



Our Lady & St Patrick's Primary School Design and Technology Curriculum

This document aims to provide our classroom teachers with an understanding of the rationale for the DT curriculum, the core substantive and disciplinary knowledge that will be covered, as well as guidance on how to implement it in classrooms.

- *Principal aim*
- *Intent*
- *Implementation*
 - *Curriculum*
 - *Early years, Year 1, Year 2, Year 3, Year 4, Year 5, Year 6*
 - *Vertical concepts*
 - *Disciplinary knowledge*
 - *Alignment to National Curriculum*
- *Impact*

Design and Technology principal aim

Our principal aim of DT education is to teach children how to use media and materials for a purpose, encouraging innovation, creativity, risk takers and resourcefulness. They will design and make products that solve real and relevant problems.

Design and Technology Curriculum Intent

“Children are naturally creative. It is our job to give them the freedom, materials and space to let their creativity blossom to its full potential” — Jean Van’t Hul

Our overarching curriculum intent for children from OLSP in Design and Technology is to learn to use media and materials for a purpose. The children will have the opportunity to be innovative, creative, risk takers and resourceful. They will design and make products that solve real and relevant problems. They will be drawing on the knowledge they have acquired in other subjects such as, mathematics, science, computing, art to improve a product or to develop a technique.

The high-quality Design and Technology education provided for the children at OLSP allows them to work with a range of textiles, tools and equipment. It develops life skills such as learning to sew or cooking and helps the children to understand and carry out the process of planning, making and evaluating for a particular audience or purpose.

Through a relevant, inspiring and progressive curriculum, Children at OLSP will:

- Apply the skills and knowledge they have been taught to solve problems.
- Have a clear understanding of how we can reduce, reuse and recycle.
- Develop their oracy skills. Discussions are valuable to all learners as it encourages the sharing of thoughts and reasoning.
- Use the correct terminology and understand and use the design and technology vocabulary accurately.

Our teaching of DT will engage and interest our pupils by posing problems that are grounded in real life situations.

Design and Technology Curriculum Implementation

At OLSP, our DT curriculum follows the National Curriculum and provides children with an array of enriching opportunities.

D&T is often taught through a cross-curricular approach linking topic work and themes in each Year group as much as

possible. Where possible the children explore different techniques and methods, try them out and then have the opportunity to explore adjustments or say how they would improve their designs.

In D&T children will be asked to solve problems. This allows the children to have ownership over their curriculum and ultimately lead their own learning. At times they may be asked to take part in collaborative learning where children may be asked to work as part of a team to work on a product. The children learn to support and help one another towards a challenging, yet rewarding goal.

As the children progress up the school they will have an increasing awareness of the health and safety aspects of D&T and be able to apply these within school and their own lives.

September 2026:

	EYFS	Year 1	Year 1/2	Year 3	Year 4	Year 5	Year 5/6
Autumn	Construction and mechanism	Mechanisms: wheels and axles Moving vehicles <i>How can I make my vehicle move?</i> Christmas	Mechanisms: sliders and levers Moving Christmas cards <i>How does my Christmas card move?</i> Christmas	Electrical systems: buzz wire game Simple circuits and switches <i>How can we make a buzz wire game?</i>	Textiles: 2D shape to 3D product Bag/ purse/ wallet <i>How can flat fabrics be used to store items?</i> Christmas stocking?	Structures: bridges Making a strong and stable bridge <i>How can I make my bridge strong and stable?</i>	Food: celebrating culture and seasonality Create a savoury snack for a celebration <i>Can you make a savoury, tasty snack for a celebration?</i>
Spring	Food technology	Food: preparing fruit and vegetables Making a healthy wrap <i>Can I make a healthy wrap that includes ingredients from two food groups?</i>	Textiles: templates and joining techniques Hand puppets <i>Which joining technique is best for making a hand puppet?</i>	Food: Fairtrade chocolate Design and make a fairtrade chocolate <i>How can we craft chocolate that's fair for people and kind to the planet?</i>	Mechanical systems: levers and linkages <i>How can I make my product move?</i>	Mechanical systems: pulleys or gears Catapulting toys <i>How do I create a mechanical toy for younger children?</i>	Textiles: combining different fabrics Pencil cases <i>How can I join fabrics together?</i>
Summer	Textiles	Structures: freestanding structures Make a home <i>How can I make my model house more stable?</i>	Food: preparing fruit and vegetables Preparing fruit and veg for a kebab <i>Which methods are appropriate for making this food smaller?</i>	Structures: Egyptian-themed model <i>How can we use magnets to make a model move mysteriously?</i>	Food: healthy and varied diet Sandwiches <i>What makes a healthy sandwich snack?</i>	Food: celebrating culture and seasonality Salad (heat wave) <i>How can I source local produce and make a well balanced meal?</i>	Electrical systems: alarm systems Electrical moving item <i>How can electricity help us protect...?</i>

While in the majority of cases, it does not matter whether DT is taught in half term 1 or half term 2, there are a small number of units that are taught in either the first or the second term. This allows cross curricular links to be made where appropriate.

EYFS – Autumn Term – Construction and mechanism

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	In nursery, design and technology might look like children exploring materials through play, building with blocks, junk modelling and investigating how things fit together. They experiment with tools and materials such as glue spreaders, playdough tools and simple construction sets, developing fine motor skills and confidence. Adults support children to talk about what they are making, try out ideas and solve simple problems as they design and create.	Exploring how simple moving parts work through play, such as wheels, axles, levers and sliders. Children are expected to experiment with cause and effect by making things move, developing problem-solving skills and an early understanding of how everyday objects work.	- Explore and test different moving vehicles, to identify fun, safe and functional features. - Sketch and label a simple vehicle. - Cut, join and assemble materials to build a stable, moving vehicle; decorate to make it appealing. - Practise cutting and joining techniques; explore simple mechanisms like wheels and axles. - Test the vehicle's function and appearance.
DK		Design I can represent and communicate my ideas through design. Make I can safely use tools and materials. I can choose materials which would be good to make things with. Evaluate I can safely use tools and materials. I can choose materials which would be good to make things with. Technical knowledge I can use some appropriate words to talk about my ideas or products.	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Technical knowledge I can explore and use simple mechanisms in my products.

EYFS – Spring Term – Food technology

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	In nursery, design and technology might look like children exploring materials through play, building with blocks, junk modelling and investigating how things fit together. They experiment with tools and materials such as glue spreaders, playdough tools and simple construction sets, developing fine motor skills and confidence. Adults support children to talk about what they are making, try out ideas and solve simple problems as they design and create.	Exploring where food comes from and experiencing a range of tastes, textures and smells. Children are expected to develop early food preparation skills such as washing, mixing and simple cutting, while learning about hygiene, safety and making healthy choices.	- Explore preprepared wraps, comparing taste, texture and appearance and learning where ingredients come from. - Planning a healthy wrap by choosing ingredients from two food groups which taste nice together. - Practise food hygiene and safe preparation skills, including hand washing, safe cutting and correct use of tools. - Test and evaluate the finished wrap by considering taste, safety and skills used and suggesting improvements.
D K		Design I can represent and communicate my ideas through design. Make I can safely use tools and materials. I can choose materials which would be good to make things with. Evaluate I can safely use tools and materials. I can choose materials which would be good to make things with. Technical knowledge I can use some appropriate words to talk about my ideas or products. Cooking and nutrition I know some foods that are healthy and good for me.	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Cooking and nutrition I can tell you where my food comes from.

EYFS – Summer Term – Textiles

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	In nursery, design and technology might look like children exploring materials through play, building with blocks, junk modelling and investigating how things fit together. They experiment with tools and materials such as glue spreaders, playdough tools and simple construction sets, developing fine motor skills and confidence. Adults support children to talk about what they are making, try out ideas and solve simple problems as they design and create.	exploring and talking about different fabrics, textures and materials through play and creative activities. Children are expected to develop fine motor skills by cutting, threading, sticking and joining materials using simple tools safely. They use textiles to express ideas and imagination, beginning to make choices about colour, texture and purpose while building confidence and independence.	- How to strengthen, stiffen and reinforce existing fabrics. - How to securely join two pieces of fabric together. - Using back stitch
D K		Design I can represent and communicate my ideas through design. Make I can safely use tools and materials. I can choose materials which would be good to make things with. Evaluate I can safely use tools and materials. I can choose materials which would be good to make things with. Technical knowledge I can use some appropriate words to talk about my ideas or products.	Design I generate and develop ideas using exploded diagrams and prototypes. I use different ways to creatively record and present my designs to show their fit for purpose. Make I can choose and use appropriate tools from a wider range to perform practical tasks. I can choose suitable materials from a wider range and explain its suitability. Evaluate I can explain why certain materials were used to make existing products. I can evaluate and suggest improvements for my design. Technical knowledge I can use a running stitch and one other type of stitch to join two fabrics.

Year 1/2 – Autumn Term – Mechanisms – wheels and axles

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	Exploring how simple moving parts work through play, such as wheels, axles, levers and sliders. Children are expected to experiment with cause and effect by making things move, developing problem-solving skills and an early understanding of how everyday objects work.	- Explore and test different moving vehicles, to identify fun, safe and functional features. - Sketch and label a simple vehicle. - Cut, join and assemble materials to build a stable, moving vehicle; decorate to make it appealing. - Practise cutting and joining techniques; explore simple mechanisms like wheels and axles. - Test the vehicle's function and appearance.	- Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement - Understand that mechanical and electrical systems have an input, process and an output - Use more complex mechanical systems in their products e.g. pulleys and linkages
DK	Design I can represent and communicate my ideas through design. Make I can safely use tools and materials. I can choose materials which would be good to make things with. Evaluate I can safely use tools and materials. I can choose materials which would be good to make things with. Technical knowledge I can use some appropriate words to talk about my ideas or products.	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Technical knowledge I can explore and use simple mechanisms in my products.	Design I can generate and develop ideas using pattern pieces, and computer-aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Technical knowledge I am able to understand and use more complex mechanical systems in my products.

Year 1/2 – Spring Term – Food – preparing fruit and vegetables

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	Exploring where food comes from and experiencing a range of tastes, textures and smells. Children are expected to develop early food preparation skills such as washing, mixing and simple cutting, while learning about hygiene, safety and making healthy choices.	- Explore preprepared wraps, comparing taste, texture and appearance and learning where ingredients come from. - Planning a healthy wrap by choosing ingredients from two food groups which taste nice together. - Practise food hygiene and safe preparation skills, including hand washing, safe cutting and correct use of tools. - Test and evaluate the finished wrap by considering taste, safety and skills used and suggesting improvements.	- Understand Fairtrade's impact on farmers and the environment. - Explore taste, texture and aroma. - Identify steps in chocolate production. - Melt, shape and decorate chocolate safely. - Learn tempering and melting processes
DK	Design I can represent and communicate my ideas through design. Make I can safely use tools and materials. I can choose materials which would be good to make things with. Evaluate I can safely use tools and materials. I can choose materials which would be good to make things with. Technical knowledge I can use some appropriate words to talk about my ideas or products. Cooking and nutrition I know some foods that are healthy and good for me.	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Cooking and nutrition I can tell you where my food comes from.	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Cooking and nutrition I can make healthy eating choices from an understanding of a balanced diet. I can use a range of ingredients to prepare a dish. Explain why the ingredients were chosen and the effects on the body. Can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading or kneading.

Year 1/2 – Summer Term – Structures – freestanding structures

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	Exploring how things are built and how they stand up through play with construction kits, blocks and everyday materials. Children are expected to experiment with joining, stacking and balancing, developing an early understanding of stability, strength and problem-solving as they build their own structures.	- Know how freestanding structures can be made stronger, stiffer and more stable - Select and use a variety of techniques for joining materials together successfully - Follow a set design criteria to design products. - Know the correct technical vocabulary for the projects they are undertaking	- Investigate how magnets work and identify everyday uses of magnetic forces in toys and tools. - Explore how to join, reinforce, stiffen and strengthen materials using folds, slots, tabs, ties, flangers and L braces - Create design criteria and plan an Egyptian-themed model that uses magnets to create a surprising effect - Accurately measure, cut, join and assemble materials to build a functional Egyptian-themed model with magnetic effects - Test, improve and evaluate the model's function and appearance against design criteria, suggesting realistic improvements
D K	Design I can represent and communicate my ideas through design. Make I can safely use tools and materials. I can choose materials which would be good to make things with. Evaluate I can safely use tools and materials. I can choose materials which would be good to make things with. Technical knowledge I can use some appropriate words to talk about my ideas or products.	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Technical knowledge I can build structures exploring how they can be made stronger, stiffer and more stable.	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Technical knowledge I can apply my understanding of how to strengthen, stiffen and reinforce structures.

Year 2 – Autumn Term – Mechanisms - Sliders and levers

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Explore and test different moving vehicles, to identify fun, safe and functional features. - Sketch and label a simple vehicle. - Cut, join and assemble materials to build a stable, moving vehicle; decorate to make it appealing. - Practise cutting and joining techniques; explore simple mechanisms like wheels and axles. - Test the vehicle's function and appearance.	- Know about the simple working characteristics of materials and components. - Know about the movement of simple mechanisms such as sliders and levers. - Know the correct technical vocabulary for the projects they are undertaking.	- Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement - Understand that mechanical and electrical systems have an input, process and an output - use more complex mechanical systems in their products e.g. pulleys and linkages
D K	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Technical knowledge I can explore and use simple mechanisms in my products.	Design I use simple drawings and labels to record my ideas. Design products that have a clear purpose based on my own design criteria. Make I can select from and use a range of equipment to perform practical tasks. For example, cutting, shaping, joining and finishing. I use a range of materials to make a product including construction materials, textiles and ingredients and explain why the materials have been selected. Evaluate I can explore and evaluate a range of existing products by looking at function and materials. I can evaluate my ideas and products against set design criteria. Technical knowledge I can explore and use simple mechanisms in my products.	Design I can generate and develop ideas using pattern pieces, and computer aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Technical knowledge I am able to understand and use more complex mechanical systems in my products.

Year 2 – Spring Term – Textiles- templates and joining techniques

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	exploring and talking about different fabrics, textures and materials through play and creative activities. Children are expected to develop fine motor skills by cutting, threading, sticking and joining materials using simple tools safely. They use textiles to express ideas and imagination, beginning to make choices about colour, texture and purpose while building confidence and independence.	Identify and label, if appropriate, the fabrics, fastenings and techniques used	- How to strengthen, stiffen and reinforce existing fabrics. - How to securely join two pieces of fabric together. - Using back stitch
D K	Design I can represent and communicate my ideas through design. Make I can safely use tools and materials. I can choose materials which would be good to make things with. Evaluate I can say what I like or don't like about what I have made. Technical knowledge I can use some appropriate words to talk about my ideas or products.	Design I use simple drawings and labels to record my ideas. Design products that have a clear purpose based on my own design criteria. Make I can select from and use a range of equipment to perform practical tasks. For example, cutting, shaping, joining and finishing. I use a range of materials to make a product including construction materials, textiles and ingredients and explain why the materials have been selected. Evaluate I can explore and evaluate a range of existing products by looking at function and materials. I can evaluate my ideas and products against set design criteria. Technical knowledge I can suggest ways to join two pieces of fabric together.	Design I generate and develop ideas using exploded diagrams and prototypes. I use different ways to creatively record and present my designs to show their fit for purpose. Make I can choose and use appropriate tools from a wider range to perform practical tasks. I can choose suitable materials from a wider range and explain its suitability. Evaluate I can explain why certain materials were used to make existing products. I can evaluate and suggest improvements for my design. Technical knowledge I can use a running stitch and one other type of stitch to join two fabrics.

Year 2 – Summer Term – Fruit- preparing fruit and vegetables

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Explore preprepared wraps, comparing taste, texture and appearance and learning where ingredients come from. - Planning a healthy wrap by choosing ingredients from two food groups which taste nice together. - Practise food hygiene and safe preparation skills, including hand washing, safe cutting and correct use of tools. - Test and evaluate the finished wrap by considering taste, safety and skills used and suggesting improvements.	- Understand that food comes from plants or animals - Understand that food has been farmed, caught or grown - Identify that people should eat at least 5 portions of fruit and vegetables per day - Sort foods into 5 groups using the 'Eatwell Plate' - Know the correct vocabulary for the projects they are undertaking	- Understand Fairtrade's impact on farmers and the environment. - Explore taste, texture and aroma. - Identify steps in chocolate production. - Melt, shape and decorate chocolate safely. - Learn tempering and melting processes
D K	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Cooking and nutrition I can tell you where my food comes from.	Design I use simple drawings and labels to record my ideas. Design products that have a clear purpose based on my own design criteria. Make I can select from and use a range of equipment to perform practical tasks. For example, cutting, shaping, joining and finishing. I use a range of materials to make a product including construction materials, textiles and ingredients and explain why the materials have been selected. Evaluate I can explore and evaluate a range of existing products by looking at function and materials. I can evaluate my ideas and products against set design criteria. Cooking and nutrition I can use a range of ingredients to prepare a healthy dish.	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Cooking and nutrition I can make healthy eating choices from an understanding of a balanced diet. I can use a range of ingredients to prepare a dish. Explain why the ingredients were chosen and the effects on the body. Can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading or kneading.

Year 3 – Autumn Term – Electrical systems

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Know how freestanding structures can be made stronger, stiffer and more stable - Select and use a variety of techniques for joining materials together successfully - Follow a set design criteria to design products. - Know the correct technical vocabulary for the projects they are undertaking	- Using circuits to create a light up Christmas card - How mechanical and electrical systems have an input, process and output. - Understand and use electrical systems in their products.	- understanding and using electrical circuits in products. - understanding that electrical systems have an input, process and output
D K	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Technical knowledge I can build structures exploring how they can be made stronger, stiffer and more stable.	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Technical knowledge I can understand and use electrical systems in my products.	Design I generate and develop ideas using a variety of design techniques. I justify my plans in a convincing way. I use research and develop design criteria to design Innovative, functional, and appealing products aimed at a specific group. Make I select and use specialist tools and equipment to perform practical tasks accurately. Can select from and use a wider range of materials and components according to their functional qualities and aesthetic qualities. Evaluate I can critically evaluate the quality of the design, manufacture, and fitness for purpose by comparing existing products. I can evaluate my ideas and products against my own design criteria and consider the views of others to improve my work. Technical knowledge I'm able to control and model using an ICT control programme.

Year 3 – Spring Term – Food - Fairtrade Chocolate

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Explore preprepared wraps, comparing taste, texture and appearance and learning where ingredients come from. - Planning a healthy wrap by choosing ingredients from two food groups which taste nice together. - Practise food hygiene and safe preparation skills, including hand washing, safe cutting and correct use of tools. - Test and evaluate the finished wrap by considering taste, safety and skills used and suggesting improvements.	- Understand Fairtrade's impact on farmers and the environment. - Explore taste, texture and aroma. - Identify steps in chocolate production. - Melt, shape and decorate chocolate safely. - Learn tempering and melting processes	- Foods that are reared, caught and grown in the UK and across the globe. - How some foods are seasonal and give examples - Seasonality in relation to food products and the source of different food products
D K	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Cooking and nutrition I can tell you where my food comes from.	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Cooking and nutrition I can make healthy eating choices from an understanding of a balanced diet. I can use a range of ingredients to prepare a dish. Explain why the ingredients were chosen and the effects on the body. Can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading or kneading.	Design I can generate and develop ideas using pattern pieces, and computer aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Cooking and nutrition I can explore a range of cooking techniques to produce a healthy, balanced dish I can measure out ingredients accurately and use ratios to scale up or scale down a recipe. I understand the importance of correct storage and handling of ingredients.

Year 3 – Summer Term – Structures- Magnetic mysteries

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Know how freestanding structures can be made stronger, stiffer and more stable - Select and use a variety of techniques for joining materials together successfully - Follow a set design criteria to design products. - Know the correct technical vocabulary for the projects they are undertaking	- Investigate how magnets work and identify everyday uses of magnetic forces in toys and tools. - Explore how to join, reinforce, stiffen and strengthen materials using folds, slots, tabs, ties, flangers and L-braces - Create design criteria and plan an Egyptian-themed model that uses magnets to create a surprising effect - Accurately measure, cut, join and assemble materials to build a functional Egyptian-themed model with magnetic effects - Test, improve and evaluate the model's function and appearance against design criteria, suggesting realistic improvements	- Know that there are different types of bridges. - Know what makes a strong bridge. - Using learning from science to help design and make products that work - Using learning from mathematics to help design and make products that work
D K	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Technical knowledge I can build structures exploring how they can be made stronger, stiffer and more stable.	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Technical knowledge I can apply my understanding of how to strengthen, stiffen and reinforce structures.	Design I can generate and develop ideas using pattern pieces, and computer aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Technical knowledge I can apply my understanding of how to strengthen, stiffen and reinforce more complex structures.

Year 4 – Autumn Term – Textiles -2d shape to 3d product

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	Identify and label, if appropriate, the fabrics, fastenings and techniques used	- How to strengthen, stiffen and reinforce existing fabrics. - How to securely join two pieces of fabric together. - Using back stitch	- creating a 3D textile product made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. - fabrics can be strengthened, stiffened and reinforced where appropriate - explore the impact of well known designers and inventors and how their products helped shape the world - know how to join fabrics together.
D K	Design I use simple drawings and labels to record my ideas. Design products that have a clear purpose based on my own design criteria. Make I can select from and use a range of equipment to perform practical tasks.For example, cutting, shaping, joining and finishing. I use a range of materials to make a product including construction materials, textiles and ingredients and explain why the materials have been selected. Evaluate I can explore and evaluate a range of existing products by looking at function and materials. I can evaluate my ideas and products against set design criteria. Technical knowledge I can suggest ways to join two pieces of fabric together.	Design I generate and develop ideas using exploded diagrams and prototypes. I use different ways to creatively record and present my designs to show their fit for purpose. Make I can choose and use appropriate tools from a wider range to perform practical tasks. I can choose suitable materials from a wider range and explain its suitability. Evaluate I can explain why certain materials were used to make existing products. I can evaluate and suggest improvements for my design. Technical knowledge I can use a running stitch and one other type of stitch to join two fabrics.	Design I generate and develop ideas using a variety of design techniques. I justify my plans in a convincing way. I use research and develop design criteria to design Innovative, functional, and appealing products aimed at a specific group. Make I select and use specialist tools and equipment to perform practical tasks accurately. Can select from and use a wider range of materials and components according to their functional qualities and aesthetic qualities. Evaluate I can critically evaluate the quality of the design, manufacture, and fitness for purpose by comparing existing products. I can evaluate my ideas and products against my own design criteria and consider the views of others to improve my work. Technical knowledge I can use applique to decorate by glueing and stitching.

Year 4 – Spring Term – Mechanical systems - levers and linkages

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Explore and test different moving vehicles, to identify fun, safe and functional features. - Sketch and label a simple vehicle. - Cut, join and assemble materials to build a stable, moving vehicle; decorate to make it appealing. - Practise cutting and joining techniques; explore simple mechanisms like wheels and axles. - Test the vehicle's function and appearance.	- Creating a design product that is designed for purpose and audience. - Know how mechanical systems such as levers and linkages create movement. - Distinguish between fixed and loose pivots.	- Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement - Understand that mechanical and electrical systems have an input, process and an output - use more complex mechanical systems in their products e.g. pulleys and linkages
D K	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Technical knowledge I can explore and use simple mechanisms in my products.	Design I generate and develop ideas using exploded diagrams and prototypes. I use different ways to creatively record and present my designs to show their fit for purpose. Make I can choose and use appropriate tools from a wider range to perform practical tasks. I can choose suitable materials from a wider range and explain its suitability. Evaluate I can explain why certain materials were used to make existing products. I can evaluate and suggest improvements for my design. Technical knowledge I am able to understand and use mechanical systems in my products.	Design I can generate and develop ideas using pattern pieces, and computer aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Technical knowledge I am able to understand and use more complex mechanical systems in my products.

Year 4 – Summer Term – Food - Healthy and varied diet

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Understand Fairtrade's impact on farmers and the environment. - Explore taste, texture and aroma. - Identify steps in chocolate production. - Melt, shape and decorate chocolate safely. - Learn tempering and melting processes	- How to prepare and make a healthy food product. - know that food can be divided into different groups - name the different food groups and describe their purpose - know that people have different preferences?	- Foods that are reared, caught and grown in the UK and across the globe. - How some foods are seasonal and give examples - Seasonality in relation to food products and the source of different food products
D K	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Cooking and nutrition I can make healthy eating choices from an understanding of a balanced diet. I can use a range of ingredients to prepare a dish. Explain why the ingredients were chosen and the effects on the body. Can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading or kneading.	Design I generate and develop ideas using exploded diagrams and prototypes. I use different ways to creatively record and present my designs to show their fit for purpose. Make I can choose and use appropriate tools from a wider range to perform practical tasks. I can choose suitable materials from a wider range and explain its suitability. Evaluate I can explain why certain materials were used to make existing products. I can evaluate and suggest improvements for my design. Cooking and nutrition I can make healthy eating choices from an understanding of a balanced diet. I can use a range of ingredients to prepare a healthy dish. Explain why the ingredients were chosen and The effects on the body. I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading or kneading.	Design I can generate and develop ideas using pattern pieces, and computer aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Cooking and nutrition I can explore a range of cooking techniques to produce a healthy, balanced dish I can measure out ingredients accurately and use ratios to scale up or scale down a recipe. I understand the importance of correct storage and handling of ingredients.

Year 5 – Autumn Term – Structures

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Investigate how magnets work and identify everyday uses of magnetic forces in toys and tools. - Explore how to join, reinforce, stiffen and strengthen materials using folds, slots, tabs, ties, flangers and L braces - Create design criteria and plan an Egyptian-themed model that uses magnets to create a surprising effect - Accurately measure, cut, join and assemble materials to build a functional Egyptian-themed model with magnetic effects - Test, improve and evaluate the model's function and appearance against design criteria; suggesting realistic improvements	- Know that there are different types of bridges. - Know what makes a strong bridge. - Using learning from science to help design and make products that work - Using learning from mathematics to help design and make products that work	understanding how different materials and shapes (like beams, frames, and shells) work together to make strong, stable, and safe constructions:
DK	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Technical knowledge I can apply my understanding of how to strengthen, stiffen and reinforce structures.	Design I can generate and develop ideas using pattern pieces, and computer aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Technical knowledge I can apply my understanding of how to strengthen, stiffen and reinforce more complex structures.	Understanding how forces such as tension, compression and torsion act on materials and components. Pupils learn how different structural forms (for example frames, shells and solid structures) are designed and reinforced to improve strength, stability and performance.

Year 5 – Spring Term – Mechanical systems – pulleys or gears

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Explore and test different moving vehicles, to identify fun, safe and functional features. - Sketch and label a simple vehicle. - Cut, join and assemble materials to build a stable, moving vehicle; decorate to make it appealing. - Practise cutting and joining techniques; explore simple mechanisms like wheels and axles. - Test the vehicle's function and appearance.	- Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement - Understand that mechanical and electrical systems have an input, process and an output - use more complex mechanical systems in their products e.g. pulleys and linkages	- understanding and using electrical circuits in products. - understanding that electrical systems have an input, process and output
D K	Design I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design. Make I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product; including construction materials, textiles, and ingredients. Evaluate I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for. Technical knowledge I can explore and use simple mechanisms in my products.	Design I can generate and develop ideas using pattern pieces, and computer aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Technical knowledge I am able to understand and use more complex mechanical systems in my products.	Design I generate and develop ideas using a variety of design techniques. I justify my plans in a convincing way. I use research and develop design criteria to design innovative, functional, and appealing products aimed at a specific group. Make I select and use specialist tools and equipment to perform practical tasks accurately. Can select from and use a wider range of materials and components according to their functional qualities and aesthetic qualities. Evaluate I can critically evaluate the quality of the design, manufacture, and fitness for purpose by comparing existing products. I can evaluate my ideas and products against my own design criteria and consider the views of others to improve my work. Technical knowledge I'm able to control and model using an ICT control programme.

Year 5 – Summer Term – Food – celebrating culture and seasonality

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Understand Fairtrade's impact on farmers and the environment. - Explore taste, texture and aroma. - Identify steps in chocolate production. - Melt, shape and decorate chocolate safely. - Learn tempering and melting processes	- Foods that are reared, caught and grown in the UK and across the globe. - How some foods are seasonal and give examples - Seasonality in relation to food products and the source of different food products	- Understand that sometimes raw ingredients need to be processed before they can be cooked (e.g. defeathering a chicken) - Understand how foods are produced in different areas of the world. - Understand that recipes can be adapted to change the appearance, taste and aroma of a dish.
DK	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Cooking and nutrition I can make healthy eating choices from an understanding of a balanced diet. I can use a range of ingredients to prepare a dish. Explain why the ingredients were chosen and the effects on the body. Can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading or kneading.	Design I can generate and develop ideas using pattern pieces, and computer-aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Cooking and nutrition I can explore a range of cooking techniques to produce a healthy, balanced dish. I can measure out ingredients accurately and use ratios to scale up or scale down a recipe. I understand the importance of correct storage and handling of ingredients.	Design I generate and develop ideas using a variety of design techniques. I justify my plans in a convincing way. I use research and develop design criteria to design innovative, functional, and appealing products aimed at a specific group. Make I select and use specialist tools and equipment to perform practical tasks accurately. Can select from and use a wider range of materials and components according to their functional qualities and aesthetic qualities. Evaluate I can critically evaluate the quality of the design, manufacture, and fitness for purpose by comparing existing products. I can evaluate my ideas and products against my own design criteria and consider the views of others to improve my work. Cooking and nutrition I can measure out ingredients accurately and use ratios to scale up or scale down a recipe. I understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. I understand the importance of correct storage and handling of ingredients.

Year 5/6 – Autumn Term – Food - celebrating culture and seasonality

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Foods that are reared, caught and grown in the UK and across the globe. - How some foods are seasonal and give examples - Seasonality in relation to food products and the source of different food products	- Understand that sometimes raw ingredients need to be processed before they can be cooked (e.g. defeathering a chicken) - Understand how foods are produced in different areas of the world. - Understand that recipes can be adapted to change the appearance, taste and aroma of a dish.	understanding ingredients, nutrients and basic food science such as how heat changes food during cooking. Pupils learn core food preparation skills, hygiene and safety, and how to make healthy choices based on the Eatwell Guide.
D K	Design I can generate and develop ideas using pattern pieces, and computer aided design. Make I use a range of appropriate tools competently. I can join and combine a range of materials competently. Evaluate I can evaluate appearance and function against original criteria. I am able to justify decisions made during the design process. Cooking and nutrition I can explore a range of cooking techniques to produce a healthy, balanced dish I can measure out ingredients accurately and use ratios to scale up or scale down a recipe. I understand the importance of correct storage and handling of ingredients.	Design I generate and develop ideas using a variety of design techniques. I justify my plans in a convincing way. I use research and develop design criteria to design Innovative, functional, and appealing products aimed at a specific group. Make I select and use specialist tools and equipment to perform practical tasks accurately. Can select from and use a wider range of materials and components according to their functional qualities and aesthetic qualities. Evaluate I can critically evaluate the quality of the design, manufacture, and fitness for purpose by comparing existing products. I can evaluate my ideas and products against my own design criteria and consider the views of others to improve my work. Cooking and nutrition I can measure out ingredients accurately and use ratios to scale up or scale down a recipe. I understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. I understand the importance of correct storage and handling of ingredients.	Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Key stage 3 -understand and apply the principles of nutrition and health -cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet -become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] -understand the source, seasonality and characteristics of a broad range of ingredients

Year 5/6 – Spring Term – Textiles - combining different fabrics

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- How to strengthen, stiffen and reinforce existing fabrics. - How to securely join two pieces of fabric together. - Using back stitch	- creating a 3D textile product made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. - fabrics can be strengthened, stiffened and reinforced where appropriate - explore the impact of well known designers and inventors and how their products helped shape the world - know how to join fabrics together.	understanding fibres, fabrics and their properties, and how these affect suitability for different products. Pupils learn about textile techniques such as stitching, joining and surface decoration, as well as the impact of care and sustainability on textile products.
D K	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Technical knowledge I can use a running stitch and one other type of stitch to join two fabrics.	Design I generate and develop ideas using a variety of design techniques. I justify my plans in a convincing way. I use research and develop design criteria to design Innovative, functional, and appealing products aimed at a specific group. Make I select and use specialist tools and equipment to perform practical tasks accurately. Can select from and use a wider range of materials and components according to their functional qualities and aesthetic qualities. Evaluate I can critically evaluate the quality of the design, manufacture, and fitness for purpose by comparing existing products. I can evaluate my ideas and products against my own design criteria and consider the views of others to improve my work. Technical knowledge I can use applique to decorate by glueing and stitching.	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

Year 5/6 – Summer Term – Electrical systems

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
SK	- Using circuits to create a light up Christmas card - How mechanical and electrical systems have an input, process and output. - Understand and use electrical systems in their products.	- understanding and using electrical circuits in products. - understanding that electrical systems have an input, process and output	Understanding basic components such as cells, switches, LEDs and motors, and how they work together in simple circuits. Pupils learn how electrical systems are used in everyday products and how to assemble circuits safely to achieve a functional outcome.
D K	Design I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs. Make I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices. Evaluate I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works. Technical knowledge I can understand and use electrical systems in my products.	Design I generate and develop ideas using a variety of design techniques. I justify my plans in a convincing way. I use research and develop design criteria to design Innovative, functional, and appealing products aimed at a specific group. Make I select and use specialist tools and equipment to perform practical tasks accurately. Can select from and use a wider range of materials and components according to their functional qualities and aesthetic qualities. Evaluate I can critically evaluate the quality of the design, manufacture, and fitness for purpose by comparing existing products. I can evaluate my ideas and products against my own design criteria and consider the views of others to improve my work. Technical knowledge I'm able to control and model using an ICT control programme.	Technical knowledge -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].

Disciplinary Knowledge (EYFS-KS1)

		Design	Make	Evaluate	Technical knowledge	Cooking and Nutrition
Year 1	Construction and mechanism	I can represent and communicate my ideas through design.	I can safely use tools and materials. I can choose materials which would be good to make things with.	I can say what I like or don't like about what I have made.	I can use some appropriate words to talk about my ideas or products.	
	Food technology					I know some foods that are healthy and good for me.
	Textiles					
Year 4	Mechanisms - wheels and axles	I am beginning to design products using pictures and words based on a design criteria. I use pictures, words and models to convey what I want to design.	I can choose appropriate resources and tools to make a product. I can use a range of materials to make a product, including construction materials, textiles, and ingredients.	I am beginning to explore and evaluate a range of existing products by evaluating the product against the purpose. I can evaluate my designs and products by saying how well they do the job they were designed for.	I can explore and use simple mechanisms in my products. I can build structures exploring how they can be made stronger, stiffer and more stable.	I can tell you where my food comes from.
	Food - preparing fruit and vegetables					
	Structures - freestanding structures					
Year 2	Mechanisms - sliders and levers	I use simple drawings and labels to record my ideas. Design products that have a clear purpose based on my own design criteria.	I can select from and use a range of equipment to perform practical tasks. For example, cutting, shaping, joining and finishing. I use a range of materials to make a product including construction materials, textiles and ingredients and explain why the materials have been selected.	I can explore and evaluate a range of existing products by looking at function and materials. I can evaluate my ideas and products against set design criteria.	I can explore and use simple mechanisms in my products. I can suggest ways to join two pieces of fabric together.	
	Textiles - template and joining techniques					
	Food - preparing fruit and vegetables					I can use a range of ingredients to prepare a healthy dish.
Year 3	Electrical systems	I can research similar products to develop my own design ideas. I am able to develop a design through discussion, annotated sketches to add detail to my designs.	I can choose a material for both its suitability and its appearance and explain why it has been selected. I can think ahead about the order of my work, select tools needed for a given task and give reasons for my choices.	I can investigate and analyse an existing product by identifying whether it is fit for purpose and how easy it is to use. I can prove that my design meets some set criteria and evaluate how well it works.	I can understand and use electrical systems in my products. I can apply my understanding of how to strengthen, stiffen and reinforce structures.	
	Food - Fairtrade chocolate					I can make healthy eating choices from an understanding of a balanced diet. I can use a range of ingredients to prepare a dish. Explain why the ingredients were chosen and the effects on the body. Can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading or kneading.
	Structures - Magnetic mysteries					

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Year 4	Textiles- 2d shape to 3d product	I generate and develop ideas using exploded diagrams and prototypes.	I can choose and use appropriate tools from a wider range to perform practical tasks.	I can explain why certain materials were used to make existing products.	I can use a running stitch and one other type of stitch to join two fabrics.	
	Mechanical systems - levers and linkages	I use different ways to creatively record and present my designs to show their fit for purpose.	I can choose suitable materials from a wider range and explain its suitability.	I can evaluate and suggest improvements for my design.	I am able to understand and use mechanical systems in my products.	
	Food - healthy and varied diet					I can make healthy eating choices from an understanding of a balanced diet. I can use a range of ingredients to prepare a healthy dish. Explain why the ingredients were chosen and The effects on the body. I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading or kneading.
Year 5	Structures	I can generate and develop ideas using pattern pieces, and computer aided design.	I use a range of appropriate tools competently.	I can evaluate appearance and function against original criteria.	I can apply my understanding of how to strengthen, stiffen and reinforce more complex structures.	
	Mechanical systems - levers and linkages		I can join and combine a range of materials competently.	I am able to justify decisions made during the design process.	I am able to understand and use more complex mechanical systems in my products.	
	Food - healthy and varied diet					I can explore a range of cooking techniques to produce a healthy, balanced dish I can measure out ingredients accurately and use ratios to scale up or scale down a recipe. I understand the importance of correct storage and handling of ingredients.
Year 6	Food - celebrating culture and seasonality	I generate and develop ideas using a variety of design techniques. I justify my plans in a convincing way. I use research and develop design criteria to design Innovative, functional, and appealing products aimed at a specific group.	I select and use specialist tools and equipment to perform practical tasks accurately. Can select from and use a wider range of materials and components according to their functional qualities and aesthetic qualities.	I can critically evaluate the quality of the design, manufacture, and fitness for purpose by comparing existing products. I can evaluate my ideas and products against my own design criteria and consider the views of others to improve my work.		I can measure out ingredients accurately and use ratios to scale up or scale down a recipe. I understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. I understand the importance of correct storage and handling of ingredients.
	Textiles - combining different fabrics				I can use applique to decorate by glueing and stitching.	
	Electrical systems				I'm able to control and model using an ICT control programme.	

Impact

We use a range of strategies to assess what skills and knowledge the children have attained each half-term, including the

following:

- Regular feedback each lesson
- Formative assessment in lessons which may lead to lessons being adapted to address misconceptions.
- Book looks
- Pupil voice
- Marking- ticking of the IALT shows children have achieved the IALT
- Summative assessment - answering the big question at the end of a unit.

Assessing impact is assessing how well pupils have learned the required knowledge from the implemented curriculum. It is not about lots of tests, or meticulously comparing pupils' outcomes at the start and end of each unit.

If pupils can keep up with a well-sequenced curriculum that has progression built in, they are making progress!

Key Assessment Criteria

Designing	Key Stage 1	Key Stage 2
Understanding contexts, users and purposes	Across KS1 pupils should: • 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	Across KS2 pupils should: • 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 In early KS2 pupils should also: • gather information about the needs and wants of particular individuals and groups • develop their own design criteria and use these to inform their ideas In late KS2 pupils should also: • carry out research, using surveys, interviews, questionnaires and web-based resources • identify the needs, wants, preferences and values of particular individuals and groups • <i>develop a simple design specification to guide their thinking</i>
Generating, developing, modelling and communicating ideas	Across KS1 pupils should: • 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	Across KS2 pupils should: • 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 In early KS2 pupils should also: • generate realistic ideas, focusing on the needs of the user • <i>make design decisions that take account of the availability of resources</i> In late KS2 pupils should also: • generate innovative ideas, drawing on research • <i>make design decisions, taking account of constraints such as time, resources and cost</i>

Making	Key Stage 1	Key Stage 2
Planning	Across KS1 pupils should: • <i>plan by suggesting what to do next</i> • select from a range of tools and equipment, <i>explaining their choices</i> • select from a range of materials and components according to their characteristics	Across KS2 pupils should: • select tools and equipment suitable for the task • <i>explain their choice of tools and equipment in relation to the skills and techniques they will be using</i> • select materials and components suitable for the task • explain their choice of materials and components according to functional properties and aesthetic qualities In early KS2 pupils should also: • <i>order the main stages of making</i> In late KS2 pupils should also: • <i>produce appropriate lists of tools, equipment and materials that they need</i> • <i>formulate step-by-step plans as a guide to making</i>
Practical skills and techniques	Across KS1 pupils should: • 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	Across KS2 pupils should: • 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 In early KS2 pupils should also: • 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 In late KS2 pupils should also: • 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 • <i>use techniques that involve a number of steps</i> • demonstrate resourcefulness when tackling practical problems

Evaluating	Key Stage 1	Key Stage 2
Own ideas and products	Across KS1 pupils should: • talk about their design ideas and what they are making • make simple judgements about their products and ideas against design criteria • <i>suggest how their products could be improved</i>	Across KS2 pupils should: • identify the strengths and areas for development in their ideas and products • consider the views of others, including intended users, to improve their work In early KS2 pupils should also: • refer to their design criteria as they design and make • use their design criteria to evaluate their completed products In late KS2 pupils should also: • critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make • <i>evaluate their ideas and products against their original design specification</i>
Existing products	Across KS1 pupils should explore: • 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	Across KS2 pupils should investigate and analyse: • 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 In early KS2 pupils should also investigate and analyse: • 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 In late KS2 pupils should also investigate and analyse: • 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
Key events and individuals	Not a requirement in KS1	Across KS2 pupils should know: • about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products

Technical knowledge	Key Stage 1	Key Stage 2
Making products work	Across KS1 pupils should know: • 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 • <i>that a 3-D textiles product can be assembled from two identical fabric shapes</i> • <i>that food ingredients should be combined according to their sensory characteristics</i> • <i>the correct technical vocabulary for the projects they are undertaking</i>	Across KS2 pupils should know: • 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 • <i>that materials can be combined and mixed to create more useful characteristics</i> • that mechanical and electrical systems have an input, process and output • <i>the correct technical vocabulary for the projects they are undertaking</i> In early KS2 pupils should also know: • 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 • <i>that a single fabric shape can be used to make a 3D textiles product</i> • <i>that food ingredients can be fresh, pre-cooked and processed</i> In late KS2 pupils should also know: • 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 • <i>that a 3D textiles product can be made from a combination of fabric shapes</i> • <i>that a recipe can be adapted by adding or substituting one or more ingredients</i>

Cooking and nutrition	Key Stage 1	Key Stage 2
Where food comes from	Across KS1 pupils should know: - that all food comes from plants or animals - that food has to be farmed, grown elsewhere (e.g. home) or caught	Across KS2 pupils should know: - 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 In late KS2 pupils should also know: - that seasons may affect the food available - how food is processed into ingredients that can be eaten or used in cooking
Food preparation, cooking and nutrition	Across KS1 pupils should know: - how to name and sort foods into the five groups in The eatwell 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	Across KS2 pupils should know: - 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 In early KS2 pupils should also know: - that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate - that to be active and healthy, food and drink are needed to provide energy for the body In late KS2 pupils should also know: <i>that recipes can be adapted to change the appearance, taste, texture and aroma</i> - that different food and drink contain different substances – nutrients, water and fibre – that are needed for health