

Dobwalls Concept Tracker – DT Years 1-6

Objective: UNDERSTANDING	Date Assessed:	Limited Understanding	Able to mimic this with help	Off the gap list! Can explain and apply this	Can reason with this and use it in any context
Design – Design thinking requires you to fully understand the brief, know your materials and formulate new ideas that can be made and tested.					
Design Y1 Understands that designs use pictures and ideas to suggest solutions to problems before building them. Applies this to their process of making and describing.					
Design Y2 Understands designs serve a user and so must fit what they need (empathy) Applies this so makes useful, workable products appealing to others.					
Design Y3 Understands you can meet a number of requirements in one design. Learns from their prototype and makes new decisions not losing sight of the main purpose.					
Design Y4 Understands the concept of 'fit for purpose'. Can conceptualise the design (predict materials needed, describe how it will work and evaluate it from plan)					
Design Y5 Can create logical step by step plans for others in a multistage design, rotating the design in their head and taking into account realistic time, material and costs.					
Design Y6 Understands the concepts of innovation, functionality and aesthetics. They can pre-empt problems mentally walking through design and build process in their head.					
Evaluation – Understand the concept of the iterative process. They can look at any design and suggest marginal or large improvements.					
Evaluation Y1 Comment on how well something does its job separately from how much they like it.					

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Evaluation Y2 Can understand objectivity so can say how well a design fits with what others need/ like even if they don't.					
Evaluation Y3 Understands that designs are assessed against design criteria and can apply these to score against them or suggest ideas for how they could fit the 'brief' better.					
Evaluation Y4 Understands that the choice of material can be key to function so can evaluate the method of construction and design ideas as well as the functionality					
Evaluation Y5 Understands sustainability as a factor in design along with many others when evaluating multiple different designs for the same purpose / brief / criteria.					
Evaluation Y6 Can include concepts such as cost of production, life cycle, quality of product, ease of manufacture, innovation within the market etc.					
Nutrition – Understanding that we need to consume the right nutrients in the right amounts depending on the activity we are doing.					
Nutrition Y1 Understand that you need to have a range of food and eat it hygienically to help keep you healthy.					
Nutrition Y2 Understand where their food comes from and can explain why a balanced diet is important					
Nutrition Y3 Understand and can explain links between specific food and drinks they eat and what health impact they have.					

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Nutrition Y4 Understands the spread, multiplication and control of bacteria and so can explain why and how to keep food production hygienic.					
Nutrition Y5 Understands how the balance and choice of ingredients alters the taste and appearance of dishes and so can make intelligent choices for modifying recipes.					
Nutrition Y6 Can make their own healthy eating and ethical decisions based on reading ingredients, knowing method of production, packaging and country of origin.					

	DT Progression of Practical Skills (Critical analysis, problem solving and practical ability)							Designing, Making, Evaluating, Improving	Taking Inspiration
	Food	Materials	Textiles	Electronics	Computing	Construction	Mechanics		
KS1	Cut, peel or grate ingredients safely and hygienically. Measure or weigh using measuring cups or electronic scales. Assemble or cook healthy ingredients.	Cut materials safely using tools provided. Measure /mark out to nearest cm. Demonstrate range of cutting and shaping techniques (e.g. tearing, cutting, folding, curling). Demonstrate range of joining techniques (e.g. gluing, hinges or combining materials to strengthen).	Shape textiles using templates. Join textiles using running stitch. Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).	Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).	Model designs using software (such as 2simple).	Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	Create products using levers, wheels and winding mechanisms.	Design products that have a clear purpose and an intended user. Make products, refining the design as work progresses. Use software to design. Begin to evaluate their ideas and products against design criteria.	Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created.
NP									
M									
Lower KS2	Prepare ingredients hygienically using appropriate utensils. Measure ingredients to the nearest gram accurately. Follow a recipe. Assemble or cook healthy ingredients (controlling the temperature of the oven or hob, if cooking).	Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest millimetre. Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). Select appropriate joining techniques/ resources.	Understand the need for a seam allowance. Join textiles with appropriate stitching. Select the most appropriate techniques to decorate textiles.	Create series and parallel circuits.	Control and monitor models using software designed for this purpose.	Choose suitable techniques to construct products or to repair items. Strengthen materials using suitable techniques.	Use scientific knowledge of transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears.)	Design with purpose by identifying opportunities to design. Make products by working efficiently (such as by carefully selecting materials). Refine work and techniques as work progresses, continually evaluating the product design. Use software to design and represent product designs.	Identify some of the great designers (such as Brunel, Mackintosh) in all areas of study inc. horticultural techniques) to generate ideas for designs. Improve on existing designs, giving reasons for choices. Disassemble products to understand how they work.
NP									
M									
Upper KS2	Understand the importance of correct storage and handling of ingredients (using knowledge of microorganisms). Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. Demonstrate a range of baking and cooking techniques. Create and refine recipes, including healthy seasonal ingredients, methods, cooking times and temperatures.	Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after cutting shapes). Understand qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than paper).	Create objects that employ a seam allowance. Join textiles with a combination of stitching techniques. Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles	Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips.) Check resources prior to planning.	Write code to control and monitor models or products (such as Lego Mindstorms).	Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).	Convert rotary motion to linear using cams. Use innovative combinations of electronics (or computing) and mechanics in product designs.	Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). Make products through stages of prototypes, making continual refinements. Ensure products have a high quality finish, using art skills where appropriate. • Use prototypes, crosssectional diagrams and computer aided designs to represent designs.	Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. Create innovative designs that improve upon existing products. Evaluate the design of products so as to suggest improvements to the user experience.
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M									