Galliard Primary School DT Year 5

	Term 1	Term 2	Term 3
Unit of work	Food *Bread*	Frame structures *Bridges/Skyscapers*	Mechanical systems *Pulleys and Gears*
Link to Programme of study	**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.		
Composite knowledge	What are culture and seasonality? What different techniques can we use? How can we understand the nutritional value of a product? What functions do different utensils have?	What is a frame structure? How can we join our frame structure? What is triangulation and how does it help?	What mechanical components are used and where are they positioned? How does a CAM lift a follower? How does changing the shape of a CAM effect the output?
Intentional knowledge they need to understand (Component knowledge)	Describe what culture and seasonality are Identify different techniques we can use to make bread/biscuits Recognise the different nutritional values in food products and understand what is healthy	Describe what a simple frame structure is and observe frame structures in the local area Observe and construct a variety of different methods to join a frame structure	Describe accurately the different mechanical components and where they are positioned on a functioning CAM system Explain how the rotation of a CAM causes a follower to lift

	Explain and demonstrate the functions different untensils have	Recognise triangulation in frame structures and understand that it helps to strengthen and reinforce the structure	Observe and explain how the shape of a CAM impacts the output pattern
Vocabulary	ingredients, yeast, dough, bran, flour,wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonalityutensils, combine, fold, knead, stir, pour, mix, rubbingin, whisk, beat, roll out, shape, sprinkle, crumble	frame structure, stiffen, strengthen, reinforce, triangulation, stability	cam, follower, axle, shaft, rotation, input movement, output movement
Links to prior knowledge	Have knowledge and understanding about food hygiene, nutrition, healthy eating and a varied diet. Be able to use appropriate equipment and utensils, and apply a range of techniques for measuring out, preparing and combining ingredients.	Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with construction materials. Basic understanding of what structures are and how they can be made stronger, stiffer and more stable.	Experience of axles, axle holders and wheels that are fixed or free moving. Basic understanding of different types of movement. Experience of cutting and joining techniques with a range of materials including card, plastic and wood. An understanding of how to strengthen and stiffen structures.
Cross-curricular links	Mathematics –measurement of mass kg/g; understand and use approximate equivalence of metric and imperial units. Art and design–using and developing drawing skills. Writing –purpose of writing e.g. for planning and evaluation. Mathematics –measurement of mass kg/g. Science –recognise the impact of diet on the way the body develops	History – Ancient Greece Art – use and develop drawing Maths – apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm	Science – forces and movement: explore the effects of simple machines on movement. – identify and compare the suitability of a variety of everyday materials for particular uses. Mathematics – use mathematical vocabulary to describe position, direction and movement.
Oracy & Outdoor Learning Links	Spoken language –articulate and justify answers and opinions.Listenand respond to adults and peers.		Spoken language – ask relevant questions, formulate and express opinions, give wellstructured descriptions and explanations. Listen and respond appropriately, articulate and justify answers, arguments and opinions. Consider and evaluate different viewpoints.