

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS						
Year 1		Moving pictures Great Fire of London OAK ACADEMY: LEVERS AND SLIDERS-MOVING CARDS (Year 2) This unit develops pupils' knowledge of simple mechanisms. By making levers and sliders, pupils will apply their knowledge of the characteristics of paper and card to make their own moving cards.	OAK ACADEMY ROTARY MECHANISMS-WINDMILLS This unit introduces knowledge of simple rotary mechanisms that create movement. Pupils will investigate how windmills work, consider sail design, and produce a working model that will be tested for stability and movement.		OAK ACADEMY:STRUCTURES -BRIDGES This unit introduces pupils to structures. It focuses on bridge building and introduces cutting, folding, and joining techniques. Pupils make their own bridges, applying their knowledge of structure design.	
Year 2	Moon buggies OAK ACADEMY:WHEELS AND AXELS-VEHICLES This unit develops pupils' knowledge of wheels and axles. The characteristics of woods will be introduced. Pupils will analyse different vehicles and their structure			ACADEMY:TEMPLATES AND TEXTILES-HAND PUPPETS (Year 1) This unit develops pupils' knowledge of the characteristics of non-woven fabrics and their joining techniques. Pupils analyse the techniques used to make fabric products and then apply this knowledge by designing and		OAK ACADEMY FREE STANDING: STRUCTURES-PLAYGROUNDS This unit develops pupils' knowledge of freestanding structures and how to make them more stable. Pupils will analyse different structures, shapes and construction techniques to make

	to design and make their own vehicle.			making a fabric puppet.		piece of play equipment.
Year 3		OAK ACADEMY:PNEUMATICS-MOVING TOYS This unit introduces pupils to creating movement with air using pneumatic mechanisms. They will then apply this knowledge to develop a moving toy.		Shell Structures-CAD OAK ACADEMY:SHELL STRUCTURES-PACKAGING This unit develops pupils' knowledge of shell structures. They will critique the packaging of a given product and investigate the sustainability of materials, to create a new packaging design considering its environmental impact.		ACADEMY:2D SHAPES TO 3D PROCUTS-STATIONARY STORAGE This unit develops pupils' knowledge and joining techniques when working with woven fabrics. Pupils test and select recycled fabric for functionality. They will use templates and decorative techniques to make a stationery storage product.
Year 4	ACADEMY:SIMPLE PROGRAMMING-DATA LOGGERS This unit develops pupils' knowledge of simple circuits, programming and control. Fault finding of circuits will be introduced. Pupils will learn how to integrate a BBC Micro:bit in a			OAK ACCADEMY:TEXTILE PATTERN PEIECES-HATS AND CAPS This unit introduces pupils to more complex textile products, enabling them to produce fabric patterns. Pupils will develop knowledge of fabrics and apply this by		OAK ACADEMY:LEVERS AND LINKAGES-INTERACTIVE BOOKS This unit develops pupils' knowledge of mechanisms through levers and linkages. They will apply this knowledge by exploring mechanisms and incorporating them into an

	simple circuit and use sensors to program a light display.			selecting them for functionality and aesthetics to design a product.		interactive book with a user-centred focus.
Year 5		OAK ACADEMY:CAD STRUCTURES-ARCHITECTURE This unit introduces 3D Computer Aided Design to pupils. They will investigate modern architects to understand the techniques and materials they use in sustainable housing. They will develop knowledge of TinkerCAD to design and present a model sustainable house.		OAK ACADEMY:COMBING FABRICS-ACCESSIBLE TEXTILES This unit develops pupils' knowledge and 3D joining techniques when working with woven fabrics. Accessible design is introduced by investigating the work of fashion designers. Pupils apply this knowledge and understanding to make and promote an accessible product.		OAK ACADEMY:PULLEYS AND GEARS-ELECTRIC VEHICLES This unit develops pupils' knowledge of mechanisms through gears and pulleys. By investigating electric vehicles and mechanical and electrical components, pupils will apply their knowledge and understanding by making an electric vehicle.
Year 6		ACADEMY:CAMS AND AUTOMA This unit develops pupils' knowledge of mechanisms through cams. Pupils will develop knowledge of the		OAK ACADEMY:SYSTEMS AND CONTROL:SENSOR ALARMS This unit develops pupils' programming		OAK ACADEMY: PRODUCTS AND PEOPLE-INSPIRATIONAL DESIGN This unit introduces pupils to key individuals and

		properties of wood and apply this by selecting suitable materials for functionality. Knowledge of wood construction and joining techniques are introduced and applied through making an automaton.		and control knowledge, with a focus on monitoring. Debugging and troubleshooting will be introduced. Pupils will learn how to integrate a BBC Micro:bit in a product and use sensors to program a light display.		products from the product design and fashion industries that have shaped our world. Pupils will complete design tasks that develop their knowledge and understanding of designers and their products while critiquing the materials and techniques used.
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Food technology and hygiene will be taught discretely in a dedicated block during the school year, providing children with focused opportunities to develop practical skills, knowledge and understanding of food preparation and hygiene. Please see the separate document outlining this learning.