



South Gosforth First School
Design & Technology – Year 3 Long Term Plan

Purpose of Study

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Aims

In line with the National Curriculum for Design Technology it is our aim to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- Critique, evaluate and test their ideas and products and the work of others
- Understand and apply the principles of nutrition and learn how to cook.



Autumn	Castles (Structures)		
Character Culture Creativity Challenge	Prior Learning Pupils will be familiar with the design and creating process of making strong, stable and stiff structures using joining techniques and paper folding. They will have explored the features of natural and made structures, comparing the stability of different shapes.		
	Key Learning Intentions (Skills) Design: To design a castle with key features, drawing and labelling using 2D and 3D shape labels, materials needed and colour. Make: To construct a range of geometric shapes using nets. To make facades from range of recycled materials. Evaluate: To evaluate own work and the work of others in comparison to the original design. To suggest points for modification of individual designs.		
	Key Learning Intentions (Knowledge) To know that... • wide and flat based objects are more stable • the strength and stiffness are important in structures • a paper net is a 2D shape that can become a 3D shape	Key Vocabulary 2D 3D castle design key features net scoring shape stable stiff strong structure tab	
	Overview of outcomes Children will draw and label a simple castle that includes the most common features. They will recognise that a castle is made up of multiple 3D shapes and design a castle with key features which satisfy a given purpose. They will score or cut along lines on the net of a 2D shape and use glue to securely assemble geometric shapes. They will utilise skills to build a complex structure from simple geometric shapes. Finally, they will evaluate their work by answering simple questions.		
	Milestones of Learning		
	Features of a castle	Children will: identify different features of castles, design their own castle, label the features of their castle, explain why a castle needs to be strong and stable.	
	Design a castle	Children will: recall the features of a castle, add two design points to the design specification to appeal to the person/purpose of my castle, draw the design of my castle using 2D shapes and labelling: ○ the 3D shapes that will create the features; ○ the materials needed; ○ the colours to be used.	
	Nets and structures	Children will: know that a net is what a 3D shape would look like if it were opened out flat, construct a range of 3D geometric shapes using a net by: ○ Cutting along the bold lines. ○ Folding along the dotted lines. ○ Keeping the tabs the correct size. ○ Making crisply folded edges.	



		Constructing the net using glue to make a geometric shape.
	Building a castle	Children will: construct their castle to meet the requirements of my brief by: - Making neat 3D shapes using nets. - Stacking shapes and recyclable materials to make the structures of my castle. - Creating a castle base to secure my structures to. - Adorning my castle with facades and other decorative features, evaluate their work and the work of others.
	N/A	Enhancements

Spring	Egyptian Collars (Textiles)	
Character Culture Creativity Challenge	Prior Learning Pupils will be familiar with using a simple running stitch to join 2 pieces of material together. They will have been introduced to the skills of threading needles, starting and finishing a run of stitches. They have embellished their pieces of work by adding buttons and extra material with glue.	
	Key Learning Intentions (Skills) Design: To follow design criteria to make an Egyptian collar. Make: To select and cut fabrics. To thread needles and tie knots with greater independence. To sew cross stitch to decorate or join fabric. To decorate fabric with applique. Evaluate: To evaluate the end product.	
	Key Learning Intentions (Knowledge) To know that... - appliqué is a way of mending or decorating a textile by applying smaller pieces of fabric. - A product's function relies on material choice - There are different types of material and they have different properties	Key Vocabulary asymmetrical, symmetrical appliqué cross-stitch Cotton, polyester, silk
	Overview of outcomes Children will demonstrate their ability to use cross-stitch as a decorative feature or to join two pieces of fabric together. They will design, cut and shape their template for an usekh or wesekh collar with increasing accuracy. Their product will involve decorating their Egyptian collar using a variety of techniques, such as appliqué, cross-stitch, beads, buttons and pinking. They will begin to recognise different types and qualities of fabrics and begin to explain the aesthetic and functional properties of some of their material choices.	



	Milestones of Learning	
	Cross-stitch and applique	Children will: use the cross stitch sewing technique, know how to applique and reflect on the techniques that they have used.
	To develop and use a template	Children will: design a collar based on their Egyptian history learning, develop a template for a product and understand how to adapt their template to fit a design criteria.
	To assemble fabric parts into a product	Children will: cut and shape fabric accurately, use the template to create the main parts of their product, use stitches to join the fabrics and understand that different types of fabrics have different properties.
	To decorate fabric using applique and cross stitch	Children will: follow their design criteria to use cross stitch to complete their product and add applique. They will the evaluate their end product and suggest improvements.
	Enhancements	
	History unit: Ancient Egyptians	

Summer	Eating Seasonally (Cooking and Nutrition)	
Character Culture Creativity Challenge	Prior Learning Pupils will be familiar with the Eatwell Plate and the concept of a balanced diet made up of all the food groups. They are familiar with preparing raw vegetables by cutting, slicing and grating. They have followed a design brief to plan, make and evaluate a savoury food product.	
	Key Learning Intentions (Skills) Design: To choose ingredients based on a design brief. Make: To follow the instructions within a recipe. To peel and cut ingredients safely Evaluate: To taste and describe the texture and flavour of ingredients.	
	Key Learning Intentions (Knowledge) To know that... - Seasonal means foods grown in a given season in a given country. - Eating seasonal foods can have a positive impact on the environment - Similar coloured fruits and vegetables often have similar nutritional benefits	Key Vocabulary Appearance texture mock-up peel grate snip seasonal seasons design evaluate export import Mediterranean climate tropical
	Overview of outcomes Children will know that fruits and vegetables grow in different countries based on their climates and understand that seasonal fruits and vegetables grow in a given season. They will understand that eating seasonal fruit and vegetables positively affects the environment. Using their knowledge of seasonal vegetables they will design a tart recipe using seasonal ingredients.	



	Milestones of Learning	
	To explain why food comes from around different places around the world.	Children will: identify some fruits and vegetables that cannot be grown in the UK, label countries where different fruits and vegetables grow.
	To explain the benefits of seasonal food.	Children will: know that importing food has an impact on the environment, match the fruits and vegetables with the season in which they grow in the UK and find recipes containing seasonal foods.
	To develop cutting and peeling skills	Children will: identify equipment used for preparing food, explain why some foods may need to be prepared and explain the safety rules for food preparation.
	To evaluate seasonal ingredients	Children will: identify current seasonal foods, taste various fruits and vegetables and describe their flavours and use this evaluation to make a taste wheel.
	To design a mock up using criteria	Children will: design a puff pastry tart using seasonal vegetables, use colours to identify nutritional benefits and describe the vegetable start and the benefits of the ingredients.
	To evaluate a dish	Children will: taste their product and provide feedback, consider the taste, texture and appearance to evaluate and use feedback to identify strengths of the product.
	Enhancements Science unit: animals including humans Art unit: growing artists	