Skelton School

Design and Technology - Curriculum Map

(1 year cycle)	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Children have numerous opportunities throughout the EYFS to develop early skills which are crucial in later DT units across the curriculum. This is done through continuous provision and a play-based approach alongside adult led sessions. Examples of this include – cutting, sewing, joining, weaving, assembling, problem solving, building structures, designing and evaluating. Some examples of adult led sessions below.						
• EYFS	All about me **Food –** Healthy Eating 1. Learn about the basic principles of a healthy and balanced diet and the importance of fruit and vegetables. 2. Learn about the importance of basic hygiene. 3. Sample a range of different fruits and vegetables. 4. Use tools to chop and assemble fruit kebabs. 5. Evaluate.	Travel and Transport **Materials/construction** – Recycled material vehicles. 1. Learning about different vehicles. 2. Designing what they would like their finished product to look like. Thinking about the materials they will use. 3. Make – cutting skills, joining skills, experimenting with different materials and tools and problem solving. 4. Evaluate – What do they like/dislike?	Space **Materials/construction** – Papier Mache Planets 1. Learning about the planets – key features. 2. Make collaboratively using a range of new skills, ensuring a strong structure. 3. Evaluate.	Growing and Changing	Fairy Tales	Under the Sea **Materials/construction** - Recycling project. 1. Learn about properties of different materials that can be recycled. 2. Collaborate to create a whole class project using only recycled materials (child led so finished products will differ year on year) 3. Evaluate
Links	Fruit salad project KS1 Seasonal foods LKS2	Recycled musical instruments KS1 Wheeled bathing machines KS1				Recycled musical instruments KS1
In Reception, the seasons topic runs throughout the year and provides opportunities for skills and knowledge-based sessions which feed into the; communication and language, personal, social and emotional development, physical development, understanding the world and expressive art and design areas of learning, along with others. These include activities such as; soup making, working in the growing garden, baking, constructing bird feeders, greetings card making and other craft activities.						
Years 1-6 Cycle A	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 and 2	Materials **Materials/construction -** Recycled materials musical instruments. 1. Evaluate a range of existing products (real musical instruments) identifying key features for both functionality and visual appeal. 2. Design own musical instrument. Generate ideas through discussion, drawing and labelling. Focus on functionality and appeal, how will it make a sound and what features are there to make it look nice. 3. Constructing musical instrument from recycled materials. Select from and use a range of tools to perform practical tasks. Select from and use a wide range of materials and components. Build structures exploring how they can be made stronger, stiffer and more stable. 4. Midway evaluation. What is working and how can we make them better, revisit initial designs etc. 5. Continue to construct/improve model. 6. Evaluate model against design criteria and existing products. Assess selves throughout the process, which aspects were difficult and how were these overcome, where have we improved.	Materials	This is where we live **Food –** Traditional English scones. 1. Explore and evaluate a range of different products. Trying plain, fruit and cheese scones. Discussing food groups etc. Understand where food comes from. 2. Design own scones. Choose flavour and shape. Draw and label design. 3. Prepare and cook scones following a simple recipe. Select from and use a wide range of tools and equipment to perform practical tasks. Select from and use a wide range of ingredients according to their characteristics. 4. Evaluate design against design criteria and compare to existing products.	This is where we live	Habitats **Materials/construction –** Habitat enhancements. **1.** Explore existing products, look at the visual appeal and function of bird houses, bird feeders, bug hotels, hedgehog hides, pond ramps etc. 2. Design own habitat enhancement. Think about the function and purpose of this design. Which materials will be most suitable etc. Draw and label. 3. Create mock up of design using card. Following initial design sketches create mock up using card to get a better understanding of the making process. 4. Make the habitat enhancement. Select from and use a range of tools to perform practical tasks. Select from and use a wide range of materials and components based on their characteristics. Build structures, exploring how they can be made stronger, stiffer and more stable. 5. Evaluate own ideas against design criteria. 6. Ongoing evaluation once products are in the environment, how are they weathering, are they being used as was intended?	Habitats
Links			LKS2 – Seasonal foods UKS2 – Making Bread		UKS2 - Labyrinths	
In KS1, the seasons topic runs throughout the year and provides opportunities for skills and knowledge-based sessions which work towards the Design and Technology National Curriculum objectives along with others. These include activities such as; soup making, working in the growing garden, baking, constructing bird feeders, greetings card making and other craft activities.						

Year 3 and 4	Anglo-Saxons, Vikings & Scots	Anglo-Saxons, Vikings & Scots **Construction -** Packaging 1. Investigate a range of packaging 2. To construct nets for 3D shaped packaging 3. To explore the use of graphics on packaging 4. To design a package for a purpose 5. To make a packaging box following a design 6. To evaluate the finished product	Ancient Egypt	Ancient Egypt **LED Circuits –** Light up signs 1. To investigate and analyse illuminated signs 2. To understand how LEDs may be used instead of traditional incandescent bulbs in series circuits 3. To develop ideas for a decorative illuminated sign 4. To select and use tools, equipment, materials and components to make the enclosure of a decorative illuminated sign 5. To construct a working circuit with one or more lights and fit it in a decorative illuminated sign. 6. To investigate ways in which computers can be used to program and control lights in a product.	Plants of the world	The Lake District – Lakes and Mountains **Food –** Seasonal food 1. To cook using British ingredients 2. To know how seasonal fruits in Britain are grown and processed 3. To understand why vegetables form an important part of a healthy diet 4. To find out about seasonally produced eat can form part of a heathy diet To know how fish are caught and reared, processed and used in healthy meals
Links				UKS2 – Computer systems		KS1 – English scones UKS2 – Making Bread
Year 5 and 6	Exploration **Food - Making Bread** 1. To investigate and evaluate bread products according to their characteristics. 2. To learn how bread products are an important part of a balanced diet and can be eaten in different ways. 3. To find out which different ingredients are needed to make bread and how ingredients can be altered and mixed to create different effects. 4. To be able to design a new bread product for a particular person or event. 5. To be able to make bread based on a plan and design. 6. To be able to evaluate a finished product.	Exploration	Ancient Islamic Civilisation		Ancient Greece **Materials/Construction -** Labyrinths 1. Read a Greek myth and understand what a labyrinth is 2. Look at a range of arial view of labyrinth designs and analyse them for features they like 3. Design a range of their own labyrinth designs and annotate with measurements that they will need. 4. Use a range of measuring, cutting, smoothing and use a variety of materials to create a working labyrinth. 5. Evaluate their design for strengths and areas for improvement or areas of their design that they had to change	Ancient Greece **Computer System – ICT with SK** 1. To design an electronic product 2. To code and debug a program 3. To create a website 4. To create and edit a video 5. To understand the techniques used in advertising a product
Links	KS1 – Scones LKS2 – Seasonal foods				KS1 – Habitat enhancements	LKS2 – LED light up signs
Years 1-6 Cycle B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

Year 1 and 2	Myself and other animals	Myself and other animals **Food -** Making a healthy fruit salad. 1. Evaluating own likes and dislikes – trying a range of different fruits/existing products. Understand where food comes from. 2. Designing purposeful, functional and appealing products for other users following design criteria and considering preferences. Communicating these ideas through discussion and drawing. 3. Good food hygiene practices. 4. Use the basic principles of a healthy and varied diet to prepare dishes. 5. Cutting, slicing, grating and peeling skills where needed while preparing fruit salad. Select from and use a range of tools/equipment to perform practical tasks. 6. Evaluate their ideas and products against design criteria. **Textiles** – Delightful Decorations (Plan Bee) 1. Explore and evaluate a range of existing products. Discuss function, visual appeal, likes and dislikes. 2. Practice cutting skills – Select from and use a range of tools and equipment to perform practical tasks. 3. Practice sewing skills - Select from and use a range of tools and equipment to perform practical tasks. 4. Design a hanging Christmas decoration – design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing and templates. 5. Make a Christmas decoration - Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including textiles and embellishments according to their characteristics. 6. Evaluate Christmas decoration – Evaluate their ideas and products against design criteria.	My wonderful world and flying high **Mechanisms –** Moving pictures (flying machines). 1. Evaluate existing products – Look at pre-made models. What do we like dislike, which mechanisms are most impressive? Exploring how each was constructed. 2. Designing own moving picture – Choose a mechanism and draw and label a mock up. 3. Creating own moving picture – Children create the different elements – background, flying machine that will move and components for the mechanism. Then assembling. Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components according to their characteristics. **Explore and use mechanisms [for example, levers, sliders] in their products.** 4. Evaluate their ideas and products against design criteria. What went well and what could be improved. Which aspects were easy/difficult? 5. Edit and improve products, can visual appeal or function be improved, how? 6. Re-evaluate.	My wonderful world and flying high	Seaside holidays **Materials/construction and mechanisms –** A wheeled bathing machine. 1. Evaluate existing products – Look at pictures of Victorian bathing machines. Identify key features and record preferences. 2. Design own bathing machine – Draw and label a mock up. 3. Make a bathing machines using small boxes, wheels and axels – select from and use a range of tools to perform practical tasks. Select from and use a wide range of materials and components. Explore and use mechanisms [wheels and axels] in products. 4. Evaluate finished product against design criteria. Thinking about functionality and visual appeal.	Plants
Links		EYFS – Healthy eating LKS2 – Seasonal foods LKS2 – Seasonal Stockings UKS2 – A Stuffed Christmas Decoration	LKS2 – Moving storybooks		EYFS – Recycled material vehicles UKS2 – CAM and followers	
In KS1, the seasons topic runs throughout the year and provides opportunities for skills and knowledge-based sessions which work towards the Design and Technology National Curriculum objectives along with others. These include activities such as; soup making, working in the growing garden, baking, constructing bird feeders, greetings card making and other craft activities.						

Year 3 and 4	Castles and Dragons	Castles and Dragons **Textiles –** Seasonal stockings 1. Explore and evaluate a range of existing products with different designs thinking about function and visual appeal. 2. Explore different ways to join fabric using sewing skills. Select from and use different techniques and materials according to functional and aesthetic qualities. 3. Explore different ways to decorate fabric using sewing skills. 4. Design a Christmas stocking – Use research to develop design criteria to inform the design of functional and appealing products. Generate, develop and model ideas through discussion, annotated sketches and pattern pieces. 5. Use sewing skills to create the Christmas stocking – Select from and use a wide range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components. 6. Evaluate finished product. Evaluate their ideas and products against design criteria and consider the views of others to improve their work.	Stone Age	Bronze Age to Iron Age **Pneumatics** - Moving Monsters 1. Investigate familiar products that need air to make them work 2. Investigate techniques for making simple pneumatic systems 3. Gather ideas for creating moving monsters 4. Design a monster with a moving pneumatic part 5. Make a monster with a moving pneumatic part 6. Evaluate the finished product	South America **Levers & Linkages** – moving storybooks 1. To investigate and evaluate products with levers and linkage systems. 2. To experiment with a range of techniques to create moving mechanisms. 3. To explore and experiment with a range of different fonts and graphic techniques. 4. To be able to plan and design a storybook. 5. To be able to make a storybook with moving mechanisms using a design. 6. To be able to evaluate a finished product.	Rainforests
Links		KS1 – Delightful Decorations UKS2 – A stuffed Christmas decoration		KS1 – Moving Pictures UKS2 – CAM and follower links	KS1 – Moving flying machines	
Year 5 and 6	Liverpool	Liverpool **Textiles-** Making a stuffed Christmas decoration LINKS- KS1, LKS2 Christmas sewing · 1. Evaluating existing products and take inspiration from existing designs. · 2. Design a stuffed decoration, considering the main component shapes and colour. · 3. Create an appropriate template for their stuffed decoration. · 4. Neatly cut out their fabric. · 5. Use appliqué, embroidery or decorative stitching to decorate the front of their stuffed decoration according to their design, adjusting if necessary. · 6. Join two pieces of fabric using an appropriately chosen stitch and hidden stitching. · 7. Evaluate their product and the making process by identifying what worked well and areas for improvement.	Survival **Mechanical System** – Cam and follower Links – Science in Autumn 2 covered forces and mechanisms. 1, Develop a design idea with some descriptive notes. 2, Explore different cam profiles and choose one or two for their follower toppers with an explanation of their choices. 3, Create neat, decorated follower toppers with some accuracy. 4, Measure and cut panels that fit with some inaccuracies to conceal the inner workings of the automata. 5, Decorate and finish the automata to meet the design criteria and brief. 6, Evaluate their finished product, making descriptive and reflective points on function and form.	Survival	Europe **Electrical System** – Steady hand game Links - Chn will be learning about electric circuits in Science. 1. Identify the components of a steady hand game through researching existing products. 2.State what they like or dislike about an existing children's toy and why. 3. Design a steady hand game of their own according to their design criteria, using four different perspective drawings. 4. Create a secure base for their game, with neat edges, that relates to their design. 5. Make and test a functioning circuit and assemble it within a case.	
Links		KS1 – Delightful Decorations LKS1 – Seasonal Stockings	KS1 – Wheeled vehicles		LKS2 – Light up Signs	