



Mersey Park Primary School

Design and Technology Progression of Skills

KS1

KS2

Year 1

Year 2

Year 3

Year 4

Year 5

Year 6

Cooking and Nutrition

- Talk about what he/she eats at home and begin to discuss what healthy foods are
- Say where some food comes from and give examples of food that is grown
- Use simple tools with help to prepare food safely

Fruit kebab

- Understand the need for a variety of food in a diet
- Understand that all food has to be farmed, grown or caught
- Use a wider range of cookery techniques to prepare food safely

Potato & Herb Salad

- Talk about the different food groups and name food from each group
- Understand that food has to be grown, farmed or caught in Europe and the wider world
- Use a wider variety of ingredients and techniques to prepare and combine ingredients safely

Healthy Pizza

- Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active
- Understand seasonality and the advantages of eating seasonal and locally produced food
- Read and follow recipes which involve several processes, skills and techniques

Healthy Soup

- Understand the main food groups and the different nutrients that are important for health
- Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/tasty to eat
- Select appropriate ingredients and use a wide range of techniques to combine them

2 Course Lunch

- Confidently plan a series of healthy meals based on the principles of a healthy and varied diet
- Use information on food labels to inform choices
- Research, plan and prepare and cook a savoury dish applying his/her knowledge of ingredients and his/her technical skill

3 Course Meal (inc. smoothie)

Processes

Developing planning and communicating ideas

- Create simple designs for a product
- Use pictures and words to describe what he/she wants to do

- Design purposeful, functional, appealing products for himself/herself and other users based on design criteria
- Generate, develop, model and communicate his/her ideas through talking drawing, templates, mock-ups and, where appropriate, information and communication technology

- Use knowledge of existing products to design his/her own functional products
- Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes

- Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience
- Create designs using exploded diagrams

- Use his/her market research to inform the design of his/her own innovative product
- Create prototypes to show his/her ideas

- Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products
- Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Working with tools, equipment, materials and components to make quality products</p> <p>Textiles</p> <p>Use of materials (KS2 - Stiff and flexible sheet materials & Mouldable materials)</p>	<ul style="list-style-type: none"> Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing Use a range of simple tools to cut, join and combine materials and components safely <p><i>Glove/sock puppet</i></p> <p><i>Building 2D wooden Frame Seaside scene incorporating levers and sliders.</i></p>	<ul style="list-style-type: none"> Choose appropriate tools, equipment, techniques and materials from a wide range Safely measure, mark out, cut and shape materials and components using a range of tools <p><i>Finger puppet</i></p> <p><i>Building 2D wooden chassis for a moving vehicle with axles and wheels.</i></p>	<ul style="list-style-type: none"> Safely measure, mark out, cut assemble and join with some accuracy Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them <p><i>Stick puppet</i></p> <p>Building a shallow 3D wooden frame which incorporates pneumatic system 'pop ups'</p>	<ul style="list-style-type: none"> Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them <p><i>Rabbit toy</i></p> <p><i>Building a 3D wooden Light box incorporating electrical circuit</i></p>	<ul style="list-style-type: none"> Make careful and precise measurements so that joins, holes and opening are in exactly the right place Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques <p><i>Water Bottle Carrier</i></p> <p><i>Building a 3D wooden frame which incorporates a cam mechanism to make a moveable toy.</i></p>	<ul style="list-style-type: none"> Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities Use technical knowledge and accurate skills to problem solve during the making process <p><i>Pencil Case for Y7</i></p> <p><i>Building a 3D wooden frame as a basis of a bridge, incorporating gears and pulleys.</i></p>
Evaluating processes and products	<ul style="list-style-type: none"> Ask simple questions about existing products and those that he/she has made 	<ul style="list-style-type: none"> Evaluate and assess existing products and those that he/she has made using s design criteria 	<ul style="list-style-type: none"> Investigate and analyse existing products and those he/she has made, considering a wide range of factors 	<ul style="list-style-type: none"> Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user 	<ul style="list-style-type: none"> Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work 	<ul style="list-style-type: none"> Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she has made
Mechanisms (KS2 – Electrical and mechanical components)	<ul style="list-style-type: none"> Explore and use mechanisms e.g. levers, sliders, in his/her products (Band 2) 	<ul style="list-style-type: none"> Explore and use mechanisms e.g. wheels and axles, in his/her products 	<ul style="list-style-type: none"> Understand how pneumatic systems create movement 	<ul style="list-style-type: none"> Understand and use electrical systems in products 	<ul style="list-style-type: none"> Understand how to use more complex mechanical and electrical systems – cams 	<ul style="list-style-type: none"> Apply his/her understanding of computing to program, monitor and control his/her product Gears and pulleys
Construction	<ul style="list-style-type: none"> Build structures, exploring how they can be made stronger, stiffer and more stable 	<ul style="list-style-type: none"> Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable 	<ul style="list-style-type: none"> Strengthen frames using diagonal struts 	<ul style="list-style-type: none"> Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas 	<ul style="list-style-type: none"> Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable 	<ul style="list-style-type: none"> Use a wide range of methods to strengthen, stiffen and reinforce complex structures and use them accurately and appropriately