St Peters C.E Primary School Curriculum Overview – Design Technology

Term	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Spring	**Creepy Crawlies**	**Wolf-Proof house** Structures	**Wacky Windmills** Structures	**Stone-Age Jewellery** Textiles	**Telling the Time** Mechanisms	**Mexican Food** Food Technology	**Growing Greenhouses** Structures
	EYFS Profile: **Development Matters EYFS** 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 Return to and build on their previous learning, refining ideas and developing their ability to represent them. **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.	*KS1 NC Objectives:* Create a 3D model house for the one of the Little Pigs from construction materials that is 'wolf-proof' TBAT: • To design a purposeful / functional product for someone else • To select from and use construction materials and textiles according to their characteristics • To build structures, exploring how they can be made stronger and more stable • To recognise if their ideas and products solved a problem or not	*KS1 NC Objectives:* Create a freestanding 3D model structure, with a turning axle, that is wind-powered TBAT: • To use mechanisms (axles) in their products • To make models to communicate their ideas • To test their model and evaluate their design by saying whether it did the job it was supposed to do or not. • To be able to improve a structure, knowing how to make it more stable	*KS2 NC Objectives:* Design and make a replica Stone-Age necklace to 'sell' in a Museum TBAT: • To use research to inform the design of a functional product aimed at particular people • To select from and use a wider range of construction materials and components, according to their functional and asethetic properties • To understand how key events in DT have shaped the world (Prehistoric) • To be able to show ideas using simple computer aided design. • To consider the views of others to improve their work.	*KS1 NC Objectives:* Make a device that can be used to measure a duration of time to boil an egg TBAT: • To understand how key events in DT have shaped the world (Ancient History) • To investigate and analyse a range of existing products • To use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose • To select from and use a wider range of construction materials and components, according to their functional properties • To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	*KS1 NC Objectives:* Create a Mexican inspired recipe using a tortilla wrap to sell in a street stall TBAT: • 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. • Write a recipe, explaining key steps, methods and ingredients • 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. • 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	*KS1 NC Objectives:* Create a mini greenhouse suitable to grow a plant as an Easter gift or Mother's Day gift TBAT: • 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. • 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. • 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.
	Why here? Why now To tie in with outdoor learning of 'Creepy Crawlies'	*Why here? Why now?* Links to Reading on Three Little Pigs. Geographical links to home. Reinforces materials learning in Science.	*Why here? Why now?* Reinforce Geography learning on weather. Links to locality in History: buildings and industry in the Humber area. Building upon Y1 learning of structures.	*Why here? Why now?* Reinforcing Stone-Age learning from History. Looking at Stone-Age technology Links to Maths (3D shapes, symmetry) Links to ICT (copy and paste / drawing shapes)	*Why here? Why now?* Links to History - developments in DT from Prehistory to Ancient History Links to Maths (Time)	*Why here? Why now?* Links to Reading books on Mexico. Links to PSHE healthy me.	*Why here? Why now?* Using and applying previous learning on structures Links to Maths: 2D and 3D shapes Science – properties of materials, monitoring
	Key vocabulary: cut, pack, natural, material, recycle, hotel, bug,	Key vocabulary: structure, walls, foundation, stable, roof, brick bonding ideas, model, test, worked / not worked, change	Key vocabulary: sails, blades, wind-powered, structure, axle, base, top, thicker, thinner, buttress	Key vocabulary: Patterned pieces, symmetry, pierce, thread, replica research, annotated sketch, purpose, criteria, aesthetics, computer-aided design	Key vocabulary Water clock, sand timer, duration, elapsed	Key vocabulary Healthy, varied diet, savoury, seasonality, national dishes, processed Adapt, evaluate, annotated sketch, cross sectional diagram	Key vocabulary rigid, frame structure, reinforce, supports, secured, tethered, transparent Adapt, evaluate, exploded diagrams
	Core knowledge: To manufacture a bug hotel out of recycled items: • What bugs can they see in their surroundings? • They must use recycled materials wherever possible and aim to keep the accommodation as natural as can be.	**Core Knowledge** To know: • A structure is something made and put together • The parts of a building: roof, walls, foundation	**Core Knowledge** To Know: • That the sails or blades of a windmill are moved by the wind. • That windmills are used to generate power and were used for grinding flour.	**Core Knowledge** To know: • To use research to inform the design of a functional product aimed at particular people • To understand how key events in DT have shaped the world (Stone Age technology)	**Core Knowledge** To know: • To understand how key events in DT have shaped the world • That in Ancient History, sand or water was used to measure a set duration of time.	**Core Knowledge** To know: • Health and safety in production to minimise cross contamination. • That 'flavour' is how a food or drink tastes.	**Core Knowledge** To know: • A greenhouse is a frame structure normally covered in an outer shell of glass, which is used to retain heat. • Food is either grown, reared, or caught for food. •Different foods are grown around the world and that a greenhouse makes it

	• What do 'Bug-Hotels' look like? • How will they ensure it will last in the varying weather conditions? • Where will it be placed? • How will they test if it has been successful?	• To know that bricks arranged in different patterns have different strengths • That buildings need to be stable and not easily moved or destroyed	• That a structure is something built for a reason. • That adding weight to the base of a structure can make it more stable • To know that having a wider base can make a structure more stable • To know that buttresses can make a structure more stable	• That Stone-Age jewellery was made from natural materials and it is thought that it showed the wearer's status •		• That many countries have 'national dishes' which are recipes associated with that country. • To know that 'processed food' means food that has been put through multiple changes in a factory. • Understand how key chefs have influenced eating habits to promote varied and healthy diets.	possible to grow certain crops all year round • That structures can be strengthened by manipulating materials and shapes. • That in the real world, design can impact users in positive and negative ways.