvements as the product is being developed.** P: Evaluates products against design criteria, **including detailed solutions to specific problems encountered during the design process, a**nd making improvements as the product is being developed.

	+ Carefully control the temperature of a heat source while cooking <mark>Term3, A</mark> <mark>Term 1 B</mark> + Manage the timings of cooking with multiple heat sources for a single meal	be solved for the next iteration		

Strong progress in DT is supported by the repeated practice of key skills, with expectations in the following areas increasing as children progress through the curriculum:

- Accuracy and safety with tools
- Clarity and detail in communicating ideas
- Application of key knowledge of food and technology
- Objective and critical reflection when evaluating their own work

As such, these objectives are additive – children are expected to meet all objectives from the previous phases, plus the new objectives in their current phase.

We only record our assessment of children's development in evaluation, as development in this area builds the meta-cognitive skills that support learning in all areas of the curriculum.