Progression Map

Design and Technology

3 I's: Intent, Implementation, Impact

Intent
A Northfield Primary School we want our pupils to engage with and to enjoy their learning. The intent of our Design and Technology curriculum is to enable and encourage children to make links to the real world. This will be achieved by exploring, designing, making and evaluating products. They will be inspired by, and learn from, designers from a range of nations and cultures. They will build knowledge and skills towards making an end product and be able to present and confidently discuss their product. Through our 'Life-Long Learners' curriculum driver, we seek to inspire our children to create links between their subject knowledge to aspects of the real world through aspirations into their lifelong learning and future careers. Pupils will 'Be healthy' as they learn how to prepare food in a healthy way, promoting a healthy lifestyle. As Northfield 'Community', all pupils, including disadvantaged and SEND will feel a part of the design community and will feel a sense of belonging. Learning about designers and chefs will promote aspiration to become e.g. an engineer or a chef – developing a sense of belonging now and in the future.
Implementation
At Northfield we teach DT in line with the National Curriculum. • Our curriculum develops children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. • Teachers plan effectively and deliver lessons that are engaging and that are accessible for all groups of learners. • Our sequence of lessons begin with a design objective or problem and this is resolved in the real world. Exploring through research and evaluating children then design and make their own product and consequently evaluate the effectiveness of their own project. • DT is taught from EYFS where the children develop the fine motor skills to be able to use equipment and the creative skills are developed through their own learning time. • Key stage one and key stage two record their work in a DT Project Booklet. • Key vocabulary and knowledge for each project is read at the start of each lesson, the vocabulary is also on the front of their DT Project Booklets. This enables children to develop their vocabulary and use it with confidence. • Staff ensure that children who are achieving well, as well as those who are in need of additional support, are identified, and additional provision and strategies are planned in. We expect the children to know more, remember more and understand more about Design and Technology.
Impact
At Northfield, the impact of our Design and Technology curriculum is in the development of our pupils being able to approach problems creatively and in a range of ways, applying their knowledge from across the curriculum areas independently. By providing a range of contexts and the necessary skills, we endeavour to support pupils in their future educational journey and in the understanding of the ever-developing world around them. The skills and attributes they develop will benefit them beyond school and into adulthood: the ability to use time efficiently, work with others productively, show initiative, independence, resilience and manage risks effectively will ensure well-rounded citizens who will make a difference in the wider world.

National Curriculum

National Curriculum Aims
The national 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.

Key Stage 1
When designing and making, pupils should be taught to: <u>Design</u> • 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 <u>Make</u> • 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 <u>Evaluate</u> • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria <u>Technical knowledge</u> • 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 <u>Cooking and nutrition</u> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from

Key Stage 2
When designing and making, pupils should be taught to: Design • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Make • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Evaluate • investigate and analyse a range of existing products • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • understand how key events and individuals in design and technology have helped shape the world Technical knowledge • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] • apply their understanding of computing to program, monitor and control their products
Cooking and nutrition • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques • understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

DT Curriculum Map						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1		Structures-Santa's Grotto		Mechanism- Animal Masks	Food – Vegetable/fruit kebab	
Year 2		Textiles- stocking		Food- Bagel bruschetta		Mechanisms- cart
Year 3		Structures - kites		Food- Easter flapjack with packaging	Mechanism – moving sarcophagus	
Year 4		Electrical – night light		Food – vegetable couscous		Textiles – coin purse
Year 5		Structures – bird feeders		Mechanism- Cams		Food – Greek food, flat bread and dip
Year 6		Textiles – pencil case			Food- Italian food, pasta	Electrical- Crumbles fairground ride

Structures	Food	Mechanism	Textiles	Electrical

Nursery Progression Map DT

Physical Development: Educational Programme

Physical activity is vital in children's all-round development, enabling them to pursue happy, healthy and active lives. Gross and fine motor experiences develop incrementally throughout early childhood, starting with sensory explorations and the development of a child's strength, co-ordination and positional awareness through tummy time, crawling and play movement with both objects and adults. By creating games and providing opportunities for play both indoors and outdoors, adults can support children to develop their core strength, stability, balance, spatial awareness, co-ordination and agility. Gross motor skills provide the foundation for developing healthy bodies and social and emotional well-being. Fine motor control and precision helps with hand-eye co-ordination, which is later linked to early literacy. Repeated and varied opportunities to explore and play with small world activities, puzzles, arts and crafts and the practice of using small tools, with feedback and support from adults, allow children to develop proficiency, control and confidence.

Physical Development: Fine Motor Skills

Fine Motor- Hold a pencil effectively in preparation for fluent writing (using the tripod grip in almost all cases. Use a range of small tools, including scissors, paintbrushes, and cutlery, begin to show accuracy and care when drawing.

Baseline	End of Term 1	Interim	End of Nursery
I am beginning to use a fisted or fist grip when encouraged.	I can use a fisted grasp or fist grip.	I can use a four-finger grip. I am showing preference for a dominant hand.	I can use a comfortable grip with good control when holding pens and pencils.
I can build a tower of 7 plus blocks using preferred hand I can insert square, circular and triangular shapes in a jigsaw.	I can use tools with a preferred hand.	I can make simple models using construction toys.	I can use one handed tools and equipment.
I can hold scissors often with both hands, learning to open and close the blades	I can open and close the blades on scissors using one hand.	I can make small snips with scissors when an adult holds the paper.	I can make small snips with scissors when holding the paper myself.
I am exploring mark making using a range of tools.	I am developing manipulation and control when using mark making tools.	I can colour in pictures trying to keep in the lines.	I can draw with increasing control.

Expressive Arts and Design: Educational Programme

The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

Expressive Arts and Design- Creating with Materials

ELG: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function, share their creation, explaining the process they have used, make use of props and materials when role playing character in narratives and stories.

Baseline	End of Term 1	Interim	End of Nursery
I can explore different materials and 'have a go' I can manipulate and play with different materials.	I am beginning to use a variety of construction materials. I can show interest in and describe the texture of things. I am beginning to explore a range of materials to create with.	I can join construction pieces together to build and balance. I can make simple models which express my ideas. I am beginning to use a range of materials to express my ideas.	I can explore materials freely, in order to develop ideas about how to use them and what to make. I can develop my own ideas and then decide which materials to use to express them.
I am starting to develop pretend play pretending that one object represents another.	I enjoy taking part in imaginative play.	I can make simple small words with blocks and construction kits and use these in imaginative play.	I can make imaginative and complex small world with blocks and construction kits such as a city with different buildings and a park.

F2 Progression Map DT

Physical Development: Educational Programme

Physical activity is vital in children's all-round development, enabling them to pursue happy, healthy and active lives. Gross and fine motor experiences develop incrementally throughout early childhood, starting with sensory explorations and the development of a child's strength, co-ordination and positional awareness through tummy time, crawling and play movement with both objects and adults. By creating games and providing opportunities for play both indoors and outdoors, adults can support children to develop their core strength, stability, balance, spatial awareness, co-ordination and agility. Gross motor skills provide the foundation for developing healthy bodies and social and emotional well-being. Fine motor control and precision helps with hand-eye co-ordination, which is later linked to early literacy. Repeated and varied opportunities to explore and play with small world activities, puzzles, arts and crafts and the practice of using small tools, with feedback and support from adults, allow children to develop proficiency, control and confidence.

Physical Development: Fine Motor Skills

Fine Motor- Hold a pencil effectively in preparation for fluent writing (using the tripod grip in almost all cases. Use a range of small tools, including scissors, paintbrushes, and cutlery, begin to show accuracy and care when drawing.

EYFS baseline	End of Autumn	End of Spring	End of EYFS (ELG's)	Year 1 National Curriculum
I can use one handed tools and equipment	I can use simple tools to effect changes to materials.	I can handle tools, objects, construction and malleable materials safely and with increasing control and intention. Suggested tools: pencils for drawing and writing, paint brushes, scissors, knives, forks and spoons.	I can use a range of small tools, including scissors, paintbrushes and cutlery safely and with control.	I can select from and use a range of tools and equipment to perform practical tasks (D&T)
I can make small snips with scissors when holding the paper myself.	I can cut a straight-line using scissors.	I can cut a curved line using scissors.	I can cut more complex shapes.	

Expressive Arts and Design: Educational Programme

The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

Expressive Arts and Design: Creating with Materials

ELG: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function, share their creation, explaining the process they have used, make use of props and materials when role playing character in narratives and stories.

Baseline	End of Autumn	End of Spring	End of Reception (ELG's)	Year 1 National Curriculum
I can explore materials freely, in order to develop ideas about how to use them and what to make.	I am starting to select the correct tool and material for a purpose. I can join different materials and explore different textures.	I can select the correct tool and materials for a purpose.	I can safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	I can select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics (D&T).
I can develop my own ideas and then decide which materials to use to express them.	I can create and share my ideas.	I am beginning to create collaboratively sharing ideas, resources and skills.	I can share my creations, explaining the processes I have used.	I can generate, develop, model and communicate my ideas through talking and drawing (D&T).

Personal, Social and Emotional Development: Educational Programme

Children's personal, social and emotional development (PSED) is crucial for children to lead healthy and happy lives, and is fundamental to their cognitive development. Underpinning their personal development are the important attachments that shape their social world. Strong, warm and supportive relationships with adults enable children to learn how to understand their own feelings and those of others. Children should be supported to manage emotions, develop a positive sense of self, set themselves simple goals, have confidence in their own abilities, to persist and wait for what they want and direct attention as necessary. Through adult modelling and guidance, they will learn how to look after their bodies, including healthy eating, and manage personal needs independently. Through supported interaction with other children, they learn how to make good friendships, co-operate and resolve conflicts peaceably. These attributes will provide a secure platform from which children can achieve at school and in later life.

Personal, Social and Emotional Development: Managing Self

ELG: Be confident to try new activities and show independence, resilience and perseverance in the face of challenge, explain reasons for rules, know right from wrong and try to behave accordingly, manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

Baseline	End of Autumn	End of Spring	End of Reception (ELG's)	Year 1 National Curriculum
I can talk about the effects of activity on my body.	I know about the different factors that support my overall health and well-being: healthy eating, toothbrushing, exercise.	I know and can talk about the different factors that support my overall health and well-being: healthy eating, toothbrushing, exercise.	I understand the importance of healthy food choices.	I can use the basic principles of a healthy and varied diet to prepare dishes (D&T).

	Topic	Lesson Sequence: Research, design, make, evaluate.	Key Knowledge	Key Vocabulary
Year 1				
Autumn 2	Structures- Santa's Grotto	1. To research and evaluate existing products and develop ideas by drawing on their own experiences. 2. To assemble, join and combine materials. 3. To design a purposeful, functional and appealing product. 4. To follow my design to create a house for Father Christmas. 5. To evaluate my product.	• Scoring will mark or cut into a material, making it easier to fold. • Flat 2D shapes can be folded to make solid 3D shapes. • Structures can be made stronger by folding and joining so they do not fall down.	fold, join, structure, weak, strong, cuboid, cylinder, assemble, scoring
Spring 2	Mechanism- Animal Masks	1. To develop ideas by drawing on their own experiences and to evaluate images. 2. To develop technical skills by cutting, assembling, joining, and combining materials. 3. To design purposeful, functional appealing products. 4. To assemble, join and combine 2D and 3D materials into a model and use basic tools safely. 5. To paint and decorate using different materials and to use basic tools safely. 6. To examine and evaluate finished project.	• A mechanism is a system of moving parts working together. • Sliders can be used to make individual parts move along a slot. • Levers can be used to move a part about a fixed point.	slider, slot, join, assemble, measure, fix, mechanism, lever
Summer 1	Food – Vegetable/ fruit kebab	1. To generate, develop, model and communicate their ideas drawing. 2. To generate, develop, model and communicate their ideas through talking, drawing. 3. To generate, develop, model and communicate their ideas through talking. 4. To prepare to make the final product. Use a range of tools and equipment to perform practical tasks 5. To examine and evaluate finished project.	• Fruit develops from the seeds in a flowering plant, while vegetables are from other parts of the plant like roots, stems and leaves. • Good nutrition is about eating a healthy and balanced diet that includes fruit and vegetables. • Fruit can be chopped and peeled using a knife. • Good food hygiene prevents germs and bacteria spreading. • Assemble – to put things together to create a product.	nutrition, healthy, safely, hygiene, chop, peel, identify, claw/bridge grip, utensils

	Topic	Lesson Sequence: Research, design, make, evaluate.	Key Knowledge	Key Vocabulary
Year 2				
Autumn 2	Textiles- stocking	1. To research and evaluate existing products To design and appealing product for someone 2. To practice a running stitch 3. To sew a Christmas stocking using a running stitch 4. To follow my design to decorate a Christmas stocking 5. To evaluate my product	• Fabrics can be joined in many ways eg. sewing, glueing or stapling. • Templates can be used to create identical shapes. • Products can be decorated to make them look more pleasing. • Running stitch is a sewing stitch that goes in and out of fabric to join two pieces of fabric together.	running stitch, needle, thread, fabric, template, join, decorate.
Spring 2	Food- Bagel bruschetta	1. To give examples of party foods and describe food skills to make a dish. 2. To recall and explain 'ready to cook' steps and review party foods. 3. To identify the plant / animal origin of the ingredients and sort these into the eat well plate. 4. To plan a dish (bagel bruschetta) 5. To demonstrate the safe use of basic cooking equipment and make a simple dish, safely and hygienically.	• Fruit and vegetables come from plants which can be grown at home or on farms. • Milk comes from an animal. • Cheese is made from milk. • A balanced diet includes a range of food from different food groups (Eatwell Plate). • A bridge and claw grip can be used to hold fruit and vegetables when cutting.	slicing, peeling, cutting, snipping, chopping board, peeler, knife, bridge/claw grip, utensils.
Summer 2	Mechanisms- cart	1. To explore and research vehicles. 2. To find out about wheels, axles and chassis. 3. To follow a design brief to design a cart for Robin Hood with an axle, wheels, and suitable chassis. 4. To join materials appropriately. 5. To evaluate my design and suggest improvements.	• A wheel needs to be rounded to rotate and move. • For a wheel to move it must be attached to a rotating axel. • An axel moves within an axel holder. • The frame of a vehicle is called a chassis.	vehicle, wheel, axle, axle holder, chassis, fixed, free, moving, mechanism, dowel, tech card

	Topic	Lesson Sequence: Research, design, make, evaluate.	Key Knowledge	Key Vocabulary
Year 3				
Autumn 2	Structures - kites	1. To understand how key events and individuals in design and technology have helped to shape the world. (Look at how Homan Walsh used a kite to help build the Niagara Falls Bridge) 2. To investigate and analyse a range of existing products. 3. To investigate the shape of kites. 4. To develop and communicate a design for my kite. 5. To make a strong and stiff frame structure to support my kite. 6. To evaluate my product.	• Homan Walsh used a kite to help build the Niagara Falls Bridge. • Kites can be made more stable by giving them a keel or a flexible body that curves with the wind. • Wood is a strong, natural and sustainable material.	function, bridle, tow point, keel, sail, spars, tail, kite, sustainable.
Spring 2	Food- Easter flapjack with packaging	1. To research existing products to help generate ideas. 2. To explore different initial ideas before coming up with a final design. 3. To research packaging ideas for final product. 4. To learn how to use a range of tools and equipment safely to prepare and combine ingredients. 5. To evaluate final product and packaging.	• Products are designed for a certain audience. • Scales, utensils and the microwave can be used to prepare and combine food. • To prepare food hygienically, it must be prepared on a clean surface with clean utensils and clean hands. • A flat 2D net can be used to make a 3D box. • Different foods can be mixed or melted together to create various flavours.	hygiene, microwave, audience, appearance, melt, taste, scales, grams, weigh, ingredients, recipe 2D shapes, 3D shapes, nets
Summer 1	Mechanism – moving sarcophagus	1. To investigate a variety of familiar objects that use air to make them work. 2. To design a sarcophagus including moving pneumatic system. 3. To design a sarcophagus including moving pneumatic system. 4. To make a sarcophagus with a moving pneumatic part. 5. To evaluate a finished product.	• Pneumatics is the science and technology of pressurised air—using piped, compressed air (or a similar gas, such as nitrogen) to transmit force and energy. • Air pressure exerts a great force. • German physicist, engineer, and natural philosopher Otto von Guericke invented the first air pump. • A hinge is a movable joint or mechanism on which a door, gate, or lid swings as it opens and closes, or which connects linked objects. **Significant Designer –** • Otto von Guericke	pneumatic, pneumatic system, tube, process, pump, airflow, deflate, inflate, hinge, input, output, product, syringe, research

	Topic	Lesson Sequence: Research, design, make, evaluate.	Key Knowledge	Key Vocabulary
Year 4				
Autumn 2	Electricals – night light	1. I can explain how key events and individuals in design and technology have helped shape the world. I have learnt about a significant designer. 2. I can develop design criteria and a design. I can develop and communicate a design for my light. 3. I can select materials and components to make my light. 4. I can create a well finished product. 5. I can complete a detailed evaluation of my finished product.	• A series circuit can be used to light a nightlight. • A switch can be used to control the nightlight by switching the bulb on and off. • To make the design safe and pleasing to the eye, the electrical equipment must be contained in the base. • The top of the nightlight must be transparent to allow the light to show through. **Significant Designer –** George Carwardine – inventor of the Anglepoise lamp	series circuit, switch, battery, battery holder, bulb, bulb holder, wire, crocodile clip transparent
Spring 2	Food – vegetable couscous	1. To understand the principles of a balanced diet. 2. To understand how diet changes as seasons change. 3. To understand the impact of packaging on the environment. 4. To prepare a healthy seasonal meal through ingredient testing. 5. To create a healthy meal with seasonal food. 6. To evaluate a seasonal meal.	• A balanced diet is important in daily lives to enable our bodies to function properly. • Food is seasonal which means it can only be grown at certain times of the year. • Food is also grown in different countries and brought to the UK. • Recipes are used and followed to create meals. • To prepare food hygienically, it must be prepared on a clean surface with clean utensils and clean hands. • Peel, cut, chop, slice and dice are all methods of preparing food.	weigh, measure, peel, cut, chop, slice, dice, mix, combine, utensils, seasonal, healthy/balanced diet
Summer 2	Textiles – Coin purse	1. To investigate and research a range of coin purses to generate design ideas. 2. To apply different sewing techniques. 3. To create a purse with a known sewing stitch. 4. To join fabric together using a whip stitch. 5. To evaluate a design product.	• Fabric can be joined securely by using a whip stitch. • Purses can be fastened using buttons and buttonholes. • A pattern is a template which is used to cut fabric out accurately. • A whip stitch is an overstitch that securely joins two pieces of fabric.	fabric, fastening, pattern, running stitch, whip stitch, buttonhole.

	Topic	Lesson Sequence: Research, design, make, evaluate.	Key Knowledge	Key Vocabulary
Year 5				
Autumn 2	Structures – bird feeders	1. To investigate the purpose and appearance of bird feeders 2. To research a famous designer 3. To devise a success criteria 4. To design a bird feeder. 5. To know safety rules and understand the importance of following them. To practise woodworking skills safely. 6. Choose appropriate tools and materials. Give reasons for decisions.	• Extensive research is often carried out before a product is designed and made. • There are various ways to join the materials used to make bird feeders such as using nails. • Frameworks sometimes need to be strengthened and stiffened. • It is important to measure accurately before sawing wood. **Significant Designer –** Eric John Byers – an American artist who works with wood	frame structure, joint, stiffen, strengthen, reinforce, join, design, purpose, evaluate, compare, accurate
Spring 2	Mechanism- Cams	1. To investigate toys with cam mechanisms. 2. To explore different cam movements. 3. To investigate different types of cam mechanisms. 4. To be able to design a moving toy with a cam mechanism. 5. To make and evaluate a moving toy using a cam mechanism.	• A mechanical system has an input, process and an output. • Cams mechanisms effect the movement of the follower. • Cam mechanisms change rotating (circular) movement to linear (straight) movement.	mechanism, cam, crank handle, axel, follower, linear movement, shaft, rotating
Summer 2	Food – Greek food, flat bread and dip	1. To research foods that are popular in Greece to generate ideas. 2. To investigate and analyse a range of Greek foods, to inform planning a recipe. 3. To understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. 4. To use research to support the design of a recipe for Greek flat bread and dip. 5. To prepare and cook a savoury dish using a range of cooking techniques.	• Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. • Different foods require different conditions for growth so can only grow in different seasons or in countries with different climates. • Seasonal food is fresher, tastier and more nutritious than food consumed out of season. • Processed foods have been altered from their natural state, either for safety reasons or because it makes them easier to store or eat. **Significant Chef -** Akis Petretzikis – Greek Chef	weigh, measure, peel, cut, chop, slice, squeeze, zest, fry, drain, prove, combine, utensils, sustainability, seasonal, local, processed

	Topic	Lesson Sequence: Research, design, make, evaluate.	Key Knowledge	Key Vocabulary
Year 6				
Autumn 2	Textiles – Pencil Case	1. To investigate and evaluate a range of pencil cases with different fastenings. 2. To practise and compare different sewing techniques. 3. To design a pencil case with an appliqué embellishment. 4. To sew a pencil case with an appliqué design. 5. To evaluate a design product.	• Fabric can be joined securely by using a whip or running stitch. • Pencil cases can be fastened using Velcro, press studs, zips and buttons and loops or buttonholes. • A pattern is a template which is used to cut fabric out accurately. • Appliqué is ornamental needlework in which pieces or patches of fabric in different shapes and patterns are sewn or stuck onto a larger piece of fabric. **Significant Designer** Fabric appliqué inspired by designer William Morris – build on from Year 5 art.	fabric, fastening, pattern, running stitch, whip stitch, Velcro, buttonhole, press studs, appliqué.
Summer 1	Food- Italian food, pasta	1. To research food (pasta) and seasonality. 2. To identify seasonal foods and define seasonality. 3. To identify skills used within cookery (pasta dish). 4. To plan/design a recipe. 5. To make a meal using pasta (hot or cold). 6. To evaluate a cooked pasta dish.	• Know how to use utensils and equipment including heat sources to prepare and cook food. • Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. • Different foods require different conditions for growth so different foods are grown in different regions in Italy which have different climates. • Food miles are the distance a food travels, from where food is produced to where it is eaten. **Significant Chef -** Jamie Oliver	weigh, measure, peel, cut, chop, slice, dice, grate, fry, drain, simmer, boil, combine, utensils seasonality, healthy varied diet
Summer 2	Electrical- Crumbles fairground ride	1. To research carousel (roundabout) rides. 2. To control a simple circuit connected to a computer. 3. To plan/design a fairground ride model. 4. To make a fairground ride using programming software for control. 5. To make a fairground ride using programming software for control. 6. To evaluate a fairground ride model.	To use a computer to program a crumble. To attach a sparkle and a motor to the crumble to make them flash and rotate. To attach the crumble, sparkle and motor to a fairground ride that they have constructed to make the fairground ride move. **Significant Designer -** Thomas Bradshaw	light emitting diode (LED), control, program, system, input device, output device, crumble

Diversity in our DT curriculum

Year 1

Year 2

Year 3

Otto von Guericke- invented the first air pump.

Homan Walsh used a kite to help build the Niagara Falls Bridge.

Year 4

George Carwardine – inventor of the Anglepoise lamp

Year 5

Eric John Byers – an American artist who works with wood

Akis Petretzikis – Greek Chef

Year 6

Jamie Oliver – Known for his Italian recipes, trained by an Italian chef.

Thomas Bradshaw – inventor of the first steam-powered mechanical roundabout

By the end of EYFS … Our future designers and technologists, will be using a range of small tool, including scissors, paintbrushes and cutlery safely and with control. They will safely explore and use a variety of materials and techniques experimenting with colour, design, texture, form and function. Our children will be on their journey as creative collaborators, sharing ideas and creations, explaining the process used ready for the Key Stage 1 research, design, make and evaluate process.
By the end of Key Stage 1 children will… Start to develop an understanding of Design and Technology exploring the areas of food and nutrition, mechanical systems, structures and textiles. They will learn the need to research, design, make and evaluate. They will link real world items they use in their daily lives to Design and Technology. Our children will have had opportunities to develop their creativity and imagination. They will also begin to learn problem solving skills linked to their designs and finished products. By the end of the Key Stage 1 our children will have started to gain the foundation blocks needed to understand research, design, make and evaluate which they can develop further in Lower Key Stage 2.
By the end of Lower Key Stage 2 children will… Have further developed an understanding of Design and Technology exploring the areas of food and nutrition, mechanical systems, structures and textiles. They will be introduced to electrical systems. They will develop and expand their knowledge of research, plan, design, make, evaluate, improve projects through innovative thinking and resilience and build on knowledge gained in KS1. Our children will begin to incorporate their knowledge of maths and science with Design and Technology to support their understanding and enrich their learning. By the end of lower Key Stage 2 our children will have firm foundations which can be built on and challenged further in upper Key Stage 2. By the end of Upper Key Stage 2 children will… Further develop their understanding of Design and Technology through the areas of mechanical and electrical systems, food and nutrition and structures. Our Design and Technology masters will not only develop and refine their skills within this subject by building on prior knowledge acquired in Key Stage 1 and lower Key Stage 2, but also recognise the importance of science, computing and maths within Design and Technology. By linking knowledge from topics such as shape and space, measure, electrical circuits and programming to their projects, our children can consolidate and develop their own ideas through critical thinking. All the projects our children complete require them to research, design, question, make and more importantly evaluate and improve their projects through innovative thinking, becoming resilient through problem solving. By the end of Key Stage 2, our children should be prepared for the challenge of Key Stage 3 and have solid foundations to suit a career in the STEM industry, should they choose to pursue this path.