

Y6 D&T - Recycling to sell

Inspiration Creativity	Partnership with parents Community – selling their products	
Key Questions - Why recycle?	Key concepts - Joining - Cutting - Finishing - Mathematical knowledge	<i>Also covered in:</i> Y3 - Desk tidy Y2- Shipwrecked shelter
Design - What do other people make out of recycled products? - What will I make?		
Make - What methods will I use to ensure a quality product that can be sold?		
Evaluate - How successful is my design?	Skills - Generally, user experience is used as a rationale for design choice. - Generally, improvement are continual throughout the making process, with initial prototypes often changed radically through a number of refinements. - Art skills are applied and, along with attention to detail, create a high-quality finish. - There are many examples of precision cutting using a growing range of cutting implements. - The properties of materials are generally considered in choosing tools. - A growing range of practical skills are used effectively to make or repair products. - Generally there are some well-reasoned choices for combining elements from a range of designers. - There is a growing range of examples of designs that improve upon existing products. - Evaluations are generally ongoing and thorough. They relate to the user experience.	By the end of this unit, the children will be able to: - Generate a number of ideas and select one design - Produce detailed, annotated diagrams - Measure, mark out and assemble their product with accuracy - Test and refine their product throughout the making process - Produce a final evaluation against original criteria - Appreciate how important high-quality making and finishing is to producing a saleable item

Knowledge

- Recycling is when items which were going to be discarded are made into new products. Examples of recyclable materials are: metals, cardboard, glass, paper, organics, plastic and textiles.
- Recycling reduces the need for extracting, refining and processing raw materials. All of these create substantial air and water pollution. Recycling saves energy, it also reduces greenhouse gas emissions, which helps to tackle climate change.
- The function of a product describes what its key purpose is. For example, to hold an item, to keep the item dry
- There are different construction methods that can be used to connect one material to another such as: card, , tape, adhesives (including the use of a glue gun) fastenings and tabs.
- A prototype is an early model (design) of your product which is created so that solutions can be made to challenges and problems identified. These can be then changed when the “final design” is produced.
- Designers select appropriate materials for different purposes. E.g. plastic when the product needs to be waterproof, use of textiles if the product is going to be worn, metal if the product needs to be malleable.
- Designers use tools such as: scissors, pencils, rulers, glue guns, templates, hole punchers, pegs, fasteners, tape, to cut, shape, join and finish their products.



Topic Specific Vocabulary - designing e.g. investigate, survey, plan, research, texture, intention, structure, outcome. - making e.g. materials, forming, adhesives, polyvinyl acetate (PVA) glue, shaping, cutting, joining, strengthen, reinforce, finishing, durable - knowledge and understanding e.g. recycle, sustainability, function, selling, marketing, point-of-sale	NC Subject content - Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design - Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately - 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 - Investigate and analyse a range of existing products, evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
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Subject Specific/Academic Vocabulary

This vocabulary should be explicitly taught in context. Other tier 2 words should also be explored as they are encountered.

Year 3	Year 4	Year 5	Year 6
Appropriate, features, specific, concept, range, sequence, structure	Economic, identified, potential, procedure, process, variables	Affect, analyse, criteria, demonstrate, specify	Technique, component, justify, outcome

We are product designers /Being a product designer /I am a product designer
 Product a quality product that can be sold and functions satisfactorily