

### Design Technology At Fawkham CEP School



#### Intent:

Here at Fawkham we are committed to the quality, breadth and depths of experiences for our children in all of our subjects. The Kapow Design and Technology scheme aims to inspire pupils to be innovative and creative thinkers who have an appreciation of the product design cycle through creation and evaluation. We want pupils to develop their confidence to take risks, through drafting design concepts, modelling, testing and to be reflective learners who evaluate their work and the work of others. Through the Design and Technology Kapow scheme of work, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

The Kapow Design and Technology scheme of work enables pupils to meet the end of key stage attainment targets in the National Curriculum and the aims also align with those in the National curriculum. The EYFS units provide opportunities for pupils to work towards the Development Matters statements and the Early Learning Goals.

As part of our Christian vision- John Chapter 10 Verse 10 I came so that that you may have life; life in all it's fullness", we teach to fulfil this. We teach our children to care about their designs and makes, are honest in their evaluations and constructive criticism of others work, respect resources and other peoples thoughts and feelings when designing, making and evaluating and taking responsibility for their own ideas, thoughts and actions. Our curriculum fulfils the National curriculum areas in DT, Design, make, evaluate, technical knowledge and cooking and nutrition. We have adopted the combined/mixed scheme of work for KS1 and KS2 on a 2 year cycle, so that we have 3 units of Design and Technology a year. These have been placed in the year where best fit with other topics so that links can be made.

COOKING AND NUTRITION – We have a company called Roots to food who teaches the whole school cooking a nutrition based lessons. This is held yearly during the Autumn terms. KS2 children are then involved in planning, designing, cooking and hosting a Gala Dinner in Summer 2 for parents and teachers. This is in addition to their usual lessons planned in the Design and Technology Kapow Scheme.

**Implementation:** The Design and Technology National Curriculum outlines the three main stages of the design process- Design, Make and Evaluate. Each stage of the design process is underpinned by the technical knowledge which encompasses the contextual, historical and technical understanding required for each strand.

The National Curriculum organises the Design and Technology attainment targets under four subheadings DESIGN, MAKE, EVALUATE and TECHNICAL KNOWLEDGE. These subheadings are present throughout the Kapow Primary strands.

The Design and Technology Kapow scheme of work have made six key areas that pupils revisit throughout their time at Primary school. These are COOKING AND NUTRITION, MECHANISMS/MECHANICAL SYSTEMS, STRUCTURES, TEXTILES, ELECTRICAL SYSTEMS (KS2) and DIGITAL WORLD (KS2). This scheme of work shows progression throughout the school and the skills are shown in the below table along with the overview for the whole school.

Through the scheme of work, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in the six areas.

Each of the key areas follows the design process (Design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. The scheme allows pupils to revisit, consolidate and build on the previous learning.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands on computer based and inventive tasks. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to challenge children where appropriate.

#### **Impact**

The impact of the Kapow Primary Scheme for Design and Technology can be constantly monitored through both formative and summative assessment opportunities. Each lesson includes guidance to support teachers in assessing pupils progress against the learning objective. Furthermore, each unit has a unit quiz and knowledge catcher which can be used at the start and/or end of unit.

After the implementation of the Design and Technology Kapow Scheme, pupils should leave school equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society.

The expected impact is that children will

- 1. Understand the functional and aesthetic properties of a range of materials and resources.
- 2. Understand how to use and combine tools to carry out different processes for shaping, decorating and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD and products to fulfil the needs of users, clients and scenarios.
- 4. Understand and apply the principles of healthy eating, diets and recipes, including key processes, food groups and cooking equipment.
- 5. Have an appreciation of key individuals, inventions and events in history and of today that impact our world.
- 6. Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- 7. Self-evaluate and reflect on learning at different stages and identify areas to improve.
- 8. Meet the end of key stage expectations outlined in the National Curriculum for Design and Technology.
- 9. Meet the end of key stage expectations outlined in the National Curriculum for Computing.

Below is the overview across the school of what is covered across the two year cycle, along with the progression skills in each topic.

Year	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year R	Space	Diwali	CNY		Ladybirds	Pets
(1)		Clay lamps	Concertina Dragon		Junk modelling of	Design and make
	Playdough and	CONSTRUCTION	puppets		minibeasts	a pet home
	spare parts	MODELLING	CONSTRUCTION		CONSTRUCTION	CONSTRUCTION
	making Aliens			<b>Kapow Primary</b>		
	CONSTRUCTION	Constructing	Scotland	STRUCTURES		Zoo
	Dia da Illata ana	centre pieces	Weaving Tartan	Boats	Kapow Primary	Junk model zoo
	Black History	for Christmas	TEXTILES:		Seasonal projects	animals
	Month-Mae Jemison	meal CONSTRUCTION	Vehicles			Milk bottle
	Making	CONSTRUCTION	Designing and			elephants
	telescopes		making cars			Toilet tube
	CONSTRUCTION	Kapow Primary	Love and Friendship			giraffes CONSTRUCTION
	CONSTRUCTION	TEXTILES	Love and Friendship Making contraptions			CONSTRUCTION
	Little Red Hen	Bookmarks	from Cardboard			Dinosaurs
	Bread making	(Link to Book	boxes			Salt dough
	<b>COOKING AND</b>	week)	CONSTRUCTION			dinosaur fossils
	NUTRITION					CONSTRUCTION-
						MODELLING
			Kapow Primary			
	<b>Kapow Primary</b>					
	STRUCTURES-		COOKING AND			Kapow Primary
	Junk modelling		NUTITION			Seasonal Projects
	Kapow Primary	(Art)	Kanou Bricani		Vanous Drimons	
	STRUCTURES	(Art)	Kapow Primary TEXTILES	(Art)	Kapow Primary COOKING AND	(Art)
	Constructing a		_	(Art)	NUTITION	(Art)
	windmill		Puppets Skills		Fruit and	
Year 1/2	Skills		Design-		Vegetables	
Cycle A	Design-		Using a template to		vegetables	
Cycle A	Learning the		create a design for a		Skills	
	importance of		puppet		Design-	
	a clear design		Make-		Designing	
	criteria.		Cutting fabric neatly		smoothie carton	
	Including		with scissors.		packaging by hand	
	individual		Using joining		or on IT software.	
	preferences		methods to decorate			
	and		a puppet.		Make-	
	requirements		Sequencing the steps		Chopping fruit and	
	in a design.		taken during		vegetables safely	
	Make-		construction.		to make a	
	Making stable		Evaluate-		smoothie.	
	structures from		Reflecting on a		Identifying if a	
	card, tape and		finished product,		food is a fruit or a	
	glue.		explaining likes and dislikes.		vegetable.	
	Learning how to turn 2D nets		uisiikes.		Learning how and where fruit and	
	into 3D nets.		Knowledge		vegetables grow.	
	Following		To know that 'joining		vegetables glow.	
	instructions to		technique' means		Evaluate-	
	cut and		connecting two		Tasting and	
	assemble the		pieces of material		evaluating	
	supporting		together.		different food	
	structure of a		To know that there		combinations.	
	windmill.		are various		Describing	
	Making		temporary methods		appearance, smell	
	functioning		of joining fabric by		and taste.	
	turbines and		using staples, glues		Suggesting	
	axles which are		or pins.		information to be	
	assemble into a		To understand that		included on the	
	main		different techniques		packaging.	
	supporting		for joining materials			
	structure.		can be used for			
	Evaluate-		different purposes.		Knowledge	
	Evaluate- Evaluating a windmill		different purposes. To understand that a template (or fabric		Knowledge Understanding the difference	

according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't. **Suggest points** improvements.

**Knowledge** Technical-To understand the shape of the materials can be changed to improve the strength and stiffness of structures. To understand that cylinders are a strong type of structure (e.g the main shape used for windmills and lighthouses). To understand that axles are used in structures and mechanisms to make parts turn in a circle. To begin to understand that different structures are used for different purposes. To know that a structure is something that has been made and put together. Additional-To know that a client is a person that I am designing for. To know that design criteria is a list of points to ensure the product meets the clients needs and wants. To know that a windmill harnesses the

power of wind

pattern) is used to cut out the same shape multiple times. To know that drawing a design idea is useful to see how an idea will look.

between fruit and vegetables. To understand that some foods typically known as vegetables are actually fruits eg cucumber. To know that a blender is a machine which mixes ingredients together into a smooth liquid. To know that a fruit has seeds and a vegetable does not. To know that fruit grows on trees or vines. To know that vegetables can grow above and below ground. To know that vegetables can come from different parts of a plant eg roots: Potatoes, leaves: lettuce, fruit: cucumber.

				1	Γ	
	for a purpose					
	like grinding					
	grain, pumping					
	water or					
	generating					
	electricity.					
	To know that					
	windmill					
	turbines use					
	wind to turn					
	and make the					
	machines					
	inside work.					
	To know that a					
	windmill is a					
	structure with					
	sails that are					
	moved by the					
	wind.					
	To know the					
	three main					
	parts of a					
	windmill are					
	the turbine,					
	axle and					
	structure.	1		<u> </u>		
Year 1/2		Kapow Primary		(Art)	Kapow Primary	Kapow Primary
Cycle B		STRUCTURES	(Art)		MECHANISMS	MECHANISMS
	(Art)	<b>Baby Bears</b>			Fairground Wheel	Making a moving
		Chair			Skills	monster
		<u>Skills</u>			Design-	<u>Skills</u>
		Design-			Creating a class	Design-
		Generating and			design criteria for a	Selecting a
		communicating			moving monster.	suitable linkage
		ideas using			_	_
		_			Designing a moving	system to produce
		sketching and			monster for a	the desired
		modelling.			specific audience	motion.
		Learning about			in accordance with	Designing a
		different types			a design criteria.	wheel.
		of structures			Make-	
		found in the			Making linkages	Make-
		natural world			using card for	Selecting
		and in everyday			levers and split	materials
		objects.			pins for pivots.	according to their
		Make-			Experimenting	characteristics.
		Making a			with linkages	Following a design
		structure			adjusting the	brief.
		according to			widths, lengths	Evaluate-
		_			and thicknesses of	Evaluate- Evaluating
		design criteria.			card used.	_
		Creating joints				different designs.
		and structures			Cutting and	Testing and
		from paper,			assembling	adapting a design.
		card and tape.			components	
		Building a			neatly.	<u>Knowledge</u>
		strong and stiff			Evaluate-	Technical-
		structure by			<b>Evaluating own</b>	To know that
		folding paper.			designs against	different materials
		<b>Evaluate-</b>			design criteria.	have different
		Exploring the			Using peer	properties and are
		features of			feedback to modify	therefore suitable
		structures.			a final design.	for different uses.
		Comparing the				
		stability of			<u>Knowledge</u>	Additional-
		different			Technical-	To know the
		shapes.			To know that	features of a
		Testing the			mechanisms are a	Ferris wheel
		strength of own			collection of	include the wheel,
		structures.			moving parts that	frame, pods, a
		Identifying the			work together as a	base, an axle and
		weakest point			machine to	an axle holder.
		of a structure.				

produce To know that it is **Evaluating the** strength, movement. important to test stiffness and To know that there my design as I go stability of a is always an input along so that I can structure. and output in a solve any mechanism. problems that **Knowledge** To know that an may occur. **Technical**input is the energy To know the that is used to start shapes and something structures with working. wide, flat bases To know that an or legs are the output is the most stable. movement that To understand happens as a result that the shape of the input. of a structure To know that a affects its lever is something strength. that turns on a To know that pivot. To know that a materials can be manipulated linkage mechanism to improve is made up of a strength and series of levers. stiffness. **Additional-**To know that the structure is To know some real something life objects that which has been contain formed or mechanisms. made from parts. To know that a stable structure is one which is firmly fixed and unlikely to change or move. To know that a strong structure is one that does not break easily. To know that the stiff structure or material is one that does not bend easily. Additional-To know that natural structures are those found in nature. To know that man made structures are those made by people.



## Design Technology At Fawkham CEP School



Year 3/4 Cycle A Kapow Primary
COOKING AND
NUTRITION
Eating
Seasonally

Skills
DesignCreating a
healthy and
nutritious recipe
for a savoury
tart using
seasonal
ingredients,
considering the
taste, texture,
smell and
appearance of

the dish. Make-**Knowing how to** prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination. Following the instructions within a recipe. Evaluate-**Establishing and** 

using design criteria to help test and review dishes. Describing the benefits of seasonal fruits and vegetables and the impact on the environment. Suggesting points for improvement when making a

Knowledge
To know that
not all fruit and
vegetables can
be grown in the
UK.
To know that
climate affects
food growth.
To know the
vegetables and
fruit grow in

certain seasons.

seasonal tart.

Art) Kapow Primary DIGITAL WORLD

Wearable Technology Skills

Design-

Problem solving by suggesting which features on a micro:bit might be useful and justifying my ideas. **Drawing and** manipulating 2D shapes using computer-aided design to produce a point of sale badge. **Developing design** ideas through annotated sketches to create a product concept. **Developing design** criteria to respond to

Make-

a design brief.

Following a list of design requirements. Writing a programme to control (button press) and/ or monitor (sense light) that will initiate a flashing LED algorithm.

EvaluateAnalysing and
evaluating wearable
technology.
Using feedback from
peers to improve
design.

Knowledge-

**Technical-**

To understand that, in programming, a 'loop' is code that repeats something again and again until stopped. To know that a micro:bit is a pocketsized codeable computer. To know that the simulator is able to replicate the functions of an existing piece of technology. **Additional** 

Art)

Kapow Primary STRUCTURES Constructing a castle

Skills Design-Designing a castle with key features to appeal to a specific person/purpose. **Drawing and** labelling a castle design using 2D shapes, labelling:the 3Dshapes that will create the features- materials needed and colours. Designing and /or decorating a castle tower on CAD software.

MakeConstructung a range of 3D geometric shapes using nets.
Creating special features for individual designs.
Making facades from a range of recycled materials.
Evaluate-

recycled materials.

EvaluateEvaluating own
workand the work
of others based on
the aesthetic of
the finished
product and in
comparison to the
original design.
Suggesting points
for modification of
the individual
designs.

Technical-To understand that wide and flat based objects are more stable.

Knowledge

more stable.
To understand the importance of strength and stiffness in structures.
Additional
To know the following features of a castle- flags,

(Art

effect. Building frame structures designed to support weight.  Drawing a net to create a focussing on structure form. Choosing shapes individual design		To know that		To know what the		towers,	
Innova sa reigie. To know that imported food is food that has been brought from another country. To know that a expected food is been brought from another country. To know that a expected food is been brought from another country. To know that a expected food is been sent from another country. To understand that imported foods travel from far away and this can negatively impact the environmental country important for a way and this can negatively impact the environmental country. To understand that way to food the environmental country important for energy, growth and maintaining health. To know shate should be entire that is assistentially and cleaning a kinfle safely. To know shate should be entired foods travel from far away and this can negatively impact the environmental countries of the en				_		*	
To know that imported food is food that has been brought from another country. To know that a focus group is by taking another country. To know that a focus group is by taking another country. To understand that imported foods travel from far away and this can negatively impact the environment. To know that a can negatively impact the environment. To know that a design specification is a list of success criteria fibre are important for energy, growth and maintaining health. To know safety rules for using stream of the safety. To know safety rules for using stream of the safety rules for using stream of the safety. To know that a similar coloured fruits and vegetable shae similar nutritional benefits.  Year 3/4 Cycle B  Appendix Safety. To know that similar coloured fruits and vegetable shae similar nutritional benefits to be stream of the safety. To know that similar coloured fruits and vegetables have similar nutritional benefits to safely. To know that similar coloured fruits and vegetables have similar nutritional benefits to safely. To know that similar coloured fruits and vegetables have similar nutritional benefits to safely. To know that similar coloured fruits and vegetables have similar nutritional benefits to safely. To know that similar coloured fruits and vegetables have similar nutritional benefits to safely. To know that similar coloured fruits and vegetables have similar nutritional benefits to safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Agapt Primary  Kapow Primary  MECHANICAL SYSTEM  Making a Singehot Car System Making a singend to the larger and and access criteria forcast a desired effect. Building frame structures designed to create a desired effect. Building frame structures designed to choosing shape that reduces air create a desired create. To condition the target and access criteria focusing on clinical design and creating both design and individual design individual design individual design individual design individua						1	
imported food is food that has been brought end lidisplay.  from another country, stands for Computer-Aided Design.' To know that a focus group is by taking been sent from another country, To waterstand that a castle needs to be strong and stable to withstand an enemy attack. To know that a focus group is by taking been sent from another country, To understand that imported foods travely and this can negatively impact the environment. To know that a each fruit and vegetable gives us mutritional benefits because they contain vitamins, minerals and fibre. To know that similar coloured fruits and vegetables have similar an untritional benefits.  Year 2/4 Cycle B  Texalt.  Year 2/4 Cycle B  To know that a focus group is by taking and the purpose. To know that a paper net is a flat to withstand an enemy attack. To know that a paper net is a flat of the paper net is a flat of th				_			
food that has is been brought from another country. To know that A Alded Design.' To know that A Alded Design.' To know what a focus group is by taking part in one.  another country. To understand that imported foods travel from another country. To understand that imported foods travel from far away and this can negatively impact the environment. To know that a each foul among a travel part in the environment. To know that a each foul among a travel part in the environment. To know that a maintaining health. To know that design and cleaning a knife safely. To understand that imported foods travel from far away and this can negatively impact the environment. To know that a each foul among a sembled. To know that a design specification is a list of success criteria for a product.  Year 3/4 Cycle 8  Vear 3/4 Cycle 8  Lart							
food that has been brought clidisplay. To know that a Gazde is the front of a structure. To know that CAD country, stands for Computer-Alded Design." To know that a castle needs to be strong and stable to withstand an enemy attack. To know that a paper net is a flat that imported foods travel from far away and this can impact the environment. To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre are important orthough and maintaining health. To know safety rules for vising, storing and declaring a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits a selecting materials to create a desired contain vitamins, minerals and similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and safety. To know that similar coloured fruits and vegetables have similar and vegetables that the target additional safety. The vegetable problem of the vegetable p						-	
been brought from another Country, To know that A Alded Design.' To know that exported food is food that has been sent from another country. To understand that imported foods travel from far away and this can negatively impact the environment. To know that expectable pipes us truttiment because they contain wittamins, minerals and fibre. To understand that vitamins, minerals and fibre. To understand that witamins, minerals and fibre are important for energy, growth and maintaining health.  To know that similar coloured fruits and wegetables have similar coloured fruits and vegetables have similar coloured fruits and selecting materials to create a desired effect.  Building frame structures designed to support weight.  Wear 3/4 (Art) (							
from another country, stands for 'Computer- Alded Design.' To know that a facus group is by taking been sent from another country, To understand that imported foods travel from far away and this can negatively impact the environment. To know that a cast eneeds to be strong and stable to withstand an enemy attack. To know that a paper net is a flat 2D shape that can become a 3D shape once assembled. To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining and cleaning a kinife safely. To know that similar colouved fruits and vegetables have similar nutritional benefits.  **Mean 2/4** Cycle B  **Mean 3/4**  **Mean 3/4** Cycle B  **To know that similar colouved fruits and vegetables have similar nutritional benefits.  **Mean 3/4** Cycle B  **Mean 3/4** Cycle B  **Mean 3/4** Cycle B  **To know that similar colouved fruits and vegetables have similar colouved fruits and vegetables fruits and vegetables fruits a							
country, To know that exported food is food that has been sent from another country, To understand that imported foods travel from far away and this can negatively impact the environment. To know that a each fruit and vegetable gives us nutritional benefits because they contain witamins, minerals and fibre are important for energy, growth and maintaining health. To know state gives storing and dearing a kinfe sariely, To know that similiar colouved fruits and vegetables have similar nutritional benefits.  Vear 2/4 Cycle B  Vear 2/4  (Art)  (Art)  Kapow Primary STRUCTURES Pavilions Skills Skills Pavilions Skills Pavilions Skills Skills Skills Pavilions Skills Skills Skills Pavilions Skills Sk		_					
exported food is food that has been sent from another country. To understand that imported foods travel from far away and this can negatively impact the environment. To know what a found the environment. To know that a feath fibre. To understand that understand that imported foods travel from far away and this can negatively impact the environment. To know that a each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining the safely. To know that safely and vegetables have similar coloured fruits and vegetables have similar end with the safely and vegetables have similar periodic to the safely and vegetables have similar coloured fruits and vegetables that safely and vegetables have similar end vegetables have similar end vegetables that safely the pesigning a stable gailing a structure that is aesthetically pleasing and selecting materials to create a design of effect.  Building frame structure form. Choosing shapes in decidence on features of the target and success criteria of an access criteria for a product.    Vear 3/4						To understand	
food that has been sent from another country. To understand that imported foods travel from far away and this can negatively impact the environment. To know that a useptable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know that similar outritional benefits  Pear 3/4 Cycle B  Year		To know that		·		that a castle needs	
been sent from another country. To understand that imported foods travel from far away and this can negatively impact the environment. To know that a paper nere its a flat 2D shape once assembled. To know that a design specification is a list of success criteria for a product.  To know that a paper nere its a flat 2D shape once assembled. To know that a design specification is a list of success criteria for a product.  To know that a design specification is a list of success criteria for a product.  To know state they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know safety rules for using, storing and electing and electing materials to create a design of the safety. To know safety rules for using, storing and electing materials to create a design of the safety. To know safety rules for using, storing and electing materials to create a design of the safety. To know safety rules for using, storing and electing materials to create a design of the safety.  Vear 3/4 Cycle 8  Year 3/4		exported food is		To know what a focus		to be strong and	
another country. To understand that imported foods travel from far away and this can negatively impact the environment. To know that avegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining heath. To know safety rules for using, storing and cleaning a knife safety. To know that similar oloured fruits and vegetables have similar untritional benefits.  Activ To know safety rules for using, storing and cleaning a knife safety. To know that similar oloured fruits and vegetables have sistoricated for a product.  Kapow Primary Active Mech		food that has		group is by taking		stable to	
country. To understand that imported foods travel from far away and this can negatively impact the environment. To know that a design specification is a list of success criterial for a product.  Ilst of success criterial for a product.  Ils				part in one.			
To understand that imported foods travel from far away and this can negatively impact the environment. To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To know that and maintaining health. To know safety rules for using, storing and cleaning a knife safety. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 (Art) (						-	
that imported foods travel from far away and this can negatively impact the environment. To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safety. To knows safety rules for using, storing and eleaning a knife safety. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle 8  Year 3/4 Cycle 8  Year 3/4 Cycle 8  Cycle 8  Year 3/4 Cycle 8  Cycle 8  Xapow Primary STRUCTURES Pavilions Skills Design Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight. Choosing shapes to react a design and succusing on faultivature of the support weight. Choosing shapes to support and succusing on faultivature of the support weight. Choosing shapes to support and succusing on faultivature of faultical support of the							
from far away and this can negatively impact the environment. To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre.  To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a Naffe safely, To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/A Cycle B  Xeapow Primary McCHANICAL SYSTEMS Making a Singshot Car Skills Design: Designing a troch, giving consideration to the target audience and selecting materials to create a desired effect. Drawing an ent to cycle and successor infactory to the target audience and to the target audience and successor infactory to the target audience and successor infactory to the Year Cycle B  Year 3/A Cycle B  Ye							
from far away and this can negatively impact the environment. To know that a design specification is a list of success criteria for a product.  To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know afety rules for using, storing and cleaning a knife safety. To know that similar outritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Art		-					
and this can negatively impact the environment. To know that a design specification is a list of success criteria for a product.  To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safety. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 (Art) (A							
negatively impact the environment. To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Rapow Primary STRUCTURES Pavilions Skills Design: Designing a stable pavilion structure that is a sethetically pleasing and selecting materials to create a desired effect. Duilding frame structures designed to support weight. Doubling materials to create a desired effect. Duilding frame structures designed to support weight. Choosing shape that resistance, Drawing a net to features of individual design		7				-	
impact the environment. To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safety. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Obeging Design: Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Drawing a net to the target audience and creating both design and success criteria for a product.  Kapow Primary  Kapow Primary  MECHANICAL SYSTEMS Making a Sillis Design: Designing a stable pavilion structure that is aesthetically Designing a stable pavilion structure that is aesthetically Designing a torch, Designing a torch Designing a torch or create a desired effect. Drawing a net to the target audience and creating both design and success criteria for a product.  Kapow Primary  Kapow Primary  MECHANICAL SYSTEMS Making a Sillis Design: Designing a torch, Designing a torch or create a shape that reduces air resistance. Drawing a net to the target audience and creating both design and success criteria for a product.							
environment. To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Kapow Primary STRUCTURES Pavilions Skills Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight. Showing an structure form. Choosing shapes individual design oinclividual design							
To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre.  To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health.  To know safety rules for using, storing and cleaning a knife safely.  To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  (Art)  Kapow Primary STRUCTURES Pavillons Skills Design: Designing a stable pavillon structure that is a seathettically pleasing and selecting materials to create a desired effect. Building frame structures designed to toupport weight.  Bist of success criteria for a product.  Ist of suc		•				•	
each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 (Art)						•	
vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know state yrules for using, storing and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Alart  Kapow Primary STRUCTURES Pavilions Skills Design: Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structure form. Building frame structure form. Consigning a net on create a structure form. Consigning and creating both design of eatures of focusing on features of							
us nutritional benefits because they contain vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Kapow Primary STRUCTURES Pavilions Skills Design. Design at stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structure form. Chosing shapes to discussing on features of incustoms of the target access criteria focusing on features of features of incusing on features of fea							
because they contain vitamins, minerals and fibre.  To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Att						p. oaaaa	
contain vitamins, minerals and fibre.  To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health.  To know safety rules for using, storing and cleaning a knife safely.  To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Xapow Primary STRUCTURES Pavillons Skills Design: Designing a stable pavillons tructure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structure sedigned to support weight.  To chosing shapes  Year 3/4 Cycle B  Xapow Primary MECHANICAL SYSTEMS SYSTEMS Making a Slingshot Car Skills Design: Design: Designing a stable pavillons tructure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.		benefits					
vitamins, minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Art  Kapow Primary STRUCTURES Pavillons Skills Design: Designing a stable pavillon structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures form. Choosing shapes  foursign and store in a structure form. Coreate a desired effect. Building frame structures designed to support weight.		because they					
minerals and fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Art  Kapow Primary STRUCTURES Pavilions Skills Design: Designing a stable pavilions stable pavilions tructure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structure from the target audience and creating both design and support weight.  Structures designed to support weight. Choosing shapes individual design individual desig		contain					
fibre. To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Xeapow Primary MECHANICAL SYSTEMS Making a Slingshot Car Skills Design- Designing a stable pavilion structure that is aesthetically pleasing and shape that reduces air reduces air reduces air reduces air reduces air resistance. Designing a shape that reduces air resistance. To suming a net to create a desired effect. Building frame structures designed to support weight.  Year 3/4 Cycle B  Xapow Primary MECHANICAL SYSTEMS Making a Slingshot Car Skills Design- Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of focusing on features of individual design indiv		vitamins,					
To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health.  To know safety rules for using, storing and cleaning a knife safely.  To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Xapow Primary Expowerinary		minerals and					
that vitamins, minerals and fibre are important for energy, growth and maintaining health.  To know safety rules for using, storing and cleaning a knife safely.  To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Art  Kapow Primary STRUCTURES Pavilions Skills Design: Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structure designed to support weight.  Building frame structure designed to support weight.  Choosing shapes		11.01.01					
minerals and fibre are important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  (Art)							
fibre are important for energy, growth and maintaining health.  To know safety rules for using, storing and cleaning a knife safely.  To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Art  Art  Kapow Primary STRUCTURES Pavilions Skills Design. Designing a stable pavilion structure that is asethetically pleasing and selecting materials to create a desired effect. Building frame structure dots output when the selection materials to create a desired effect. Building frame structure dots output weight.		· ·					
important for energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Xapow Primary MECHANICAL SYSTEMS Making a Slingshot Car Skills Design- Designing a torch, Designing a giving consideration to the target audience and creating both design and selecting materials to create a desired effect. Building frame structure designed to the target audience and creating both design and success criteria focussing on features of individual design individual design individual design individual design individual design							
energy, growth and maintaining health. To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.   Year 3/4 Cycle B  Xeapow Primary STRUCTURES Pavilions Stills Design: Design: Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.  Wapow Primary Kapow Primary MECHANICAL SYSTEMS SYSTEMS SKills Design: Designing a stable posigning a stable posigning a shape that reduces air resistance. Drawing a net to creating both design and success criteria focussing on features of individual design							
and maintaining health.  To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Similar (Art) (A							
health.  To know safety rules for using, storing and cleaning a knife safely.  To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Xeapow Primary (Art) STRUCTURES Pavilions Skills Making a Design- Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structure form. Building frame structure of cousing shapes of individual design individual design							
To know safety rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/6 Cycle B  Year 3/7 Cycle B  Year 3/7 Cycle B  Year 3/7 Cycle B  Year 3/8 Cycle B  Year 3/8 Cycle B  Year 3/8 Cycle B  Year 3/9 Cycle B		_					
rules for using, storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  Xapow Primary STRUCTURES Pavilions Skills Design- Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.  Rapow Primary Kapow Primary ELECTRICAL SYSTEMS Skills Design- Designing a Slingshot Car Skills Design- Designing a torch, giving consideration to the target audience and creating both design and success criteria focussing on structure form. Choosing shapes individual design							
storing and cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Xeapow Primary STRUCTURES Pavilions Skills Making a Slingshot Car Skills SySTEMS Making a Slingshot Car Skills Design- Designing a stable pavilion structure that is a esthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.  Structure form. Choosing shapes  Ikapow Primary Kapow Primary ELECTRICAL SYSTEMS Skills Design- Designing a torch, giving consideration to the target audience and creating both design and success criteria focussing on features of individual design							
cleaning a knife safely. To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  (Art)  (Ar		—·					
To know that similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 (Art)							
similar coloured fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 10		safely.					
fruits and vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Cycle B  Year 3/4 Cycle B  (Art)  (A							
vegetables have similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 Systems  Yell Carth Systems  Yell Carth Systems  Yorches Skills Design- Designing a Shape that to the target audience and creating both design and shape that reduces air reduces air resistance. Create a desired effect. Building frame structures designed to support weight.  Year 3/4 Cycle B  Yapow Primary MECHANICAL SYSTEMS Torches Skills Design- Designing a giving consideration to the target audience and creating both design and success criteria focussing on features of individual design individual design							
Similar nutritional benefits.  Year 3/4 Cycle B  Year 3/4 (Art)  Year 3/4							
rutritional benefits.  Year 3/4 Cycle B  Yeapow Primary ELECTRICAL SYSTEMS Making a Skills Design- Design- Designing a torch, giving consideration to the target audience and reduces air		_					
Vear 3/4 Cycle B  (Art)  (Art)							
Year 3/4 Cycle B  (Art)  (Art)							
Cycle B  STRUCTURES Pavilions Skills Design- Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.  MECHANICAL SYSTEMS SYSTEMS Making a Torches Skills Design- Designing Designing a giving consideration to the target audience and create a focussing on features of individual design	Year 3/4		(Art)	Kapow Primary	(Art)	Kapow Primary	Kapow Primary
Pavilions  Skills  Design- Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.  Systems Making a Slingshot Car Skills Design- Designing a torch, giving consideration to the target audience and creating both design and success criteria focussing on features of individual design		(Circ)	(rii v)	_	(Aire)		
Skills       Making a       Torches         Design-Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect.       Design-Designing a giving consideration giving consideration to the target audience and reduces air reduces air reduces air audience and create a giving consideration to the target audience and resistance.         Drawing a net to create a structures designed to support weight.       Drawing a net to create a focussing on features of individual design	3,3.0 2						
Design- Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.  Skills Design- Designing a giving consideration to the target audience and creating both design and success criteria focussing on features of individual design							
Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect.  Building frame structures designed to support weight.  Design- Designing a torch, posigning a giving consideration shape that to the target audience and creduces air reduces air audience and creating both design and success criteria focusing on features of individual design						_	
that is aesthetically pleasing and shape that to the target selecting materials to create a desired effect.  Building frame structures designed to support weight.  Designing a giving consideration to the target audience and creduces air reduces air audience and creating both design and success criteria focussing on features of individual design						_	
pleasing and shape that reduces air audience and resistance. Creating both design and success criteria Building frame structures designed to support weight.  pleasing and shape that reduces air audience and resistance. Creating both design and success criteria focussing on features of individual design individual design		1		pavilion structure			Designing a torch,
selecting materials to create a desired effect.  Building frame structures designed to support weight.  Selecting materials to reduces air resistance. creating both design and success criteria focussing on features of individual design				that is aesthetically			
create a desired effect.  Building frame structures designed to support weight.  Create a desired resistance.  Drawing a net to and success criteria focussing on structure form.  Choosing shapes individual design				-		1	
effect. Building frame structures designed to support weight.  Drawing a net to create a focussing on features of individual design				pleasing and			•
Building frame create a focussing on structures designed to support weight. Choosing shapes individual design				pleasing and selecting materials to		reduces air	audience and
structures designed to support weight.  structure form. Choosing shapes individual design				pleasing and selecting materials to create a desired		reduces air resistance.	audience and creating both design
to support weight. Choosing shapes individual design				pleasing and selecting materials to create a desired effect.		reduces air resistance. Drawing a net to	audience and creating both design and success criteria
				pleasing and selecting materials to create a desired effect. Building frame		reduces air resistance. Drawing a net to create a	audience and creating both design and success criteria focussing on
Make- that increase or ideas.				pleasing and selecting materials to create a desired effect. Building frame structures designed		reduces air resistance. Drawing a net to create a structure form.	audience and creating both design and success criteria focussing on features of

Creating a range of different shaped frame structures. Making a variety of free standing frame structures of different shapes and **Selecting appropriate** materials to build a strong structure and cladding. **Reinforcing corners** to strengthen a structure. Creating a design in accordance with a **Learning to create** different textual effects with materials.

EvaluateEvaluating structures made by the class.
Describing what characteristics of a design and construction made it the most effective.
Considering effective and ineffective designs.

To understand what

#### **Knowledge**

Technical-

a frame structure is. To know what a 'free standing' structure is -one of which can stand on its own. Additional-To know that a pavilion is a decorative building or structure for leisure activities. To know that cladding can be applied to structures for different effects. To know that aesthetics are how a product looks. To know that a products function means its purpose. To understand that the target audience means the person or group of people a product is designed

To know that architects consider light, shadow and patterns when designing

decrease speed as a result of air resistance. Personalising a design. Make-Measuring, marking, cutting and assembling with increasing accuracy. Making a model based on a chosen design. Evaluate-**Evaluating the** speed of a final product based on: the effect of shape on speed ad the accuracy of workmanship on performance.

#### **Knowledge**

Technical-To understand that all moving things have kinetic energy. To understand that kinetic energy is the energy that something (object/person) has by being in motion. To know that air resistance is the level of drag on an object as it is forced through the air. To understand that the shape of a moving object will affect how it moves due to air resistance. Additional-To understand that products change and evolve over time. To know that aesthetics means how an object or product looks in design and technology. To know that a template is a stencil you can use to help you draw the same shape accurately.

To know that a birds eye view means a view

Make-Making a torch with a working electrical circuit and switch. **Using appropriate** equipment to cut and attach materials. Assembling a torch according to the design and success criteria. **Evaluate-Evaluating electrical** products. **Testing and** evaluating the success of a final product.

**Knowledge** Technical-To understand that electrical conductors are materials which electricity can pass through. To understand that electrical insulators are materials which electricity cannot pass through. To know that a battery contains stored electricity that can be used to power products. To know that an electrical circuit must be complete for electricity to flow. To know that a switch can be used to complate and break an electrical circuit. **Additional** To know the features of a torch: case, contacts, batteries, switch, reflector, lamp and lens. To know the facts from the history and invention of the electric light bulb(s)by Sir Joseph Swan

and Thomas Edison.

		from a high	
		angle (as if a bird	
		is in flight)	
		To know that	
		graphics are	
		images which	
		are designed to	
		explain or	
		advertise	
		something.	
		To know that it	
		is important to	
		assess and	
		evaluate design	
		ideas and	
		models against a	
		list of design	
		criteria	
		3.13110	



# Design Technology At Fawkham CEP School



Year	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 5/6	<b>Kapow Primary</b>	<b>Kapow Primary</b>	(Art)	<b>Kapow Primary</b>	<mark>(Art)</mark>	(Art)
Cycle A	COOKING AND	MECHANICAL		ELECTRICAL		
	NUTRITION	SYSTEMS		SYSTEMS		
	What could be	Making a pop		Doodlers		
	healthier	up book		<u>Skills</u>		
	<u>Skills</u>	(Link to Book		Design-		
	Design-	week)		Identifying		
	Adapting a	<u>Skills</u>		factors that		
	traditional	Design-		could be		
	recipe,	Designing a		changed on		
	understanding	pop up book		existing		
	that the	ehich uses a		products and		
	nutritional value	mixture of		explaining how		
	of a recipe alters	structures and		these would		
	if you remove,	mechanisms.		alter the form		
	substitute or	Naming each		and function of		
	add additional	mechanism,		the product.		
	ingredients.	input and		Developing		
	Writing an	output		design criteria		
	amended	accurately.		based on		
	method for a	Storyboarding		findings from		
	recipe to	ideas for a		investigating		
	incorporate the	book.		existing		
	relevant	na-t		products.		
	changes to	Make-		Developing		
	ingredients.	Following a		design criteria		
	Designing	design brief to		that clarifies		
	appealing	make a pop up		the target user.		
	packaging to	book, neatly and with focus		Make		
	reflect a recipe. Make-			Make- Altering a		
	Cutting and	on accuracy. Making		product's form		
	preparing	mechanisms		and function by		
	vegetables	and/or		tinkering with		
	safely.	structures		it's		
	Using	using sliders,		configuration.		
	equipment	pivots and		Making a		
	safely, including	folds to		functional		
	knives, hot pans	produce		series circuit,		
	and hobs.	movement.		incorporating a		
	Knowing how to	Using layers		motor.		
	avoid cross	and spacers to		Constructing a		
	contamination.	hide the		product with		
	Following a step	workings of		consideration		
	by step method	mechanical		for the design		
	, ,	parts for an		criteria.		
			ı	L.		

carefully to make a recipe.

EvaluateIdentifying the nutritional differences between different products and recipes. Identifying and describing healthy benefits of food groups.

Knowledge To understand where meat comes fromlearning that beef is from cattle and how beef is reared and processed, including ket welfare issues. To know that I can adapt a recipe to make it healthier by substituting ingredients. To know that I can use a nutritional calculator to see how healthy a food option is. To understand that 'cross contamination' means bacteria and germs have been passed onto ready- toeat foods and it happens when these foods mix with raw meat

or unclean

objects.

aesthetically
pleasing result.
EvaluateEvaluating the
work of others
and receiving
feedback on
own work.
Suggesting
points for
improvements.

<u>Knowledge</u> Technical-To know that mechanisms control movement. To understand that mechanisms can be used to change one kind of motion into another. To understand how to use sliders, pivots and folds to create paperbased mechanisms. Additional-To know that a design brief is a description of what I am going to design and make. To know that designers often want to hide mechanisms to make a product more aesthetically pleasing.

**Breaking down** construction process into steps so that others can make the product. **Evaluate-**Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses. **Determining** which parts of a product affect its function and which parts affect its form. Analysing whether changes in configuration positively or negatively affect an existing product. **Peer evaluating** a set of instructions to build a product.

#### Knowledge

Technical-To know that series circuits only have one direction for the electricity to flow. To know when there is a break in a series circuit, all components turn off. To know that an electric motor converts electrical energy into rotational movement, causing the motors axle to spin. To know a motorised product is one which uses a motor to function. **Additional-**To know that product analysis is

critiquing the

				strengths and		
				weaknesses of		
				a product.		
				To know that		
				'configuration'		
				means how the		
				parts of a		
				product are		
				arranged.		
				3		
Year 5/6						Kapow Primary
Cycle B	( 04 )	Kapow Primary	(Art)	Kapow Primary	/ A\	DIGITAL WORLD
Cycle b	(Art)	TEXTILES	(Ait)	STRUCTURES	(Art)	
						Navigating the
		Waistcoats		Playgrounds		world
		<u>Skills</u>		<u>Skills</u>		<u>Skills</u>
		Design-		Design-		Design-
		Designing a		Designing a		Writing a design
		waistcoat in		playground		brief from
		accordance to		featuring a		information
		a specification		variety of		submitted by a
		linked to set of		different		client.
		design criteria.		structures,		Developing design
		•		•		
		Annotating		giving careful		criteria to fulfil the
		design, to		consideration		clients request.
		explain their		to how the		Considering and
		decisions.		structures will		suggesting
		Make-		be used,		additional functions
		Using a		considering		for my navigating
		template when		effective and		tool.
		cutting fabric		ineffective		Developing a
		to ensure they				
		*		designs.		product idea
		achieve the		Make-		through annotated
		correct shape.		Building a		sketches.
		Using pins		range of play		Placing and
		effectively to		apparatus		manoeuvring 3D
		secure a		structures		objects, using CAD.
		template to		drawing upon		Changing the
		fabric without		new and prior		properties of, or
		creases or		knowledge of		combining one or
		bulges.		structures.		more 3D objects,
		Marking and		Measuring,		using CAD.
		cutting fabric		marking and		Make-
		accurately, in		cutting wood to		Considering
		accordance		create a range		materials and their
		with their		of structures.		functional
		design.		Using a range		properties,
		Sewing a		of materials to		especially those that
		strong running		reinforce and		are sustainable and
		stitc, making		add decoration		recyclable (for
		small, neat		to structures.		example, cork and
		· · ·				_
		stitches and		Evaluate-		bamboo).
		following the		Improving a		Explaining material
		edge.		design plan		choices and why
		Tying strong		based on peer		they were chosen as
		knots.		evaluation.		part of a product
		Decorating a		Testing and		concept.
		waistcoat,		adapting a		Programming an
		attaching		design to		N,E,S, W cardinal
		features (such		improve it as it		compass.
		as applique)		is developed.		Evaluate-
		using thread.		Identifying		Explaining how my
		Finishing the		what makes a		program fits the
		waistcoat with		successful		design criteria and
		a secure		structure.		how it would be
		fastening (such				useful as part of a
		as buttons)		<u>Knowledge</u>		navigation tool.
		Learning		Technical-		Developing an
		different		To know that		awareness of
		decorative		structures can		sustainable design.
				be		
		stitches.				Identifying key
				strengthened		industries that

Sewing
accurately
with evenly
spaced, neat
stitches.
EvaluateReflecting on
their work
continually
throughout the
design, make
and evaluate
process.

Knowledge

To understand that it is important to design clothing with the client/target customer in mind. To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric. To understand the importance of consistently sized stitches.

by manipulating materials and shapes. Additional-To understand what a 'footprint plan' is. To understand that in the real world, design, can impact users in positive and negative ways. To know that a prototype is a cheap model to test a design idea.

utilise 3D CAD modelling and explaining why. Describing how the product concept fits the client's request and how it will benefit the customers. **Explaining the key** functions in my program, including any additions. **Explaining how my** program fits the design criteria and how it would be useful as part of a navigation tool. **Explaining the key** functions and features of my navigation tool to the client as part of a product concept pitch. **Demonstrating a** functional program as part of a product concept pitch.

### **Knowledge**

TechnicalTo know that
accelerometers can
detect movement.
To understand that
sensors can be
useful in products as
they mean the
product can function
without human
input.
AdditionalTo know the

To know the designers write design briefs and develop design criteria to enable them to fulfil a client's request. To know that 'multifunctional' means an object or product has more than one function. To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.