St. Andrew's
Church of England Primary School
ENRICHING LIVES

Design Technology
Curriculum Journey

1. What is Design and Technology?

At St. Andrew's, we believe that Design and Technology is when we combine practical skills with an understanding of designing, exploring, creating and evaluating products in real life contexts.

2. Through the eyes of our children, Design and Technology is important because:

'It helps us to become independent, creative problem solvers and thinkers as individuals and as part of a team..'

3. Curriculum Intent

At St. Andrew's Church of England Primary School, our children use their creativity and imagination to design and make products that solve problems in real life contents. They draw on the disciplines of other subjects such as: Mathematics, Science, Computing and Art. Evaluations of designers and existing products takes place to inspire our children to create their own ideas and designs. Our children learn how to take risks, while becoming resourceful, innovative and capable citizens.

Our Curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others understand and apply the principles of nutrition and learn how to cook.

We follow the Key objectives of intent within the Design Technology Curriculum based on the National Curriculum 2014 guidance:

- Products are to be made for a purpose
- Individuality should be ensured in children's design and construction of products
- Delivery of the two strands: Designing and Making and Cooking and Nutrition
- More emphasis to be given on creating 'innovative' products in KS2
- Teaching the importance of making on-going changes and improvements during making stages
- Looking into seasonality of ingredients and how they are grown, caught or reared
- The introduction of computing and coding of products in KS2
- Researching key events and individual designers in the History of Technology in KS2.

4. Implementation

The teaching and implementation of the Design and Technology curriculum at St. Andrew's C.E. Primary School is based on the Early Learning Goals and National Curriculum; it is supported by expectations from Chris Quigley Milestones, ensuring a well-structured approach.

We organise our pupils' learning around the following structure:

Take inspiration from design throughout history: This concept involves appreciating the design process that has influenced the products we use in everyday life.

Design (see below)

Master practical skills: This concept involves developing the skills needed to make high quality products (we have highlighted a range of skills but they may be added to or changed as appropriate for your school).

(Design), make, evaluate and improve: This concept involves developing the process of design thinking and seeing design as a process.

These key concepts underpin learning in each milestone. This enables pupils to reinforce and build upon prior learning, make connections and develop subject specific language.

In Design and Technology children design products with a purpose in mind and an intended user of the products. Food technology is implemented across the school with children developing an understanding of where food comes from, the importance of a varied and healthy diet and how to prepare this.

At St. Andrew's, we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum through well planned and resourced projects and experiences. We have determined that Design Technology will taught in three units across the school year. During Design and Technology units, our children draw upon subject knowledge and skills within Mathematics, Science, History, Computing and Art. Through the evaluation of past and present technology they can reflect upon the impact of Design Technology on everyday life and the wider world.

5. Impact

Assessment of children's learning in Design and Technology is an ongoing monitoring of children's understanding, knowledge and skills by the class teacher, throughout lessons. This assessment is then used to inform differentiation, support and challenge required by the children. At the end of each unit of work, each teacher completes unit evaluations, assessing attainment against the Chris Quigley Essentials milestones to make informed judgements about the depth of their learning and the progress children have made over time.

6. Programmes of Study

6.1 Programmes of Study - Primary

EYFS	KS1	KS2
Nursery: **Communication & Language:** Use a wider range of vocabulary. **Personal, Social, Emotional Development:** Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them. Physical Development: Use one-handed tools and equipment, for example, making snips in paper with scissors. Understanding the World: Explore how things work. Talk about the differences between materials and changes they notice. **Expressive arts and design:** Explore, use and refine a variety of artistic effects to express their ideas and feelings Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures **Reception:** **Communication &**	• Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They will work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. **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	• Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They will work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. **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

Language: Learn new vocabulary Use new vocabulary through the day **Physical Development:** Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor. **Expressive arts and design:** Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. **ELG** **Physical Development:** Use a range of small tools, including scissors, paintbrushes and cutlery. **Expressive Arts & Design:** 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.	**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	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 product

6.2 Programmes of Study - Next Steps

KS3
• Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They will work in a range of domestic and local contexts [for example, the home, health, leisure and culture] and industrial contexts [for example, engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion]. **Design:** • Use research and exploration, such as the study of different cultures, to identify and understand user needs • Identify and solve their own design problems and understand how to reformulate problems given to them • Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations • Use a variety of approaches [for example, biomimicry and user-centred design] to generate creative ideas and avoid stereotypical responses • Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations **Make:** • Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture • Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties **Evaluate:** • Analyse the work of past and present professionals and others to develop and broaden their understanding • Investigate new and emerging technologies • Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups • Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists **Technical knowledge:** • Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions • Understand how more advanced mechanical systems used in their products enable changes in movement and force • Understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with heat, light, sound and movement as inputs and outputs] • Apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors] and control outputs [for example, actuators] using programmable components [for example, microcontrollers]

7. Progression of skills

- through each strand

7.1 Progression of skills in EYFS

	Development Matters & ELG
Nursery	**Nursery:** **Communication & Language:** Use a wider range of vocabulary. **Personal, Social, Emotional Development:** Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them. Physical Development: Use one-handed tools and equipment, for example, making snips in paper with scissors. Understanding the World: Explore how things work. Talk about the differences between materials and changes they notice. **Expressive arts and design:** Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures
Reception	**Reception:** **Communication & Language:** Learn new vocabulary Use new vocabulary through the day **Physical Development** Progress towards a more fluent style of moving, with developing control and grace. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor. **Expressive arts and design:** Explore, use and refine a variety of artistic effects to express their ideas and feelings. Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. **ELG** **Physical Development:** Use a range of small tools, including scissors, paintbrushes and cutlery. **Expressive Arts & Design:** 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.

7.2 Progression of Skills EYFS & KS1 & KS2 - Design, make, evaluate and improve

KS1	• Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Use software to design.
LKS2	• Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs.
UKS2	• Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high quality finish, using art skills where appropriate. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.

7.3 Progression of Skills KS1 & KS2 – Take inspiration from design throughout history

This concept involves appreciating the design process that has influenced the products we use in everyday life.

KS1	• Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created.
Lower KS2	• Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.
Upper KS2	• Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience

7.4 Progression of Skills KS1 & KS2 – Master practical skills – General skills

This concept involves developing the skills needed to make high quality products.

KS1	• Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).
Lower KS2	• Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques.
Upper KS2	• Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).

7.5 Progression of Skills KS1 & KS2 – Master practical skills -Textiles

This concept involves developing the skills with textiles needed to make high quality products.

KS1	• Shape textiles using templates. • Join textiles using running stitch. • Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).
Lower KS2	• Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles.
Upper KS2	• Create objects (such as a cushion) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).

7.6 Progression of Skills KS1 & KS2 – Master practical skills - Structures

This concept involves developing the skills with structures needed to make high quality products.

KS1	• Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.
Lower KS2	• Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques
Upper KS2	• • Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding).

7.7 Progression of Skills KS1 & KS2 – Master practical skills - Mechanisms

This concept involves developing the skills needed to make high quality products (we have highlighted a range of skills but they may be added to or changed

KS1	• Create products using levers, wheels and winding mechanisms.
Lower KS2	• Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).
Upper KS2	• Convert rotary motion to linear using cams. • Use innovative combinations of electronics (or computing) and mechanics in product designs.

7.8 Progression of Skills KS1 & KS2 – Master practical skills - Computing

This concept involves developing the skills with computing needed to make high quality products (we have highlighted a range of skills but they may be added to or changed

KS1	Model designs using software.
Lower KS2	Control and monitor models using software designed for this purpose.
Upper KS2	Write code to control and monitor models or products.

7.9 Progression of Skills KS1 & KS2 – Cooking and Nutrition

This concept involves developing the skills with cooking needed to make high quality products (we have highlighted a range of skills but they may be added to or changed

Nursery	• Talk about some of the benefits of eating healthy food. (different nutrients) • Show some understanding of good practices regarding eating and hygiene. (hand washing, rolling sleeves up, wearing an apron) • Begin to understand the importance of cleaning own teeth.
Reception	• Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance taste and smell. • Experience of cutting soft fruit and vegetables using appropriate utensils. • Express own preferences about the food.
KS1	• Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients.
Lower KS2	• Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).
Upper KS2	• Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including ingredients, methods, cooking times and temperatures.

7.10 Progression of Skills KS1 & KS2 – Master practical skills – Electricals and Electronics

This concept involves developing the skills with electricals and electronics needed to make high quality products (we have highlighted a range of skills but they may be added to or changed

KS1	• Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage)
Lower KS2	• Create series and parallel circuits
Upper KS2	• Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).

8. Planning

8.1 At St. Andrew's, we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum through well planned and resourced projects and experiences. We have determined that Design Technology will taught in bespoke units across the school year. During Design and Technology units, our children draw upon subject knowledge and skills within Mathematics, Science, History, Computing and Art. Through the evaluation of past and present technology they can reflect upon the impact of Design Technology on everyday life and the wider world.

8.2 Nursery & EYFS Themes

Design technology elements may be woven across the academic year in EYFS in the following themes:

Nursery children will focus on:

- Nursery Cycle A
  - Ourselves
  - All About Me!
  - Elves and Fairies
  - Christmas
  - Winter
  - Lunar New Year
  - Once Upon a Time
  - Easter
  - Occupations
  - At the Seaside/Beach
- Nursery Cycle B
  - My Family and Me
  - Houses and Homes
  - Castles
  - Christmas
  - Lunar New Year
  - Superheroes
  - Easter
  - Travel and Transport
  - Pirates
  - On the Farm
  - Nursery Rhymes
  - Pets

Reception children will continue this learning with:

- Reception Cycle A
  - Colours of the Rainbow
  - Autumn
  - Festivals (inc. Harvest)
  - Once Upon a Time
  - Space
  - Easter
  - Jungle
  - Ready Steady Cook
- Reception Cycle B
  - All About Me
  - Harvest
  - Dinosaurs
  - Christmas
  - Antarctica
  - Growing
  - Easter
  - Minibeasts
  - Under the Sea

8.3 KS1 – 2 year Summary of Coverage

The core theme is written in bold. The associated unit description is derived from the Nuffield design Technology programme. Whilst year groups may modify these units, the illustrate the coverage, knowledge and skills that will be covered within that project.

		Key Stage 1
Cycle A/C – Theme 1	**Structures**	The children will design a tower or a bridge for a specific purpose
Cycle A/C – Theme 2	**Mechanisms**	Which part of your picture should move? - The production of a picture with moving parts that tells a short story or a simple nursery rhyme
Cycle A/C – Theme 3	**Food**	How do you like your toast? - The children can consider the type of bread used, the shape of the toast, the temperature of the toast, the amount of browning of the toast, the nature and number of the spreads.
Cycle B/D – Theme 1	**Mechanisms**	How will your roly poly move? – The children will be designing and making a simple rolling toy for themselves or someone else.
Cycle B/D – Theme 2	**Textiles**	What should be stuck to your fridge? - The children will be working as part of a group in deciding the overall theme of a fridge magnet set and as individuals in making one of the fridge magnets in the set.
Cycle B/D – Theme 3	**Food**	Which fruits would be good for your salad? - The children will design and make a fruit salad to a specification they have researched and developed themselves.

8.4 Lower KS2 – 2 year Summary of Coverage

The core theme is written in bold. The associated unit description is derived from the Nuffield design Technology programme. Whilst year groups may modify these units, the illustrate the coverage, knowledge and skills that will be covered within that project.

		Lower Key Stage 2
Cycle A/C – Theme 1	**Textiles**	Will your party hat be practical, funny or fantastic? – The children will design a hat for a specific purpose
Cycle A/C – Theme 2	**Cooking**	How cool is your drink? - children investigate the ingredients used in making cold drinks and how they could combine a range of ingredients to make a new drink.
Cycle A/C – Theme 3	**Mechanisms**	Will this book surprise you? - The children will learn how to construct the mechanisms they need to tell their particular story. They will be able to choose the audience and the content of their book.
Cycle B/D – Theme 1	**Electricity**	What sort of light will work for you? – The children will design a light to be used by someone for a particular purpose in a particular place
Cycle B/D – Theme 2	**Cooking**	What shape should your pastry be? - This activity will highlight the differences between home-made and commercially produced food products. They will learn to record their responses to appearance, taste and texture. They will explore the ingredients used, nutritional values and packaging. The whole class will learn to make traditional jam tarts, model ideas for pastry constructions and finally, design and make new pastry products to satisfy identified consumers.
Cycle B/D – Theme 3	**Structure**	How will you store your favourite things? The children will design and make and make a special container, one that can hold an item safely and from its appearance reflect the importance of the contents. The children's task is to identify one, or a few, small items that are precious and to make a suitable "treasure" box.

8.5 Upper KS2 - 2 year Summary of Coverage

The core theme is written in bold. The associated unit description is derived from the Nuffield design Technology programme. Whilst year groups may modify these units, the illustrate the coverage, knowledge and skills that will be covered within that project.

		Upper Key Stage 2
Cycle A/C – Theme 1	**Textiles**	How could a carrier make the job easier? - The children will design a carrier for a specific purpose that can be decided by the person who will use the carrier.
Cycle A/C – Theme 2	**Cooking**	How do you take your tea? - The children investigate the uses of hot drinks in their own families. They find out the preferences of a named family member and design and make a drink for that person.
Cycle A/C – Theme 3	**Mechanisms**	How will your beast open its mouth? – The children will design a set of moving animals that can be used to promote interest in animals in a variety of situations – on farms, in the wild, in zoos and at home. At the end of the task each child will have made a model animal with a moving mouth and the whole class can put on a parade of “action mouths”.
Cycle B/D – Theme 1	**Mechanisms**	How should your puppets tell their story? – The children will design and making a set of puppets together with a puppet theatre, which the children themselves can use in putting on a performance with a message.
Cycle B/D – Theme 2	**Electricity**	How steady is your hand? - the children will design and make a battery-powered toy for themselves or for slightly younger children.
Cycle B/D – Theme 3	**Structure**	Should your creature be fierce or friendly? – The children will working a group to design and make a statue of a creature to welcome visitors to, or deter intruders from, the classroom.

9. Medium Term Plans

9.1. Progression across Cycle A & C

	Nursery	Reception	KS1	Lower KS2	Upper KS2
Tem1	**Communication & Language:** Use a wider range of vocabulary. **Personal, Social, Emotional Development:** Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them. **Physical Development:** Use one-handed tools and equipment, for example, making snips in paper with scissors. **Understanding the World:** Explore how things work. Talk about the differences between materials and changes they notice. **Expressive arts and design:** Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures	**Communication & Language:** Learn new vocabulary Use new vocabulary through the day **Physical Development** Progress towards a more fluent style of moving, with developing control and grace. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor. **Expressive arts and design:** Explore, use and refine a variety of artistic effects to express their ideas and feelings. Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. **ELG** **Physical Development:** Use a range of small tools, including scissors, paintbrushes and cutlery. **Expressive Arts & Design:** 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.			
Term 2			**Structures**	**Textiles or Cooking**	**Textiles or Cooking**
Term 3				**Textiles or Cooking**	**Textiles or Cooking**
Term 4			**Mechanisms (Cycle A)**		
Term 5			**Mechanisms (Cycle C)**	**Mechanisms**	**Mechanisms**
Term 6			**Food**		

9.2 Progression across Cycle B & D

	Nursery	Reception	KS1	Lower KS2	Upper KS2
Term 1	**Communication & Language:** Use a wider range of vocabulary. **Personal, Social, Emotional Development:** Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them. Physical Development: Use one-handed tools and equipment, for example, making snips in paper with scissors. Understanding the World: Explore how things work. Talk about the differences between materials and changes they notice. **Expressive arts and design:** Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures	**Communication & Language:** Learn new vocabulary Use new vocabulary through the day **Physical Development** Progress towards a more fluent style of moving, with developing control and grace. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor. **Expressive arts and design:** Explore, use and refine a variety of artistic effects to express their ideas and feelings. Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. **ELG** **Physical Development:** Use a range of small tools, including scissors, paintbrushes and cutlery. **Expressive Arts & Design:** 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.	**Mechanisms (Cycle B)**		**Mechanisms**
Term 2			**Mechanisms (Cycle D)**	**Electricity**	
Term 3			**Textiles (Cycle B)**		**Electricity**
Term 4				**Cooking**	
Term 5			**Textiles (Cycle D)**	**Structures**	**Structures**
Term 6			**Food**		

10. Vocabulary

10.1. Progression in Vocabulary

The teaching and use of appropriate vocabulary forms an important part of teaching learning. These age specific 'key word' lists identify the vocabulary that we expect teachers to be using. In addition, specific key words (must words) will be selected from these lists for each unit of work for inclusion in the knowledge organisers.

10.2

	Vocabulary
EYFS Nursery	Make Cut Stick Tools Glue Scissors Join

10.3

	Vocabulary			
	Food	**Structures**	**Textiles**	**Mechanisms**
EYFS Reception	chop absorb edge slice bend weigh scales mix chopping board knife fruit vegetables	waterproof cut stick Weave Plastic	cut sew packaging metal float thread recyclable fabric	sink reusable safety scissors measure

10.4

Key Stage 1	Vocabulary		
	Design	**Make**	Evaluate
	Research, design, product, equipment, label, prototype, ideas, criteria.	Tools, equipment, choices, plan, measure, cut, shape, assemble, join, combine, techniques.	Evaluate, design criteria, product, work, fit design, inventor.

Key Stage 1	Vocabulary			
	Food	**Structures**	**Textiles**	**Mechanisms**
	Fruit and vegetable names grater peeler sharp sour flesh skin pip core peel squeeze	structure freestanding stable stronger stiff/er flexible base plastic wood paper top edge side, underneath triangle, rectangle, cube cylinder	names of fabric e.g., felt needle thread join glue running stitch decorate template pattern piece	mechanism lever slider pivot slot bridge guide paper fastener up, down straight, curved

10.5

Lower Key 2	Vocabulary		
	Design	**Make**	Evaluate
	Research, design, product, equipment, label, prototype, ideas, criteria Design, purpose, create, protype, resources, criteria.	Tools, equipment, choices, plan, measure, cut, shape, assemble, join, combine, techniques.	Evaluate, design criteria, product, work, fit design, inventor Evaluate, refer, original, product, design

Lower Key Stage 2	Vocabulary				
	Food	**Structures**	**Textiles**	**Mechanisms**	**Electrical**
	Product/ingredient names Utensil Whisk beat appearance smell preference moist fresh savoury hygienic	length, breadth, width frame mark out measure score assemble accuracy decoration criteria strengthen	names of finishing materials e.g., buttons, sequins, fabric paint seam seam allowance pinking shears hem right/wrong side overstitch blanket stitch	fixed, free pneumatic system inflate/deflate pump seal airtight tubing syringe pressure compression	series circuit parallel circuit connection toggle component switch, bulb, battery control program input output

10.7

Lower Key Stage 2	Vocabulary		
	Design	**Make**	**Evaluate**
	Questionnaires, research, fit for purpose, design criteria, planning, annotations, model, refine, computer-aided designs. Market research, requirements, criteria, specification, innovative design, annotations, cross-sectional planning, exploded diagrams, prototypes.	Tools, equipment, precision, suitable, functionality, detailed plan, appeal, audience, measure, mark out, cut, shape, materials, components, techniques, resourceful, practical. constraints, appropriate materials, functionality, aesthetics, create, follow, adapt, quality, audience, assemble, join, combine, finishing techniques, resourceful.	Evaluate, quality, specification, appearance, purpose, innovative, sustainable, materials. checking, existing products, research, discuss, sustainable, impact, intended purpose.

Upper Key Stage 2	Vocabulary				
	Food	**Structures**	**Textiles**	**Mechanisms**	**Electrical**
	Micro-organisms storage combine fold grill fry barbecue ratio scale refine temperature	pillars trusses arches reinforce triangulation stability temporary permanent	name of textiles and fastenings used e.g., zipper wadding reinforce visual/tactile effect back stich appropriate combination	cam shaft slider follower linear movement rotary movement axle motion input/output movement	control system monitor flowchart input device output device