



BARNSTON PRIMARY SCHOOL KEY STAGE 1 AND 2 NEW CURRICULUM OVERVIEW FROM SEPTEMBER 2014

School Subject: DESIGN AND TECHNOLOGY

	Autumn Term 1	Spring Term 2	Summer Term 3
F2 Yearly	Technologies – including food technology relating to the topics studied (see creative curriculum, although in F2 learning will be child led and based on the children’s interests, therefore they are adaptable). Construction area weekly with key skills. *All objective led across the ages and stages of development.	→	
Year 1/2 Cycle 1	Fire Design Tudor buildings and make sure the design is purposeful, functional and appealing – communicate ideas, draw ideas, make mock-up and then select from a range of materials and equipment – evaluate each other’s end product. Explore building structures and strength.	Castles MOE – role of designer/engineer to create and test a small siege engine <ul style="list-style-type: none"> • Research and test materials, mechanisms levers, slides, wheels and design ideas. • Identify and use a range of methods to secure materials together for a simple timber structure. • Evaluate finished siege engine and identify strengths and areas for improvement. 	Oceans Research, plan, cost and help prepare a seafood (healthy) meal. Draw out designs, evaluate their appeal, refine designs and then cost the meal. Prepare and cook the meal following instructions carefully and talk about the science behind the food being cooked. Taste (parental permission) and evaluate their food and suggest any ideas for improvement. Show they understand the principles of a healthy and varied diet. Discuss where food comes from as food from the seas and oceans as a starting point.
Year 1/2 Cycle 2	Dinosaurs (Shoe design for humans) Design, create and evaluate a shoe, thinking about the purpose of the shoe and the materials needed to make it an appropriate design. Explore a range of existing shoes. Use and select from a wide range of materials and components including construction materials and textiles as needed to mould the characteristics of the shoe.	Pirates Construct a 3D representation of a pirate ship from card from a given resource. To select methods with which to fix/fasten model together. Evaluate the effectiveness of the model in term of cutting skills, construction and accuracy.	Famous People Design a garden for a famous person – think about the purpose and function of the garden – what questions would you ask the famous person to find out the function? How can it be made appealing? Draw up templates and communicate ideas. Make a mock-up of the garden including soil, sand samples etc. Evaluate each other’s work against the design criteria.
Year 3/4 Cycle 1	A Local Study – Tudors and Little Moreton Hall Creation of lavender pomander during Tudor day by sewing pieces of material together to create a bag. Select from and use a wider range of tools and equipment to perform practical tasks [for example,	Volcanoes and Earthquakes Design, creation and evaluation of volcanoes and earthquake proof buildings. Create and explode volcanoes (in groups) using paper mache.	Rainforests Children to create a textile rainforest – links to deforestation. Generate, model and communicate their ideas through discussion and annotated sketches and use computer-aided design. Evaluate

	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. Make a mock-up and test on material sewing stitches for effectiveness evaluate the end result against their design and the work of others to see where improvements can be made.	Create earthquake proof buildings using straws and marshmallows. Discuss and evaluate the structure and how to strengthen, stiffen and reinforce the structure. Discuss and understand how key events from earthquakes and volcanoes have helped key individuals in design technology shape the world – look at building structures in countries such as Japan, Thailand and South America to see what strategies are used.	their ideas against their own design criteria and consider the views of others at the product end. Children to design and create a wind-up toy – butterfly. Use gears and mechanisms as well as incorporating circuits into the wings to make the skin glow as if the sun is shining on the wings. Research butterflies, their design and structure and make prototypes before final creation.
Year 3/4 Cycle 2	Romans Design and make their own Roman siege machine. Understand and use mechanical systems such as gears, pulleys, cams, levers and linkages. Use research and develop design criteria to inform the design of an innovative and functional appealing machine that is fit for purpose. To sketch annotated ideas with cross-sectional and exploded diagrams. To build small prototypes in groups and discuss. To use computing and modern day technology to work out the projection of missiles with the machines for effectiveness.	Saxons Split the class into 4 groups and design a Saxon menu based on seasonality and the ingredients available in different seasons. Discuss modern day seasonality of products, comparing with modern trade which provides out of season products. Go back to basics and how the Saxons had to work with what was available. Design, prepare and cook four savoury dishes using a range of cooking techniques and using the products Saxons would have had available in the 4 seasons. Compare and contrast the finished dishes and taste to evaluate, rotating around the 4 seasons.	Vikings Design a Viking long boat and shields. Think about materials needed for strength and purpose and for the waterproofing of the boat – investigate and analyse a range of existing products and discuss what would have been available in Viking times. Use the Viking era and their skills in technology to understand how key events have helped to shape the world. Select from a wide range of materials and components to construct their long boats for functionality and aesthetic qualities. Evaluate their ideas against their designs.
Year 5/6 Cycle 1	Britain since the end of WW2 Look at rationing and how this influenced recipes in WW2. Design recipes from the ingredients available and cook these, working out the costs etc. Discuss the health aspects of the food and look in detail at the diet available at the end of WW2. Compare and contrast with a healthy and varied diet in 21 st century. Design a menu in groups and cook a variety of healthy savoury dishes using a range of cooking techniques.	The Mayans Design and create a funeral mask based on Pakal's funeral mask. Think about the materials used in Mayan times, wood, stone, bones, jade, ceramic materials. Use research to develop their designs and make sure that the mask is innovative, appealing and fit for purpose. Generate annotated sketches and computer aided designs. Select a wider range of tools and equipment to perform the creation of the mask accurately. Evaluate their product against their design ideas and take on board the views of others.	Local Field Study Create and design a product that would be useful in the 21 st century in the local area studied e.g. farm equipment, meteorological equipment, wind power machines, water power etc. Investigate and analyse a range of existing products. Use computing to program, monitor and control their product. Select from a wide range of tools and equipment to make their product functional, practising using prototypes. Create and evaluate their end product against their design criteria.
Year 5/6 Cycle 2	The Egyptians Use research and develop design criteria to design and make their own pyramid. Use computer programs to monitor and control their design and to work out the accuracy applied to the chambers they put within the pyramid. Discuss the technological	Ancient Greece Examine Greek diet and discuss the healthiness of this. Research the seasonality of ingredients in Greece during the era and compare with modern Greece. Compare further with seasonal availability in the UK and discuss which ingredients produce a	Stone Age to Iron Age Look at building structures – how to strengthen, stiffen and reinforce structures to make them more complex. Think about insulation and the importance of this during this era, as well as thinking about how to incorporate warmth.

	<p>ability of the Egyptians and the fact that this shaped the world we live in. Make pyramids with accuracy, adding in chambers in their design and choosing appropriate materials. Evaluate their work against their own design criteria and consider the views of others to improve their ideas.</p>	<p>healthier all round diet. Create recipes based on Greek ingredients and produce savoury dishes. Discuss how to dress a Greek table/area around the table. Use circuits in table setting designs to make the food more appealing – use Ancient Greek culture with modern circuits to create a special table.</p>	<p>Investigate a range of products that would have been available and select and construct from these.</p>
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All Design and Technology assessments will be on-going every lesson and summative assessments will be termly in relation to the programmes of study in the New Curriculum.