MORELAND PRIMARY SCHOOL
LEARNING FOR LIFE

DT Curriculum Overview and Progression Map

EYFS ELG's			
Expressive Arts and Design: Creating with Materials ELG Children at the expected level of development will: • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function; • Share their creations, explaining the process they have used;			
EYFS			
Developing, planning and communicating ideas	**Working with tools, equipment, materials and components to make quality products**	**Evaluating processes and products**	
• Can they make observations about the features of objects? • Can they use their senses to explore and describe objects? • Can they think of some ideas of their own? • Can they plan how best to approach a task	• Can they explain what they are making? • Can they select appropriate resources and tools? • Can they explain which tools are they using and why? • Can they use tools safely? • Can they use tools to manipulate materials?	• Can they identify success and next steps? • Can they change their strategy as needed?	
Growing	**Cooking**	**Nutrition**	**Enjoying Food**
• Do they understand the life cycle of plants and animals? • Do they understand that all food comes from plants or animals? • Can they describe how food makes the journey from farm to fork? • Do they understand what plants need to grow	• Are they aware that ingredients are available from a range of sources (shops, markets, grown at home)? • Can they select and use appropriate tools needed for a recipe? • Can they use tools effectively and safely? • Can they identify and use the appropriate ingredients for a recipe? • Can they complete basic hygiene tasks? (e.g. wash hands)	• Do they understand that food is a basic requirement of life? • Do they understand that we need food to grow, be active and maintain health? • Can they sort a selection of foods into healthy and unhealthy groups? • Can they identify and talk about a range of fruits and vegetables?	• Can they talk about foods they like and dislike with reasons? • Can they discuss the food that they eat during special occasions or cultural celebrations? (e.g. birthday, Eid, etc.) • Are they willing to try new foods?
See EYFS Medium Term Plans for detail on teaching and learning activities provided			

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS						
EYFS DT Cycle 1 and 2	**Ongoing skills development** Focus on: Choosing resources Cutting and joining skills Including – junk modelling, sewing, woodwork, construction and block play **Cooking and Nutrition** Seasonal foods (soups, stew, autumn fruit desserts) Celebration foods – (food from different cultures, making food for celebrations – Harvest festival, international evening, Diwali, Christmas fair) Food linked to stories – gingerbread, bread **Growing** Harvesting and planting		**Ongoing skills development** Focus on: Designing, planning and making Using a wider range of tools Including – junk modelling, sewing, woodwork, construction and block play **Cooking and Nutrition** Recognising healthy and unhealthy foods (cooking healthy recipes/ change for life recipes – e.g. healthy muffins, pizzas) Family kitchen club – enjoying cooking together **Growing** Spring planting Understanding life cycles of animals and where food comes from – farm visit, caring for the chickens, hatching eggs – farm to fork		**Ongoing skills development** Focus on: Evaluating and presenting Using a wider range of materials and selecting the best material for the task Including – junk modelling, sewing, woodwork, construction and block play **Cooking and Nutrition** Designing their own simple dishes (e.g. sandwiches, salads, fruit salad, healthy fruit smoothies/ lollies) Talking about likes and dislikes **Growing** Harvesting summer crops Exploring life cycles of plants – sunflowers, beans Caring for the garden and understanding what plants need to grow	

Key Stage 1 National Curriculum

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products

Cooking and Nutrition

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from

Year 1

Designing		**Making**	
<u>Understanding contexts, users and purposes</u>	<u>Generating, developing, modelling and communicating ideas</u>	<u>Planning</u>	<u>Practical skills and techniques</u>
• work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment • state what products they are designing and making • say whether their products are for themselves or other users • describe what their products are for • say how their products will work	• generate ideas by drawing on their own experiences • use knowledge of existing products to help come up with ideas • develop and communicate ideas by talking and drawing • model ideas by exploring materials, components and construction kits and by making templates and mock ups	• plan by suggesting what to do next • select from a range of tools and equipment, explaining their choices • select from a range of materials and components according to their characteristics	• follow procedures for safety and hygiene • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • measure, mark out, cut and shape materials and components • assemble, join and combine materials and components

• say how they will make their products suitable for their intended users • use simple design criteria to help develop their ideas	• use information and communication technology, where appropriate, to develop and communicate their ideas		• use finishing techniques, including those from art and design
Evaluating		**Technical Knowledge**	**Cooking and Nutrition**
<u>Own ideas and products</u>	<u>Existing products</u>	<u>Making products work</u>	<u>Where food comes from</u> <u>Food preparation, cooking and nutrition</u>
• talk about their design ideas and what they are making • make simple judgements about their products and ideas against design criteria • suggest how their products could be improved	• what products are • who products are for • what products are for • how products work • how products are used • where products might be used • what materials products are made from • what they like and dislike about products	• about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • how freestanding structures can be made stronger, stiffer and more stable • that a 3-D textiles product can be assembled from two identical fabric shapes • that food ingredients should be combined according to their sensory characteristics • the correct technical vocabulary for the projects they are undertaking	• that all food comes from plants or animals • that food has to be farmed, grown elsewhere (e.g. home) or caught • how to name and sort foods into the five groups in The Eat well plate • that everyone should eat at least five portions of fruit and vegetables every day • how to prepare simple dishes safely and hygienically, without using a heat source • how to use techniques such as cutting, peeling and grating

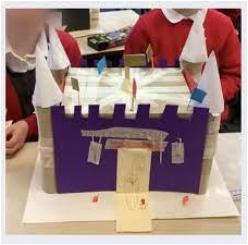
Unit Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Textiles Puppets  Kapow unit	**Mechanisms** **Wheels and Axles** Vehicles  Kapow un	**Structures** Georgian Dolls House   Stand alone unit		**Structures** Woodwork – bird houses/bug hotels 	**Cooking and Nutrition** Fruit and Vegetables - smoothies  Kapow unit

Judith Hope- Puppet maker	**Helen Davcock Bentley's Head of Laboratory** **La Shirl Turner, Design Chief (Advance Color & Trim) at Fiat Chrysler Autos**	**William Kent Georgian architect** **Emma Waddell – Dolls House Grand Designs owner**	**Mamo Architects / Andreu Carulla/ Paul Clark – Designers of bird houses**	**Richard Reed, Adam Balon and Jon Wright** **Founders of Innocent Smoothies**

Year 2			
Designing		**Making**	
Understanding contexts, users and purposes	Generating, developing, modelling and communicating ideas	Planning	Practical skills and techniques
• work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment • state what products they are designing and making • say whether their products are for themselves or other users • describe what their products are for • say how their products will work • say how they will make their products suitable for their intended users • use simple design criteria to help develop their ideas	• generate ideas by drawing on their own experiences • use knowledge of existing products to help come up with ideas • develop and communicate ideas by talking and drawing • model ideas by exploring materials, components and construction kits and by making templates and mock ups • use information and communication technology, where appropriate, to develop and communicate their ideas	• plan by suggesting what to do next • select from a range of tools and equipment, explaining their choices • select from a range of materials and components according to their characteristics	• follow procedures for safety and hygiene • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • measure, mark out, cut and shape materials and components • assemble, join and combine materials and components • use finishing techniques, including those from art and design
Evaluating		**Technical Knowledge**	**Cooking and Nutrition**
Own ideas and products	Existing products	Making products work	Where food comes from Food preparation, cooking and nutrition
• talk about their design ideas and what they are making • make simple judgements about their products and ideas against design criteria • suggest how their products could be improved	• what products are • who products are for • what products are for • how products work • how products are used • where products might be used • what materials products are made from • what they like and dislike about products	• about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • how freestanding structures can be made stronger, stiffer and more stable • that a 3-D textiles product can be assembled from two identical fabric shapes	• that all food comes from plants or animals • that food has to be farmed, grown elsewhere (e.g. home) or caught • how to name and sort foods into the five groups in The Eat well plate • that everyone should eat at least five portions of fruit and vegetables every day • how to prepare simple dishes safely and hygienically, without using a heat source

		• that food ingredients should be combined according to their sensory characteristics • the correct technical vocabulary for the projects they are undertaking	• how to use techniques such as cutting, peeling and grating

Unit Overview					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Mechanisms **Sliders and Levers** Great Fire of London Animation  Adapted kapow unit for GFOL animation		**3D Structures** Castles  Kapow unit	**Make packaging for British Bake Off** (DT/Art project)  Access Art Food: Great British Bake Off	**Textiles** Making a pouch  Kapow unit	**Cooking and Nutrition** A Balanced Diet – Wrap  Kapow unit
Jan Pienkowski author and illustrator **Lauren Child**		**Gundulf (1024-1108) – Norman Romanesque Builder and Architect**	**Jones Knowles Richie – Brand and Packaging Designs** **Ruben Rausing and Erik Wallenburg – inventors of the Tetra Pak**	**Alev Ozturk bag designer**	**Keith Cox and Matthew Blair** **Founders of World Wrapps**

National Curriculum Key Stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- 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

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products

Cooking and Nutrition

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

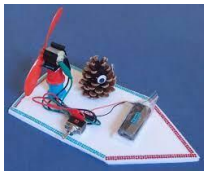
Year 3

Designing		Making	
<u>Understanding contexts, users and purposes</u>	<u>Generating, developing, modelling and communicating ideas</u>	<u>Planning</u>	<u>Practical skills and techniques</u>
• work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • describe the purpose of their products	• share and clarify ideas through discussion • model their ideas using prototypes and pattern pieces • share and clarify ideas through discussion	• select tools and equipment suitable for the task • explain their choice of tools and equipment in relation to the skills and techniques they will be • using	• follow procedures for safety and hygiene • use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients,

• indicate the design features of their products that will appeal to intended users • explain how particular parts of their products work • gather information about the needs and wants of particular individuals and groups • develop their own design criteria and use these to inform their ideas	• model their ideas using prototypes and pattern pieces • use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas • use computer-aided design to develop and communicate their ideas • generate realistic ideas, focusing on the needs of the user • make design decisions that take account of the availability of resources	• select materials and components suitable for the task • explain their choice of materials and components according to functional properties and aesthetic qualities • order the main stages of making	mechanical components and electrical components • measure, mark out, cut and shape materials and components with some accuracy • assemble, join and combine materials and components with some accuracy • apply a range of finishing techniques, including those from art and design, with some accuracy
Evaluating		**Technical Knowledge**	**Cooking and Nutrition**
<u>Own ideas and products</u>	<u>Existing products</u>	<u>Making products work</u>	<u>Where food comes from</u> <u>Food preparation, cooking and nutrition</u>
• identify the strengths and areas for development in their ideas and products • consider the views of others, including intended users, to improve their work • refer to their design criteria as they design and make • use their design criteria to evaluate their completed products	• how well products have been designed • how well products have been made • why materials have been chosen • what methods of construction have been used • how well products work • how well products achieve their purposes • how well products meet user needs and wants • who designed and made the products • where products were designed and made • when products were designed and made • whether products can be recycled or reused	• how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking • how mechanical systems such as levers and linkages or pneumatic systems create movement	• how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eat well plate • that to be active and healthy, food and drink are needed to provide energy for the body

		• how simple electrical circuits and components can be used to create functional products • how to program a computer to control their products • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product • that food ingredients can be fresh, pre-cooked and processed	

Unit Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Textiles **Fastenings** Phone Case  Kapow Unit	**Mechanical Systems** Pneumatic Toys  Kapow Unit	**Structures** Design an earthquake proof building 	**Electrical Systems** **Fan Boats (1 lesson)** TTS Project 	**Digital World** Electronic Charm  Kapow Unit	**Cooking and Nutrition** Seasonal Foods  Kapow Unit
YKK - Fastenings designer George De Mestral – inventor of velcro	**Arvind Gupta – Toy maker**	**Adam Smith - Burj Khalifa, Dubai** **C.Y Lee & Partners - Taipei 101-Taiwan** **William Pereira - Transamerica Pyramid, USA**	**Alexander Graham Bell - inventor of the fan boat**	**Akihiro Yokoi of WiZ and Aki Maita of Banda** **Creator of Tamagotchi**	**Clare Gray** **Dietician Mindful Chef**
Country Trust Food discovery project runs all year in Y3					

<table>
<tr><th colspan="4">Year 4</th></tr>
<tr><th colspan="2">Designing</th><th colspan="2">Making</th></tr>
<tr><td><u>Understanding contexts, users and purposes</u></td><td><u>Generating, developing, modelling and communicating ideas</u></td><td><u>Planning</u></td><td><u>Practical skills and techniques</u></td></tr>
<tr>
<td>• work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment
• describe the purpose of their products
• indicate the design features of their products that will appeal to intended users
• explain how particular parts of their products work
• gather information about the needs and wants of particular individuals and groups
• develop their own design criteria and use these to inform their ideas</td>
<td>• share and clarify ideas through discussion
• model their ideas using prototypes and pattern pieces
• share and clarify ideas through discussion
• model their ideas using prototypes and pattern pieces
• use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas
• use computer-aided design to develop and communicate their ideas
• generate realistic ideas, focusing on the needs of the user
• make design decisions that take account of the availability of resources</td>
<td>• select tools and equipment suitable for the task
• explain their choice of tools and equipment in relation to the skills and techniques they will be
• using
• select materials and components suitable for the task
• explain their choice of materials and components according to functional properties and aesthetic qualities
• order the main stages of making</td>
<td>• follow procedures for safety and hygiene
• use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components
• measure, mark out, cut and shape materials and components with some accuracy
• assemble, join and combine materials and components with some accuracy
• apply a range of finishing techniques, including those from art and design, with some accuracy</td>
</tr>
<tr><th colspan="2">Evaluating</th><th>Technical Knowledge</th><th>Cooking and Nutrition</th></tr>
<tr><td><u>Own ideas and products</u></td><td><u>Existing products</u></td><td><u>Making products work</u></td><td><u>Where food comes from</u>
<u>Food preparation, cooking and nutrition</u></td></tr>
<tr>
<td>• identify the strengths and areas for development in their ideas and products
• consider the views of others, including intended users, to improve their work
• refer to their design criteria as they design and make</td>
<td>• how well products have been designed
• how well products have been made
• why materials have been chosen
• what methods of construction have been used
• how well products work
• how well products achieve their purposes</td>
<td>• how to use learning from science to help design and make products that work
• how to use learning from mathematics to help design and make products that work
• that materials have both functional properties and aesthetic qualities</td>
<td>• how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source
• how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</td>
</tr>
</table>

• use their design criteria to evaluate their completed products	• how well products meet user needs and wants • who designed and made the products • where products were designed and made • when products were designed and made • whether products can be recycled or reused	• that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking • how mechanical systems such as levers and linkages or pneumatic systems create movement • how simple electrical circuits and components can be used to create functional products • how to program a computer to control their products • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product • that food ingredients can be fresh, pre-cooked and processed	• that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eat well plate • that to be active and healthy, food and drink are needed to provide energy for the body

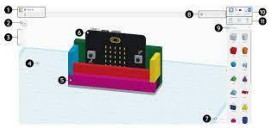
Unit Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Electrical Systems Make a Light Kapow Unit	**Digital World** Mindful Moments  Kapow Unit	**Mechanical Systems** Make a Shaduf 		**Textiles** **Talking Textiles** (Art/DT project) Create a textiles piece based on a Greek Myth	**Cooking and Nutrition** Adapting a Recipe  Kapow Unit
David Misell inventor of the torch	**Christopher and Nicho Plowman – co founders Insight Timer**	**Ancient Egyptians**			**Chef** **Nadiya Hussain**
Royal Academy of Culinary Arts – Adopt a School Programme					

Year 5			
Designing		**Making**	
Understanding contexts, users and purposes	Generating, developing, modelling and communicating ideas	Planning	Practical skills and techniques
• work confidently within a range of contexts, such as the home, school, leisure, culture, • enterprise, industry and the wider environment • describe the purpose of their products • indicate the design features of their products that will appeal to intended users • explain how particular parts of their products work • carry out research, using surveys, interviews, questionnaires and web-based resources • identify the needs, wants, preferences and values of particular individuals and groups • develop a simple design specification to guide their thinking	• share and clarify ideas through discussion • model their ideas using prototypes and pattern pieces • use annotated sketches, cross-sectional drawings and exploded diagrams to develop and • communicate their ideas • use computer-aided design to develop and communicate their ideas • generate innovative ideas, drawing on research • make design decisions, taking account of constraints such as time, resources and cost	• select tools and equipment suitable for the task • explain their choice of tools and equipment in relation to the skills and techniques they will be using • select materials and components suitable for the task • explain their choice of materials and components according to functional properties and aesthetic qualities • produce appropriate lists of tools, equipment and materials that they need • formulate step-by-step plans as a guide to making	• follow procedures for safety and hygiene • use a wider range of materials and components than KS1, including construction materials • and kits, textiles, food ingredients, mechanical components and electrical components • accurately measure, mark out, cut and shape materials and components • accurately assemble, join and combine materials and components • accurately apply a range of finishing techniques, including those from art and design • use techniques that involve a number of steps • demonstrate resourcefulness when tackling practical problems
Evaluating		**Technical Knowledge**	**Cooking and Nutrition**
Own ideas and products	Existing products	Making products work	Where food comes from Food preparation, cooking and nutrition
• identify the strengths and areas for development in their ideas and products • consider the views of others, including intended users, to improve their work • critically evaluate the quality of the design, manufacture and fitness for purpose of their	• how well products have been designed • how well products have been made • why materials have been chosen • what methods of construction have been used • how well products work • how well products achieve their purposes	• how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities	• 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 • that seasons may affect the food available

• products as they design and make • evaluate their ideas and products against their original design specification	• how well products meet user needs and wants • how much products cost to make • how innovative products are • how sustainable the materials in products are • what impact products have beyond their intended purpose	• that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking • how mechanical systems such as cams or pulleys or gears create movement • how more complex electrical circuits and components can be used to create functional products • how to program a computer to monitor changes in the environment and control their products • how to reinforce and strengthen a 3D framework • that a 3D textiles product can be made from a combination of fabric shapes • that a recipe can be adapted by adding or substituting one or more ingredients	• how food is processed into ingredients that can be eaten or used in cooking

Unit Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Mechanical Systems Pop Up Book  Kapow Uni	**Textiles** Stuffed Toy  Kapow Unit	**Mechanical Systems** Making a Moving Toy  Kapow Unit		**Digital World** Monitoring Devices  Kapow Unit	**Cooking and Nutrition** What could be healthier?  Kapow Unit

Colette Fu https://www.colettefu.com/	**Yiying Wang- Noodoll creator and founder**	**Jacques de Vaucanson French inventor and artist** **Wanda Sowry Maker of wooden automata**	**Lazina Rahman Technical Marketing Engineer- Future Electronics**	**Jane and Nick Somper The Dorset Meat Company**

Year 6			
Designing		**Making**	
Understanding contexts, users and purposes	Generating, developing, modelling and communicating ideas	Planning	Practical skills and techniques
• work confidently within a range of contexts, such as the home, school, leisure, culture, • enterprise, industry and the wider environment • describe the purpose of their products • indicate the design features of their products that will appeal to intended users • explain how particular parts of their products work • carry out research, using surveys, interviews, questionnaires and web-based resources • identify the needs, wants, preferences and values of particular individuals and groups • develop a simple design specification to guide their thinking	• share and clarify ideas through discussion • model their ideas using prototypes and pattern pieces • use annotated sketches, cross-sectional drawings and exploded diagrams to develop and • communicate their ideas • use computer-aided design to develop and communicate their ideas • generate innovative ideas, drawing on research • make design decisions, taking account of constraints such as time, resources and cost	• select tools and equipment suitable for the task • explain their choice of tools and equipment in relation to the skills and techniques they will be using • select materials and components suitable for the task • explain their choice of materials and components according to functional properties and aesthetic qualities • produce appropriate lists of tools, equipment and materials that they need • formulate step-by-step plans as a guide to making	• follow procedures for safety and hygiene • use a wider range of materials and components than KS1, including construction materials • and kits, textiles, food ingredients, mechanical components and electrical components • accurately measure, mark out, cut and shape materials and components • accurately assemble, join and combine materials and components • accurately apply a range of finishing techniques, including those from art and design • use techniques that involve a number of steps • demonstrate resourcefulness when tackling practical problems
Evaluating		**Technical Knowledge**	**Cooking and Nutrition**
Own ideas and products	Existing products	Making products work	Where food comes from Food preparation, cooking and nutrition
• identify the strengths and areas for development in their ideas and products • consider the views of others, including intended users, to improve their work • critically evaluate the quality of the design, manufacture and fitness for purpose of their	• how well products have been designed • how well products have been made • why materials have been chosen • what methods of construction have been used • how well products work • how well products achieve their purposes	• how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities	• 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 • that seasons may affect the food available

• products as they design and make • evaluate their ideas and products against their original design specification	• how well products meet user needs and wants • how much products cost to make • how innovative products are • how sustainable the materials in products are • what impact products have beyond their intended purpose	• that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking • how mechanical systems such as cams or pulleys or gears create movement • how more complex electrical circuits and components can be used to create functional products • how to program a computer to monitor changes in the environment and control their products • how to reinforce and strengthen a 3D framework • that a 3D textiles product can be made from a combination of fabric shapes • that a recipe can be adapted by adding or substituting one or more ingredients	• how food is processed into ingredients that can be eaten or used in cooking • 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 • that seasons may affect the food available • how food is processed into ingredients that can be eaten or used in cooking

Unit Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Electrical Systems Steady Hand Game  	**Structures** Playground  Kapow Unit	**Textiles** **Upcycled Fashion Design** (Art/DT Project) Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, children design, assemble and decorate an	**Digital World** Navigating the World Kapow Unit	n/a	**Cooking and Nutrition** Come Dine with Me  Kapow Unit

Kapow Unit		item of clothing or accessory for a chosen purpose. Stand Alone unit based on Kapow			
John Spinello- Designer of Operation game	**Niki de Saint Phalle and Benjamin Dominguez**	**Lulu Guiness – bag designer** **Vivienne Westwood – fashion designer** **Nannacay – ethical bag designs**	**Lars and Jens Eilstrup Rasmussen, Noel Gordon and Stephen Ma, at the Sydney-based company Where 2 Technologies – designers of google maps**		**Chef** **Jamie Oliver**