Guilden Sutton Church of England Primary School

Love and Justice for All

Design Technology Whole School Curriculum Progression Map

Our Christian Values: **WISDOM, JUSTICE, COMPASSION, LOVE, FORGIVENESS, FRIENDSHIP**

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	• Develop fine motor skills through finger gym activities using tweezers and tongs to place beads, pom-poms and gems. • Threading with wool, string and ribbon using card shapes and beads. • Produce Supertato and alien paintings and 3D models of rockets, spacecraft, aliens and planets. • Moulding clay to create diva lamps and hedgehogs.		• Sewing valentine hearts using needles and wool. • Using scissors to cut out penguins, lanterns, Easter eggs. • Creating Chinese lanterns and Hung Bao Lucky Money Bags. • Explore floating and sinking through making boats from different materials for the boy and the penguin to return to the Antarctic. • Building Great Wall of China and pagodas with blocks and construction resources.		• Make shakers, drums and instruments to accompany African music. Match tempo to animal's movements. • Create dioramas for under the sea. • Plan and make bridges for the 3 Billy Goats Gruff using a variety of construction materials.	
	<u>Key Vocabulary</u> Draw, chop, stick, connect, balance, join, mould, squeeze, push, pull, twist, cut,					
1	**Puppets – Textiles** • Can I make a success criteria? • Can I explore and evaluate a range of puppets? • Can I explore different ways of joining materials?		**Goldilocks and the 3 bears – Structure** • Can I make a success criteria? • Can I explore and evaluate a range of existing products? • Can I explore the concept and features of structures and the stability of different shapes?		**Ice pops – Food** • Can I make a success criteria? • Can I explore and evaluate a range of existing products? • Can I explore the different flavours and shapes used for ice pops?	

	• Can I design and label two different puppets based on my research? • Can I make my design? • Can I evaluate my design? **Designer: Vivienne Westwood**	• Can I design and label two different chairs based on my research? • Can I make my design? • Can I evaluate my design? **Designer: Ron Arad**	• Can I design and label two different ice pops based on my research? • Can I make my design? • Can I evaluate my design? **Chef: Mary Berry**
	<u>Key Vocabulary</u> Design, evaluate, attach, structure, apply, decoration, mould, stable, stiff, strong, weak, textiles, finger puppet, running stitch,		
2	**A healthy snack for Paddington (fruit skewers) - Food** • Can I research other fruit skewers and suggest what I like and dislike about them? • Can I design a fruit skewer that follows a repeating pattern? • Can I prepare a clean area to make my fruit skewer? • Can I cut fruit to the size I require safely using a knife? • Can I construct a fruit skewer following a pattern? • Can I evaluate my finished fruit skewer using the design criteria? **Chef: Jamie Oliver**	**Design and make a building for the future – Structure** • Can I research how to use boxes and masking tape to create a freestanding structure? • Can I suggest the features I like and dislike about futuristic architecture? • Can I design a structure inspired by my research? • Can I design a structure that can support itself without falling over? • Can I use junk modelling material to create my design? • Can I join materials using masking tape? • Can I evaluate my finished structure using the design criteria? **Designer: Zaha Hadid**	**Chester/British Value bunting - Textiles** • Can I research different ways to join two materials? • Can I create a Chester collage? • Can I design a piece of bunting inspired by my research? • Can I design a piece of bunting that includes the joining of other materials? • Can I create one of my designs? • Can I join materials using stapling, gluing, safety pins and sewing? • Can I evaluate my finished bunting using the design criteria? **Designer: Jasper Conran**
	Key Vocabulary Design, evaluate, material, construct, prepare, hygienically, structure, joining, technique, skewer, repeating pattern, desired, architecture, fabric, bunting		
3	**Stone Age Spears – Structure** • Can I use historical information and research to design a SA spear?	**Dragon model – Mechanisms** • Can I research reptile patterns and skill for my model?	**Ancient Egyptian Bread – Food** • Can I conduct research to decide on flavours for my bread?

	• Can I use sketches, diagrams and labels to present my designs? • Can I use different methods of construction to build and attach parts of my model? • Can I select appropriate materials to construct my spear? • Can I test my designs to see if I need to change anything? • Can I evaluate my spear and think of ways to improve it? **Designer: Isambard Kingdom Brunel**	• Can I use sketches, diagrams and labels to present my designs? • Can I use different methods and techniques to attach parts of my model? • Can I select appropriate materials to construct and decorate my model? • Can I create a prototype for my dragon wings? • Can I evaluate my dragon model against the design criteria and think of ways to improve it? **Designer: Henry Ford**	• Can I use sketches, diagrams and labels to present my design? • Can I develop a recipe for my bread? • Can I use techniques to mould and shape my bread? • Can I evaluate my bread and think of ways to improve it? **Chef: Paul Hollywood**
	<u>Key Vocabulary</u> Design, evaluate, research, prototype, material, construct, structure, joining, technique, recipe, spear, Stone Age, size, realistic, sturdy, strength, quantities, flavours, knead, rise,		
4	**3D Nets to create homes – Structure** • Can I identify different types of nets and state what 3D shapes they make? • Can I understand how boxes are made up, designing nets that will make 3D shapes? • Can I design and develop a product to meet a design brief? • Can I select appropriate materials to use to make my box whilst also selecting other materials to make the product attractive in appearance? • Can I evaluate my ideas against the design criteria and consider improvements to my work? • Can I select and use a range of tools to aid me in cutting, sticking and creating my home? **Designer: Norman Foster**	**Moving Models – Mechanisms** • Can I develop an understanding of simple pneumatic systems? • Can I work as part of a team to design and make a model monster with at least one moving part controlled by a pneumatic system? • Can I select from and consider the use of a range of materials according to their functional properties? • Can I regularly collaborate with my peers and consider the views of others to improve my work? **Designer: James Dyson**	**Money containers – Textiles** • Can I demonstrate sufficient understanding and skills in working with textiles to design and make a money container? • Can I complete different designs and identify the different stages of making my money container? • Can I evaluate existing products and test my design to help me select my final design? • Can I make a money container that is functional, fit for purpose and meets their design criteria? • Can I evaluate my final product and can suggest improvements for next time? **Designer: Paul Smith**
	<u>Key Vocabulary</u>		

	Design, evaluate, research, prototype, material, construct, structure, joining, technique, scale, net, tab, pneumatic pump, pneumatic system, air pressure, compress, syringe, tubing, wallet, purse, running stitch, over stitch		
5	**Viking Longboats – Structure** • Can I research different Anglo Saxon or Viking boats, stating features that I like and dislike? • Can I generate and develop ideas through group discussions and labelled designs? • Can I design and develop a product to meet a design brief? • Can I select from and consider the use of a range of materials according to their functional properties? • Can I regularly collaborate with my peers and consider the views of others to improve my work? • Can I evaluate my ideas against the design criteria and consider improvements to my work? **Designer: Alec Issigonis**	**Mayan Chocolate bars – Food** • Can I make links to how the Mayans used chocolate? • Can I design and develop a product to meet a design brief? • Can I taste and select good ingredients to use in my chocolate bar? • Can I design an eye-catching wrapper that links to the Mayans? • Can I create a name and logo for my product? • Can I evaluate my ideas against the design criteria and consider improvements to my work? **Chef: Heston Blumenthal**	**Design a Roller Coaster – Structure/Mechanism** • Can I present my findings from my Disney and roller coaster research? • Can I identify different features of materials and state how they are useful? • Can I design and develop a product to meet a design brief? • Can I make a model of our roller coaster as a marble run, selecting and joining different materials? • Can I create a name and logo for my roller coaster? • Can I regularly collaborate with my peers and consider the views of others to improve my work? • Can I evaluate my ideas against the design criteria and consider improvements to my work? **Designer: Antonio Gaudi**
	<u>Key Vocabulary</u> Design, evaluate, research, prototype, material, construct, structure, joining, technique, scale, model, balance, up thrust, hull, oars, sail, mast, packaging, logo, brand, cacao bean, theme, roller coaster, Disneyland		
6	**3D- models related to War topic – Structure** • Can I design and build a replica 3D model using the historical knowledge I have learnt? • Can I select the appropriate materials for my lifelike model? • Can I safely use cutting tools and cohesive devices when building my model?	**Vegetable dishes – Food** • Can I make a vegetable soup that is nutritious and tasty? • Can I design and develop a product to meet a design brief? • Can I select the appropriate equipment and use this carefully?	**Electricity game – Electronics** • Can I research current electrical games? • Can I make links to science circuits learning? • Can I make an electronic circuit to use in my game?

	• Can I explain why I used the materials that I have chosen? • Can I think about the scale of the different features when planning my design?  **Designer: Sir Jonathan Ive**	• Can I explain why I used the vegetables that I have chosen? • Can I evaluate my ideas against the design criteria and consider improvements to my work? **Chef: Nadiya Hussain**	• Can I design and develop a product to meet a design brief? • Can I evaluate my design against the design criteria? **Designer: Caroline Haslett**
	<u>Key Vocabulary</u> Design, evaluate, research, prototype, material, construct, structure, joining, technique, scale, model, scale, size, nutritious, recipe, vegetarian, electronic, circuit, logo, theme, brand, current, battery, buzzer, switch, voltage, conductor		