



South Gosforth First School
Design & Technology – Year 2 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	Baby Bear’s Chair (Structures)	
Character Culture Creativity Challenge	Prior Learning Pupils will be familiar with the design, make and evaluate process. They will know that their products have to suit an intended audience and have to be suitable for them to use for the intended purpose. They will have used a range of materials such as paper, card and fabric and have been introduced to joining methods using scissors, glue and masking tape.	
	Key Learning Intentions (Skills) Design: To generate and communicate ideas using sketching and modelling. To learn about different types of structures in the natural world and everyday objects. Make: To make a structure according to design criteria. To create strong joints and structures from paper, card and tape. To build strong, stiff structures by folding paper. Evaluate: To explore the features of structures and compare the stability of different shapes. To test the strength and stability of own structures. To identify the weakest part of a structure.	
	Key Learning Intentions (Knowledge) To know that...	Key Vocabulary design criteria man-made natural properties structure stable shape model test
	• shapes and structures with wide, flat bases or legs are the most stable. • shape of a structure affects its strength. • materials can be manipulated to improve strength and stiffness. • a structure is something which has been formed or made from parts. • a ‘stable’ structure is one which is firmly fixed and unlikely to change or move. • a ‘strong’ structure is one which does not break easily. • ‘stiff’ structure or material is one which does not bend easily.	
	Overview of outcomes Children will identify man-made and natural structures and identify stable and unstable structural shapes. They will identify features that make a chair stable. In the making part of the unit they will work independently to make a stable structure, following a demonstration, explaining how their ideas would be suitable for Baby Bear. They will produce a model that supports a teddy, using the appropriate materials and construction techniques, explaining how they made their model strong, stiff and stable.	
	Milestones of Learning	
	Exploring stability	Children will: identify natural and man-made structures, understand what is meant by stability and identify when a structure is more or less stable than another, explain that shapes and structures with wide, flat bases or legs are the most stable.
	Strengthening materials	Children will: understand the meaning of the words strength, stiffness and stability, understand there are different ways to fold paper to improve its strength and stiffness, build a strong and stiff structure by folding paper, test the strength of the structure.



	Making baby bear's chair	Children will: remember that chairs are structures that need to be strong, stiff and stable, create joints and structures from paper, card and tape.
	Fixing and testing Baby bear's chair	Children will: identify that the chair they design needs to be strong, stiff, stable and support Teddy, create joints and structures, evaluate the structure according to the design criteria.

Spring	Pouches/Bags (Textiles)	
Character Culture Creativity Challenge	Prior Learning Pupils have had the opportunity to use felt in previous years. In early years, they were able to decorate using different materials. They are aware of joining materials using tape, glue or split pins. This is the first opportunity pupils may have had to learn sewing skills. They have used templates to draw round objects.	
	Key Learning Intentions (Skills) Design: To design a pouch for Bad Nana Make: To select and cut fabrics. To cut fabric using a template and neatly pin the fabric together. To thread a needle. To sew a running stitch. Evaluate: To evaluate the quality of stitching. To discuss as a class, the success of their stitching using success criteria. To identify aspects of their peers' work they like and why.	
	Key Learning Intentions (Knowledge) To know that... • Sewing is a method of joining fabric • Different stitches can be used when sewing • It is important to tie a knot after the final stitch • A thimble can be used to protect fingers	Key Vocabulary decorate fabric fabric glue knot needle needle threader running stitch sew template thread
	Overview of outcomes Children will sew a running stitch with regular-sized stitches and understand that both ends must be knotted. They will prepare and cut fabric to make a pouch from a template. Using their acquired skills in sewing they will join the two pieces of fabric together. Finally they will decorate their pouch using the materials provided.	
	Milestones of Learning	
	Sew a running stitch	Children will: thread a needle, sew a running stitch
	Use a template	Children will: use a template, cut fabric neatly, pin fabric accurately, design a pouch



	Make a pouch by joining fabrics using a running stitch	Children will: sew neat, even stitches, tie a knot at either end of the thread, design decorations for my product
	Decorate the pouch using glue or stitching	Children will: join items using glue or stitching, decorate fabric using different items, evaluate their own designs.

Summer	Healthy Wraps (Cooking and Nutrition)	
Character Culture Creativity Challenge	Prior Learning Pupils developed their food preparation skills in Year one, learning how to cut, slice and juice soft fruits. They looked at the difference between fruits and vegetables and how to tell them apart. The science units in Key Stage 1 give opportunities to look at food groups and the need for a balanced diet.	
	Key Learning Intentions (Skills) Design: To design 3 wrap ideas Make: To chop foods safely. To grate foods. To snip smaller foods instead of cutting. To spread soft foods. Evaluate: To describe appearance, smell and taste.	
	Key Learning Intentions (Knowledge) To know... • 'Diet' means the food and drink that a person or animal usually eats • A balanced diet is made up of the 5 main food groups: carbohydrates, fruits and vegetables, protein, dairy and oils. • They should eat a range of foods from each group and roughly how much of each food group • 'Ingredients' means the items in a recipe or mixture • How to cut, grate, snip and spread food • How to review and evaluate by giving a score	Key Vocabulary appearance balanced carbohydrates chopping board combination cut grater ingredients oils proteins
	Overview of outcomes In line with the Year 2 science outcomes, children will be able to name the main food groups and identify foods that belong to each group. They will describe the taste, feel and smell of a given food. In the planning stage, they will think of three different wrap ideas, considering flavour combinations. Children will create a design and then construct a wrap that meets the design brief and their plan.	
	Milestones of Learning	
	Food groups and balanced meals	Children will: name the five food groups, match foods with the food group they belong to, explain how much of each food group I should have every day, identify foods they like, explain the food groups in a meal, plan a balanced menu



	Preparing ingredients	Children will: identify equipment used for preparing food, practise food preparation skills using a range of equipment, justify using a piece of equipment with a type of food.
	Select balanced combination of ingredients Plan recipes based on taste test	Children will: select foods from specific food groups, describe the taste of different foods, explain why they have chosen to put foods together. follow design criteria, design three different wraps, justify the choice I have made.
	Create and evaluate wraps.	Children will: select the ingredients for their recipe, identify the equipment needed to prepare different foods, decide if they like different wraps and choose their favourite.