Progression of Skills DT

Year	Autumn	Spring	Summer
Cycle B Lower	**Stone Age to Iron Age (Iron Rocks!) Historical Build a shelter from natural materials**	**Mountains, rivers and coasts. (Mountain High… River Deep) Home Food Tech BREAD Bread analysis, production and evaluation.**	**The Egyptians (Tomb Raiders) Industry Pulley and levers systems Design and create a device that could be used to move, lift and place pyramid stones.**
Developing, planning and communication ideas	**Know to make drawings with labels when designing. When planning explain their choice of materials and components including function and aesthetics.**	**Start to order the main stages of making a product. Identify a purpose and establish criteria for a successful product.**	**With growing confidence generate ideas for an item, considering its purpose and the user/s.** Understand how well products have been designed, made, what materials have been used and the construction technique.
Working with tools, equipment, materials and components to make quality products	Measure, mark out, cut, score and assemble components with more accuracy.		**Select a wider range of tools and techniques for making their product** i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components. **Start to understand that mechanical systems such as levers and linkages.**
Evaluating processes and products	**Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose**	Begin to evaluate familiar products and consider the views of others to improve them.	Evaluate the key designs of individuals in design and technology has helped shape the world.
Food and nutrition		**Understand how to prepare and cook dishes safely and hygienically including, where appropriate, the use of a heat source.** Start to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'	

Progression of Skills DT

Cycle A Lower	What did the Romans do for us? (Rotten Romans) Leisure Construction Roman Chariots Deconstruct wheeled models and design, build and evaluate their own chariots.	Natural Disasters and Rainforests (What a disaster!) Environment Electrical circuits – disaster warning systems. Look at real examples and design and make model of own warning system.	Saxons and Vikings (Kingdom Invasion) Culture Textiles – create Anglo Saxon bag Look at historical evidence, give a design brief to work to.
Developing, planning and communication ideas	**Confidently make labelled drawings from different views showing specific features.** Identify the strengths and areas for development in their ideas and products. When planning explain their choice of materials and components according to function and aesthetic.	Start to generate ideas, considering the purposes for which they are designing- link with Mathematics and Science. **Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.**	**When planning consider the views of others, including intended users, to improve their work.**
Working with tools, equipment, materials and components to make quality products	Select a wider range of tools and techniques for making their product safely. **Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.** Start to join and combine materials and components accurately in temporary and permanent ways. Understand how to reinforce and strengthen a 3D framework. Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.	**Start to understand that mechanical and electrical systems have an input, process and output.** **Know how simple electrical circuits and components can be used to create functional products.**	**Start to measure, tape or pin, cut and join fabric with some accuracy. Sew using a range of different stitches.** Demonstrate how to measure, tape or pin, cut and join fabric with some accuracy.
Evaluating processes and products	**Evaluate their products carrying out appropriate tests.**	Evaluate the key designs of individuals in design and technology has helped shape the world.	
Food and nutrition			

Progression of Skills DT

Cycle B Upper	History of Baghdad (Arabian Nights) and Mexico Study (Los mysterios de Mexico) Culture Food Tech – Mexican food Looking at Mexican food, tasting, designing own menu, cooking and evaluations.	Space (Out of this world) and Portsmouth (History)Leisure Cams – Space themed cam toys. Cross-section designs	Forces (Flight) and Changes (SRE/Geography) Leisure Control technology – Car using propeller power
Developing, planning and communication ideas	**Start to understand how much products cost to make.** Use results of investigations, information sources, including ICT when developing design ideas.	**Know how mechanical systems such as cams or pulleys or gears create movement.** Start to generate, develop, model and communicate their ideas through discussion, **annotated sketches, cross-sectional** and exploded diagrams. With growing confidence select appropriate materials, tools and techniques.	Draw up a specification for their design- link with Mathematics and Science. With growing confidence apply a range of finishing techniques, including those from art and design. **Learn about designers, inventors and engineers who have developed ground breaking products (history of flight)**
Working with tools, equipment, materials and components to make quality products	**Weigh and measure accurately (time, dry ingredients, liquids).**	Understand how mechanical systems such as cams or pulleys or gears create movement. Begin to measure and mark out more accurately. With growing confidence cut and join with accuracy to ensure a **good-quality finish to the product.**	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.** Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. Understand that mechanical and electrical systems have an input, process and output.
Evaluating processes and products	Evaluate their work both during and at the end of the assignment.	Begin to evaluate it personally and seek evaluation from others.	Start to evaluate a product against the original design specification and by **carrying out tests.**
Food and nutrition	Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. **Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source** **Start to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.**		

Progression of Skills DT

Cycle A Upper	Water as a resource and renewable energy (Fuelling the Future) Wider environment Electrical – circuits Making wind turbines.	Ancient Greek democracy and monarchs past and present (Power!) Greek masks (art focus)	Evolution and inheritance (Discovering Darwin) Industry Control technology – computer programme to monitor and control. Flowal. Fairground rides?
Developing, planning and communication ideas	Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional **and exploded diagrams,** prototypes. Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. Draw up a specification for their design- link with Mathematics and Science. **Suggest alternative methods of making if the first attempts fail.**	Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.	
Working with tools, equipment, materials and components to make quality products	Assemble components **to make working models.** Understand how mechanical systems such as cams or pulleys or gears create movement.		Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. Understand that mechanical and electrical systems have an input, process and output.
Evaluating processes and products	Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests.		Evaluate against their original criteria and suggest ways that their product could be improved. Evaluate the key designs of individuals in design and technology has helped shape the world.
Food and nutrition			