Kingsley Primary School

Year 5 - DT Knowledge Progression Sheet

	Food - Celebrating culture and seasonality	Mechanical Systems - Pulleys or Gears	Structures – Frame Structures
Prior Learning	-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 axles, axle holders and wheels that are fixed or free moving. -Basic understanding of electrical circuits, simple switches and components. -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.	-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.
Designing	-Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. -Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. -Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.	-Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. -Develop a simple design specification to guide their thinking. -Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views.	-Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. -Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. -Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches.

Making	-Write a step-by-step recipe, including a list of ingredients, equipment and utensils -Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. -Make, decorate and present the food product appropriately for the intended user and purpose.	-Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. -Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost.	-Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. -Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. -Use finishing and decorative techniques suitable for the product they are designing and making.
Evaluating	-Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. -Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. -Understand how key chefs have influenced eating habits to promote varied and healthy diets.	-Compare the final product to the original design specification. -Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. -Consider the views of others to improve their work. -Investigate famous manufacturing and engineering companies relevant to the project.	-Investigate and evaluate a range of existing frame structures. -Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. -Research key events and individuals relevant to frame structures.
Technical Knowledge and Understanding	-Know how to use utensils and equipment including heat sources to prepare and cook food. -Understand about seasonality in relation to food products and the source of different food products. -Know and use relevant technical and sensory vocabulary.	-Understand that mechanical and electrical systems have an input, process and an output. -Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. -Know and use technical vocabulary relevant to the project.	-Understand how to strengthen, stiffen and reinforce3-D frameworks. -Know and use technical vocabulary relevant to the project.

Key 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, seasonality, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble design specification, innovative, research, evaluate, design brief	pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams mechanical system, electrical system, input, process, output design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional