Knowledge and Skills Progression
Year 1 to Year 6
Design & Technology Curriculum

'LEARNING TO LOVE, LOVING TO LEARN'

Year	Term	Scheme of work	Cooking and Nutrition
1/2	Sum	Eat More Fruits and Vegetables	I can name a variety of fruits and vegetables. I can use adjectives to describe the taste, smell and texture of a variety of fruits and vegetables. I know that some fruits and vegetables need to be washed, cut, cored, peeled or grated before they can be eaten. I understand basic food hygiene, e.g. washing hands, tying long hair back and keeping surfaces clean. I can use a knife to cut some fruits and vegetables in different ways. I can grate an apple and a carrot. I can peel a banana, apple and cucumber.
3	Aut	Egyptian Bread	I can create a detailed design for a shaduf. I can use a variety of materials and tools to create a working model of a shaduf. I can evaluate their work and identify areas of strength and weakness. I can work safely and hygienically with food. I can follow a recipe to create bread. I can evaluate their work and say what they think and feel about their finished product.
5	Sum	Great British Dishes	I know the origins of some traditional English savoury dishes I can combine ingredients and follow a recipe I can cut and chop vegetables safely I can name some English desserts I understand their RDA for sugar and how to identify the sugar content on food packaging I understand the seasonality of different British fruits I know how oats are grown, harvested and produced I know some traditional Scottish dishes and their main ingredients I can design/follow a simple recipe I know some traditional Welsh dishes and their main ingredients I can give their opinion of different ingredients I can follow and adapt a given recipe I can give general kitchen health and safety advice I understand how to plan and cost a meal I understand that different food products have different 'shelf-lives'

		Scheme of work	Stable Structures
1/2	Sum	Stable Structures	I can identify the features of toy garages. I know what the word 'stable' means. I can make changes to the design of a stable structure to make it fit for purpose. I can explore a range of materials and evaluate the usefulness of their properties for a particular project. I can explore how to make stable structures that hold a given object. I can follow a design to make a stable structure. I know some ways to make a structure more stable. I can evaluate my finished structure against a set of given criteria.
1/2	Sum	Making Homes	I can recognise some different types of homes and their features. I can identify and name shapes within houses. I can draw a house using a variety of shapes. I can make decisions about which materials to use for a particular purpose. I can select and use a variety of techniques for joining materials together successfully. I can suggest ways of improving my structures or making them stronger. I can make effective hinges. I can choose materials and joining methods for creating items of furniture. I can gather and develop ideas for how to decorate the interior of a house. I can design a house for a particular person or purpose. I can apply what I have learnt through my recent learning when designing a house. I can select the materials and tools I will need to make my houses. I can follow a design to create a house. I can choose appropriate materials, tools and techniques to create a model house. I can use finishing techniques to improve the overall quality of my product. I can say what I think and feel about my finished houses. I can evaluate the work of others and give my opinions in a constructive way. I can suggest ways in which I could improve my product if I were to make it
3	Sum	Making Mini Greenhouses	I know what a greenhouse is and how they work. I can explore a range of different greenhouses. I know how greenhouses are used today. I can explain how the shape of a structure affects its stability. I know that the weight of the structure needs to be evenly spread on the base to make it secure. I know that the wider a structure's base is, the more stable it will be. I can use 3D nets to explore potential structures for a greenhouse, assessing their stability. I can investigate ways of making a structure more stable, e.g. by inserting dowelling or adding triangles at the joins. I can experiment with a range of materials to test which would be most appropriate for making the structure of a mini greenhouse. I can design a mini greenhouse using specific design criteria. I can select appropriate tools and materials to make a mini greenhouse. I can follow my design to make a mini greenhouse. I can evaluate my finished mini greenhouse for stability, effectiveness and visual appeal.
4	Aut	Tudor House Builders	I can investigate the appearance and function of a variety of different houses. I can identify what materials have been used to construct a variety of houses and suggest how the parts have been joined together. I know what a flat pack diagram is and can use it to identify each part of a structure. I can create a flat pack diagram of a constructed bird house. I can draw an exploded diagram. I can identify the tools associated with basic woodwork. I can measure, clamp, saw, sand and join wood. I can use a hand drill to drill a hole in a piece of wood. I know the safety rules I need to follow when doing woodwork. I can select appropriate tools and materials to use when making a house. I can create a sturdy house frame using wood. I can evaluate my finished house, taking into account the views of others to improve my work. I can use observation to evaluate the effectiveness of my house.

		Scheme of work	Programming and Electrical Systems
4	Aut	Light-Up Signs	I can explore and analyse illuminated signs. I can create a simple circuit with incandescent bulbs and a switch. I can describe the difference between an LED and an incandescent light bulb. I can create a simple circuit with an LED bulb and a resistor. I can make a circuit with a string of LED lights. I can design an illuminated light box against a set of design criteria. I can select materials, tools and components to create a free-standing structure. I can make a stable, free-standing structure to house an electrical circuit. I can strip, twist and join wire to make permanent connections. I can insert an electrical circuit into a free-standing structure to create an illuminated light box. I can evaluate the effectiveness of my finished product against the design criteria.
6	Spr	Alarms	I recognise the uses to which alarm systems can be put I understand that switches work in different ways I understand the dangers of mains electricity I can explain how a simple circuit works I can experiment with different ways of creating circuits and switches I know how to work safely with electricity I can design an alarm system that is suitable for a particular purpose I can apply what they have learnt about alarms, circuits and switches when designing their own alarm systems I can discuss and finalise my designs I can apply what I have learnt when making my alarm system I can use a variety of electrical components accurately I can discuss my work and suggest areas for improvement I understand why evaluation is an important part of the designing and making process I can discuss their work and the work of others fairly I can evaluate their own finished products fairly
		Scheme of work	Mechanical Systems
1/2	Spr	Vehicles	I can investigate a range of vehicles, identifying and labelling their features. I know what an axle is. I know what a chassis is. I can explore different ways of using axles, chassis and wheels to create a moving base. I can design a vehicle with wheels, axles and chassis, as well as a body. I can follow a design to make a moving vehicle. I can evaluate my finished moving vehicle.
1/2	Spr	Flying Kites	I can explain what a kite is I understand the history and uses for kites I can design a kite for a particular use I can recognise some materials used to make kites I understand that different materials to make kites are better than others I can make a prediction and test it I can make a simple kite by following instructions I can evaluate a simple kite I know what kite shapes would fly better than others I can describe the materials and equipment needed to make a kite I know how to make a kite look aesthetically pleasing I can evaluate a piece of work I designed and created from scratch I understand what evaluation means I can evaluate and discuss other peoples designs and creations
3	Spr	Egyptian Shaduf Storybooks	I can explore moving parts in storybooks, suggesting how they work and what purpose they serve. I can explain what the words 'linkage', 'pivot', 'rotate' and 'lever' mean. I can use a paper concertina to make an object pop out of a book. I can arrange and stick paper between pages to create a pop-out. I can use levers to create moving parts. I can create moving wheel mechanisms to create different effects. I can experiment with different fonts and graphic design features. I can design pages of a storybook to include moving mechanisms and appropriate graphic features. I can follow my designs to create a storybook with moving mechanisms. I can evaluate how well my moving mechanisms work. I can evaluate the overall effectiveness of my storybook.

5	Sum	Moving Toys Inventions	I can recognise the movement of a mechanism within a toy or model. I understand that a cam mechanism will change rotary motion into linear motion. I can investigate examples of cam toys and comment on how they work. I can describe how cams work using appropriate vocabulary. I can explore how different shaped cams affect the movement of the follower. I can make suggestions for how different cams could be used for different kinds of toys. I can make suggestions for how they could make a sturdy structure for a moving toy I can experiment with a variety of materials, tools and techniques I can identify ways of strengthening a structure I can state the purpose and audience of their design I can design a moving toy with a cam mechanism I can describe how they will create their toy and what materials and tools they will need I can follow a design to create a moving toy I can work safely with a variety of materials and tools I can identify areas of their toy that could be improved upon I can evaluate a finished product fairly I can suggest ways they could improve their product if they were to make it again I can recognise ways in which they have been successful
6	Aut	Fairground	I can identify the moving parts of a rotating ride/ object • Are children able to create a detailed diagram of their chosen ride/object • I can go some way to explaining how they think a ride/object is powered and/or built. I understand how pulley and belt systems can be used to transfer movement • I can describe how an electrical circuit with a motor can be used to create rotating parts • I can manipulate their pulleys to create different movements. I can describe ways of strengthening and reinforcing structures • I can suggest ways in which ideas for frameworks could be developed to ideas for their own fairground ride designs • I can use a variety of materials and components accurately I can make a decision about what kind of ride I will make I can design an appropriate electrical circuit for their ride I can describe the process they will need t I can follow a design to create a fairground ride with a rotating part I can work accurately and safely with a variety of tools, materials and electrical components I can identify ways of improving their fairground rides to create a finished product of a high quality I can evaluate a finished product fairly I can suggest ways they could improve their product if they were to make it again I can recognise ways in which they have been successful
		Inventions	Textiles
1/2	Aut	Puppets	I can explore a variety of puppets, identifying and labelling their features. I can cut out felt using a simple template. I can stick pieces of felt together to make a finger puppet. I can add pieces of felt and other materials to a finger puppet to create features, such as eyes, hats and mouths. I can use running stitch to join two pieces of fabric together. I can use overstitch to join two pieces of fabric together. I can sew a button onto a piece of fabric. I can design a glove puppet for a particular purpose. I can follow a design to make a glove puppet by sewing two pieces of fabric together and adding decorations. I can evaluate my finished glove puppet by identifying what went well and what could be improved.
4	Spr	Roman purse	I can design a purse in the style of a Roman purse I can work well with fabrics and a variety of tools and techniques to make a purse I can evaluate my finished products

		Scheme of work	Inventions and Achievements
6	Sum	Programming Pioneers	I know that Charles Babbage created the first mechanical computer. I know that Ada Lovelace is referred to as the world's first computer programmer. I know that Steve Jobs and Steve Wozniak co-founded Apple, Inc. to make the first Apple computers.