Ladysmith Federation

EYFS, KS1 and KS2 Design Technology Overview			
	Autumn	Spring	Summer
EYFS Early Learning Goals	**Creating with Materials** ELG Children at the expected level of development will: - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function; - Share their creations, explaining the process they have used; - Make use of props and materials when role playing characters in narratives and stories.		
Nursery	**During the children's time in Nursery they will be learning to (from Development Matters):** - Take part in simple pretend play, using an object to represent something else even though they are not similar. - Begin to develop complex stories using small world equipment like animal sets, dolls and dolls houses, etc. - Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park - Explore different materials freely, to develop their ideas about how to use them and what to make. - Develop their own ideas and then decide which materials to use to express them. - Join different materials and explore different textures - Create closed shapes with continuous lines and begin to use these shapes to represent objects. - Draw with increasing complexity and detail, such as representing a face with a circle and including details. - Use drawing to represent ideas like movement or loud noises. - Show different emotions in their drawings and paintings, like happiness, sadness, fear, etc. - Explore colour and colour mixing. - Show different emotions in their drawings – happiness, sadness, fear, etc.		
Reception	**During Reception children will be learning to (from Development Matters):** - Explore, use and refine a variety of artistic effects to express their ideas and feelings. - Return to and build on their previous learning, refining ideas and developing their ability to represent them. - Create collaboratively, sharing ideas, resources and skills		

Key Stage 1 Design Technology Overview

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria Technical knowledge
- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Cooking and Nutrition

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

	Autumn	Spring	Summer
Year 1	Design and Make a Textile Firework *(Sewing, joining, embellishing)*	Design and Make a Mouse in a Windmill *(strengthening, stiffen, moving parts)* Design and Make Easter Cards *(Making cards using a simple sliding mechanism)*	Design and make a Plastic Bottle Pirate Ship. *(Designing, shaping, joining and finishing)*
	Simple Biscuit with an Insect Theme Healthy Eating Pea Pate		Cooking Four Nations Welsh Bread Pudding Scottish Oatcakes.
Year 2	Design and Make a Zaha Hadid Style Building *(Cutting, shaping, joining and finishing)* Christmas cards Making cards using a simple sliding mechanism	Design and Make Safari Jeeps *(Build structures, use wheels and axles)* Design and make a Tudor clay slab tealight houses. *(Designing, cutting, shaping and finishing)*	Design and make a Balsa Wood Boat. *(Cutting, shaping, joining and finishing)*
	Making Simple Bread Recipe.		Where food comes from? Recipes from Around the World

Key Stage 2 Design Technology Overview

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:

Design

- 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

Make

- 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

Evaluate

- 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
- understand how key events and individuals in design and technology have helped shape the world Technical knowledge
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

	Autumn	Spring	Summer
Year 3	Design and Make a Moving Stone age Monster *(Pneumatics)*	Design and Make an Egyptian Shaduf *(Strengthen, stiffen and reinforce - Levers)*	STEM Project *(Design and Make a machine to remove rubbish from the sea)* *(Strengthen, stiffen and reinforce)*
	Fruit Kebab/Plum Berry Dessert/Blueberry (Fruit)	Soda Bread/Vegetable Snacks	Make a Healthy Lunch Box *(linked to prepare for picnic/school trip)*
Year 4	Design and Make a Christmas card with a flashing light – link to science unit *(Switches, bulbs - Circuits)*	Design an earthquake resistant building *(Strengthen, stiffen and reinforce)*	Design and make a coin purse suitable for and Anglo-Saxon citizen *(single fabric shape can be used to make a 3D textiles product-link to Art)*
	Roman Feast – Healthy Diet	Baking to sell to support a cause	Pottage/Anglo Saxon Bread
Year 5	Design and Make a Mayan Temple *(Strengthen, stiffen, reinforce and joining techniques)* Levers, Pulleys and Gears STEM workshop Science linked topic *(Gears, pulleys and levers)*	Design and Make an Ancient Greek Cam Toy of a battle scene, sports event or market scene *(Cams)*	Design and Make a Textile Wall Hanging inspired by a South America- Reverse Applique (Molas) *(Sewing/Printing – link to Art)*
	Tortilla (Corn and Flour) Mexican Street Food *(Guacamole/Salsa/Mexican Xmas Bread)*	Greek Feast *(Hummus/Hummus and Carrot Wraps/Hummus Burger)*	Canapes
Year 6	WW2 Morse Code Bleepers and Alarms (*Buzzers, motors - circuits)*	Design and Make a bag using the shapes from nature as inspiration – link to Eden Project *(CAD CAM)*	Fairground Rides *(Motors)* or Control changes in the environment *(Programming)*
	WW2 Food Coconut Ice *(Chelsea Buns/ Welsh Rarebit/ Cornish Pasties)*	Fruit Lollies	Burger/Bean Burger