YEAR 3

DT Progression Overview

	Shell Structures	Cooking and Nutrition Seasonal and local	Systems Mechanical
Big Idea	Agents for change Antarctica	Ancient Ancestors STONE AGE	Where in the world? North Yorkshire
Project on a page	Shell Structures	Healthy and Varied Diet	Levers and Linkages
Suggested activities	• Design, make and evaluate a keepsake box for treasured items from Shackleton's boat. Shell structures.	• Cooking and nutrition- make a Stone Age lentil / bean broth	• Designing, creating and evaluating levers and linkages for a pop-up Punch and Judy
Famous in the Field (suggested designs and designers)	Roald Amundsen Pingu	Tommy Banks (Roots-York) James Martin Frances Atkins	Roman catapult designs (Scorpion, Ballista and Onager) The Romans Pop-Up: A Pop up Book To Make Yourself (Andy Hall and Maggie Hall) David Hawcock is a designer specialising in pop-up books, 3-D novelty items, and advertising. He has created many well-known titles, including the Classic Pop-Up Tale series (Dracula, Frankenstein, Sherlock Holmes) and The Amazing Pull-Out Pop-Up Body in a Book.
Design	• Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and purpose of the product. • Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas.	• Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. • Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.	• Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas.
Make	• Order the main stages of making. • Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy. • Explain their choice of materials according to functional properties and aesthetic qualities. • Use finishing techniques suitable for the product they are creating.	• Plan the main stages of a recipe, listing ingredients, utensils and equipment. • Select and use appropriate utensils and equipment to prepare and combine ingredients. • Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.	• Order the main stages of making. • Select from and use appropriate tools with some accuracy to cut, shape and join paper and card. • Select from and use finishing techniques suitable for the product they are creating.
Evaluate	• Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used. • Test and evaluate their own products against design criteria and the intended user and purpose.	• Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. • Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.	• Investigate and analyse books and, where available, other products with lever and linkage mechanisms. • Evaluate their own products and ideas against criteria and user needs, as they design and make.
Technical Knowledge and Understanding	• Develop and use knowledge of how to construct strong, stiff shell structures. • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Know and use technical vocabulary relevant to the project.	• Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.	• Understand and use lever and linkage mechanisms. • Distinguish between fixed and loose pivots. • Know and use technical vocabulary relevant to the project.

Prior Learning	• Experience of using different joining, cutting and finishing techniques with paper and card. • A basic understanding of 2-D and 3-D shapes in mathematics and the physical properties and everyday uses of materials in science.	• Know some ways to prepare ingredients safely and hygienically. • Have some basic knowledge and understanding about healthy eating and The eatwell plate. • Have used some equipment and utensils and prepared and combined ingredients to make a product.	• Explored and used mechanisms such as flaps, sliders and levers. • Gained experience of basic cutting, joining and finishing techniques with paper and card.
Key Vocabulary	shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating font, lettering, text, graphics, decision, evaluating, design brief design criteria, innovative, prototype	name of products, names of equipment, utensils, techniques and Ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet planning, design criteria, purpose, user, annotated sketch, sensory evaluations	mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating user, purpose, function prototype, design criteria, nnovative, appealing, design brief