DT Curriculum Overview

Our Design and Technology topics have been chosen to meet the requirements of the National Curriculum in a way that will enthuse and inspire our pupils, building upon their prior knowledge.

Design Technology is an inspiring, rigorous and practical subject. We aim to help children acquire a broad range of subject knowledge and draw on disciplines such as maths, science, computing and art. We also aim to make sure the children understand the skill they are learning and the subject they are in as well as understand the curriculum links.

The National Curriculum states that 'through evaluation of pass and present design and technology, they develop a critical understanding of its impact on daily life and wider world' our curriculum includes studies of designers throughout history to enable children to feel inspired by different ideas and discuss how these designers impact the world today.

Our children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.

Our curriculum is based off of the curriculum maestro guidance, we have chosen the topics based on the academic level of our classes, this changes every year and we have a rolling two-year curriculum however, this will change based on the cohort. We plan and adapt our topics and lessons to create an immersive and sensory curriculum. We allow for children to explore different materials and design their own items which they can then take home and be proud of their work!

Birtley House Independent School

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EYFS

Food technology: **We learn to:** To know and name familiar foods. To know where food comes from. To know that tools and equipment need to be used safely. **Skills:** Food safety- take part in simple clearing up tasks. Food hygiene- washing hands and touching equipment. Collaboration-being able to work together for a specific purpose. Know how to use simple tools.	**We enable this by:** Talking about they are seeing and doing. Encouraging talking about the food they use when where they come from. Encouraging to make decisions and choices about the food they would like to use. Develop own ideas. Manipulating and controlling tools to encourage hand-eye coordination. Vocabulary: cut, stir, pour, mix, squeeze, fruit and vegetables names, names of equipment and utensils, soft, juicy, crunchy, sweet, sticky, hard.
Structures: **We learn to:** Make imaginative and complex 'small words' To choose suitability of different materials and resources to fit their purpose. To know how to join different materials and explore different textures. How different tools can be used. Build items that represent other objects. **Skills:** Focus attention, explore and investigate, join, observe and ask questions, make decision, take pride in their work, be creative and innovative, be resourceful, assemble and disassemble, control and manipulate tools.	**We enable this by:** Sharing stories as a starting point for design. Encouraging the use of construction resources. Exploring different materials freely, in order to develop our ideas about how to use them and what to make. Sharing and talking about creations. Giving time for children to revisit and adapt their structure. Ensuring access to a wide range of tools including scissors, sticking tape, glue. Giving time to assemble and disassemble objects to learn more about how things work. Giving opportunities and time for children to practise and apply what they have learnt in different contexts and for a variety of purposes. Vocabulary: model, make, join, tool, cut, draw, finish, hard, soft, squishy, rough, smooth, strong.

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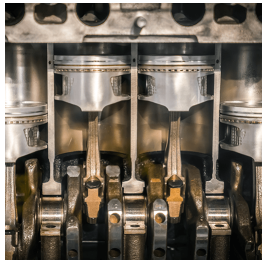
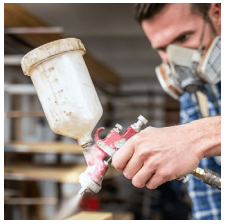
Cycle A

	Autumn 1	Spring 1	Summer 1
Owls	**Shade and Shelter** 	**Taxi** 	**Chop, Slice, Mash** 
Badgers	**Cook well, eat well** 	**Making it move** 	**Greenhouse** 
Bats	**Moving Mechanisms** 	**Eat the Seasons** 	**Architecture** 

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Cycle A

OWLS YEAR 1 CURRICULUM

Autumn	Spring	Summer
Shade and Shelter *This project teaches children about the purpose of shelters and their materials. They name and describe shelters and design and make shelter prototypes. Children then design and build a play den as a group and evaluate their completed product.*	**Taxi** *This project teaches children about wheels, axles and chassis and how they work together to make a vehicle move.*	**Chop, Slice, Mash** *This project teaches children about sources of food and the preparatory skills of peeling, tearing, slicing, chopping, mashing and grating. They use this knowledge and techniques to design and make a supermarket sandwich according to specific design criteria.*
Knowledge A shelter is a structure designed to give protection from weather or danger. A material is what an object is made from. Everyday materials include wood, plastic, glass, metal, water, rock, brick, paper and fabric. A product or project is usually guided by a set of design criteria. The project or product must meet the design criteria to be successful. Rules are made to keep people safe from danger. Safety rules include always listening carefully, following instructions and using equipment only when told to.	**Knowledge** An axle is a rod that is connected to the centre of a wheel, which allows it to turn. A chassis is the frame of a vehicle. Most vehicles that move on land have axles and wheels that are fixed to a chassis. An axle fixed to a chassis has freely moving wheels. A freely moving axle has fixed wheels. Two products can be compared by looking at a set of criteria and scoring both products against each one. A product or project is usually guided by a set of design criteria.	**Knowledge** Some foods come from animals, such as meat, fish and dairy products. Some come from plants, such as fruit and vegetables. Some foods need to be prepared before eating. Peeling, slicing, chopping, grating, tearing or mashing are different methods of preparing foods. Hand washing and good hygiene prevent the spread of germs. Fruit and vegetables are an important part of a healthy diet.

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A strength is something that is good about a piece of work. A weakness is an area that could be improved.	The project or product must meet the design criteria to be successful. Most vehicles that move on land have axles and wheels that are fixed to a chassis. An axle fixed to a chassis has freely moving wheels. A freely moving axle has fixed wheels. A strength is something that is good about a piece of work. A weakness is an area that could be improved.	It is recommended that people eat at least five portions of fruit and vegetables every day. Fruits and vegetables can be mixed to make a healthy salad. Salad dressings can improve the flavour of salads. A product or project is usually guided by a set of design criteria. The project or product must meet the design criteria to be successful. Rules are made to keep people safe from danger. Safety rules include always listening carefully, following instructions and using equipment only when told to.
Skills Describe the similarities and differences between two products. Name and explore a range of everyday products and describe how they are used. Identify and name what an object is made from, including wood, plastic, glass, metal, water and rock. Create a design to meet simple design criteria.	**Skills** Name and explore a range of everyday products and describe how they are used. Use wheels and axles to make a simple moving model. Describe the similarities and differences between two products. Create a design to meet simple design criteria. Use wheels and axles to make a simple moving model.	**Skills** Sort foods into groups by whether they are from an animal or plant source. Select the appropriate tool for a simple practical task. Explain why hand washing and cleanliness are important. Select healthy ingredients for a fruit or vegetable salad.

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Select and use a range of materials, beginning to explain their choices. Construct simple structures, models or other products using a range of materials. Follow the rules to keep safe during a practical task. Talk about their own and each other's work, identifying strengths or weaknesses and offering support	Talk about their own and each other's work, identifying strengths or weaknesses and offering support.	Measure and weigh food items using non-standard measures, such as spoons and cups. Create a design to meet simple design criteria. Follow the rules to keep safe during a practical task. Talk about their own and each other's work, identifying strengths or weaknesses and offering support.

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BADGERS YEAR 3 CURRICULUM

Autumn	Spring	Summer
Cook well, eat well *This project teaches children about food groups and the Eatwell guide. They learn about methods of cooking and explore these by cooking potatoes and ratatouille. The children choose and make a taco filling according to specific design criteria.*	**Making it Move** *This project teaches children about cam mechanisms. They experiment with different shaped cams before designing, making and evaluating a child's automaton toy.*	**Greenhouse** *This project teaches children about the purpose, structure and design features of greenhouses, and compares the work of two significant greenhouse designers. They learn techniques to strengthen structures and use tools safely. They use their learning to design and construct a mini greenhouse.*
Knowledge Humans get nutrition from what they eat. It is important to have a balanced diet made up of the main food groups, including: proteins, carbohydrates, fruit and vegetables, dairy products and alternatives, and fats and spreads. Humans stay hydrated by drinking water. There are five main food groups: fruit and vegetables; carbohydrates (potatoes, bread, rice and pasta); proteins (beans, pulses, fish, eggs and meat); dairy and alternatives (milk, cheese and yoghurt) and fats (oils and spreads). Foods high in fat, salt and sugar should only be eaten occasionally as part of a healthy, balanced diet. Safety rules must be followed when using electricity. Fingers and other objects must not be put into electrical outlets, anything with a cord or	**Knowledge** Cams are devices that can convert circular motion into up-and-down motion. The cam is fixed to the axle and the follower sits on the cam. When the axle is rotated, the follower moves up and down, following the shape of the cam. Different shaped cams produce different patterns of movement in the follower. Materials for a specific task must be selected on the basis of their properties. For example greenhouses need transparent or translucent materials. Availability and cost have also got to be considered. Design criteria are the exact goals a project must achieve to be successful. These criteria might include the product's use, appearance, cost and target user.	**Knowledge** Particular products are designed for specific tasks. For example designing a product to help grow plants will require certain materials. Work from different designers can be compared by assessing specific criteria, such as their visual impact, fitness for purpose and target market. Diagonal struts create triangular shapes within a frame structure. Adding diagonal struts to a frame structure adds strength and stability. Materials for a specific task must be selected on the basis of their properties. For example greenhouses need transparent or translucent materials. Availability and cost have also got to be considered. Design criteria are the exact goals a project must achieve to be successful.

plug should never be used around water and a plug should never be pulled out by its cord. Preparation techniques for savoury dishes include peeling, chopping, deseeding, slicing, dicing, grating, mixing and skinning. Design criteria are the exact goals a project must achieve to be successful. These criteria might include the product's use, appearance, cost and target user.	Asking questions can help others to evaluate their products. For example, asking someone whether the materials selected helped achieve the purpose of the model.	These criteria might include the product's use, appearance, cost and target user. Asking questions can help others to evaluate their products. For example, asking someone whether the materials selected helped achieve the purpose of the model.
Skills Explain the importance and characteristics of a healthy, balanced diet. Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars). Describe how key events in design and technology have shaped the world. Use appliances safely with adult supervision. Prepare and cook a simple savoury dish. Identify and name foods that are produced in different places. Develop design criteria to inform a design.	**Skills** Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products. Explain how an existing product benefits the user. Plan which materials will be needed for a task and explain why. Develop design criteria to inform a design. Make working models with simple mechanisms or electrical circuits. Use tools safely for cutting and joining materials and components.	**Skills** Explain how an existing product benefits the user. Explain the similarities and difference between the works of two designers. Compare artists, architects and designers and identify significant characteristics of the same style of artwork, structures and products through time. Create shell or frame structures using diagonal struts to strengthen them. Use tools safely for cutting and joining materials and components. Plan which materials will be needed for a task and explain why.

Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.	Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.	Develop design criteria to inform a design. Use tools safely for cutting and joining materials and components. Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.

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BATS YEAR 5 CURRICULUM

Autumn	Spring	Summer
Moving Mechanisms *This project teaches children about pneumatic systems. They experiment with pneumatics before designing, making and evaluation a pneumatic machine that performs a useful function*	**Eat the Seasons** *This project teaches children about the meaning and benefits of seasonal eating, including food preparation and cooking techniques*	**Architecture** *This project teaches children about how architectural style and technology has developed over time and then use this knowledge to design a building with specific features*
Knowledge A pneumatic system uses compressed air to exert a force. Testing a product against the design criteria will highlight anything that needs improvement or redesign. Mechanisms and systems can work together to perform a function. A strong and stable structure is necessary to support mechanisms in a machine. Pneumatic systems can be used to lift heavy loads, raise and lower platforms or soften a force by acting as a shock absorber. Evaluations can be made by asking product users a selection of questions to obtain data on how the product has met its design criteria.	**Knowledge** Seasonality is the time of year when the harvest or flavour of a type of food is at its best. A balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions. Sweet dishes are usually desserts, such as cakes, fruit pies and trifles. Savoury dishes usually have a salty or spicy flavour rather than a sweet one. A balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions.	**Knowledge** Architecture is defined by different styles often linked to particular periods of time. Each period uses visual elements to create its own style. Different types of architectual design include examples such as, Classical architecture (c850 BC–cAD 470), Gothic architecture (1100–1500), Renaissance architecture (1400–1600), Baroque architecture (1600–1830) and Postmodern architecture (1960–1990). The design of products needs to take into account the culture of the target audience. A Roman architect called Vitruvius said that successful buildings should have firmitas (stability), utilitas (useful space) and venustas (an attractive appearance). The ancient Greeks developed the Classical form of architecture that has been copied for thousands of years.

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		Support, stiffness and stability can be created by using triangular shapes to create strong frameworks, columns to support roofs and overlapping brickwork patterns. Computer-aided design (CAD) is the use of specialised computer software to design objects. CAD designs can also be made into objects using 3-D printers. Testing a product against the design criteria will highlight anything that needs improvement or redesign.
Skills Use mechanical systems in their products, such as pneumatics. Test and evaluate products against a detailed design specification and make adaptations as they develop the product. Name and select increasingly appropriate tools for a task and use them safely. Build a framework using a range of materials to support mechanisms. Explain the functionality and purpose of safety features on a range of products.	**Skills** Describe what seasonality means and explain some of the reasons why it is beneficial. Evaluate meals and consider if they contribute towards a balanced diet. Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish.	**Skills** Describe and discuss how different artists and cultures have used a range of visual elements in their work. Explain how the design of a product has been influenced by the culture or society in which it was designed or made. Describe the social influence of a significant designer or inventor. Build a framework using a range of materials to support mechanisms.

Select and combine materials with precision. Survey users in a range of focus groups and compare results.		Use pattern pieces and computer-aided design packages to design a product. Select and combine materials with precision. Build a framework using a range of materials to support mechanisms. Test and evaluate products against a detailed design specification and make adaptations as they develop the product.

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DT Curriculum Overview

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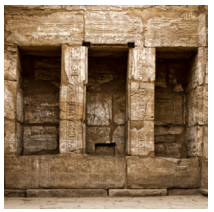
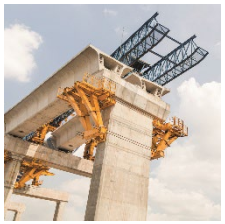
Cycle B

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Owls	**Remarkable Recipes** 		**Beach Hut** 		**Cut, Stitch and Join** 	
Badgers	**Fresh Food, Good Food** 		**Functional and Fancy Fabric** 		**Tomb Builders** 	
Bats	**Food for Life** 		**Engineer** 		**Make Do and Mend** 	

OWLS YEAR 2 CURRICULUM

Autumn	Spring	Summer
Remarkable Recipes *This project teaches children about sources of food and tools used for food preparation. They also discover why some foods are cooked and learn to read a simple recipe. The children choose and make a new school meal that fulfils specific design criteria*	**Beach Hut** *This project teaches children about making and strengthening structures, including different ways of joining materials*	**Cut, Stitch and Join** *This project teaches children about fabric home products and the significant British brand Cath Kidston. They learn about sewing patterns and using a running stitch and embellishments before making a sewn bag tag*
Knowledge Food comes from two main sources: animals and plants. Milk comes mainly from cows but also from goats and sheep. Eggs belong to the animal product category. They are laid by female animals. The most common types eaten by humans include chicken and duck eggs. Honey is made by bees. Most edible oils are made from plant parts. Olive oil, vegetable oil and coconut oil are all made from plant sources. Sugar is made from plants called sugar cane and sugar beet.	**Knowledge** Structures can be made stronger, stiffer and more stable by using cardboard rather than paper and triangular shapes rather than squares. Structures can be made stronger, stiffer and more stable by using cardboard rather than paper and triangular shapes rather than squares. Properties of components and materials determine how they can and cannot be used.	**Knowledge** There are many home products made from fabric. Examples of fabric based products in the home include cushions, curtains, blinds and carpets. The Cath Kidston brand was an important British brand which began in the 1990s. It was easily recognisable for its floral patterned fabric and use of classic British iconography including the Red London Bus and London black cab. A brand is a name, term, design, or symbol identifying a seller's products or services. A running stitch is a basic stitch used to join two pieces of fabric. Embellishment is a decorative detail or feature added to something to make it more attractive.

Plants also give us nuts, such as almonds, walnuts and hazelnuts. Tools have characteristics that make them suitable for specific purposes. For example, a knife is good for cutting food because it has a sharp metal edge. Hygiene rules include washing hands before handling food, cleaning surfaces, tying long hair back, storing food appropriately and wiping up spills. School kitchen staff are important people because they design and provide healthy meals. A healthy diet should include meat or fish, starchy foods (such as potatoes or rice), some dairy foods, a small amount of fat and plenty of fruit and vegetables		Properties of components and materials determine how they can and cannot be used. A finished product can be checked against design criteria to see how successfully it has been made or to evaluate how well it works. Improvements can then be planned.
Skills Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables). Prepare ingredients by peeling, grating, chopping and slicing.	**Skills** Generate and communicate their ideas through a range of different methods. Explore how a structure can be made stronger, stiffer and more Explore how a structure can be made stronger, stiffer and more stable.	**Skills** Explain how an everyday product could be improved. Explain why a designer or inventor is important. Compare different or the same products from the same or different brands.

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Select the appropriate tool for a task and explain their choice. Observe what happens when a range of everyday materials, including foods, are heated and cooled, sorting and grouping them based on their observations. Work safely and hygienically in construction and cooking activities. Explain why a designer or inventor is important. Generate and communicate their ideas through a range of different methods. Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal. Explain how closely their finished products meet their design criteria and say what they could do better in the future.	Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect. Select the appropriate tool for a task and explain their choice. Explain how closely their finished products meet their design criteria and say what they could do better in the future.	Select the appropriate tool for a task and explain their choice. Use different methods of joining fabrics, including glue and running stitch. Add simple decorative embellishments, such as buttons, prints, sequins and appliqué. Generate and communicate their ideas through a range of different methods. Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect. Explain how closely their finished products meet their design criteria and say what they could do better in the future.

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BADGERS YEAR 4 CURRICULUM

Autumn	Spring	Summer
Fresh Food, Good Food *This project teaches children about food decay and preservation. They discover key inventions in food preservation and packaging, then make examples. The children prepare, package and evaluate a healthy snack.*	**Functional and Fancy Fabrics** *This project teaches children about home furnishings and the significant designer William Morris. They learn techniques for decorating fabric, including block printing, hemming and embroidery and use them to design and make a fabric sample*	**Tomb Builders** *This project teaches children about simple machines, including wheels, axles, inclined planes, pulleys and levers, exploring how they helped ancient builders to lift and move heavy loads*
Knowledge Food deteriorates due to the growth of microorganisms. Significant scientists such as Louis Pasteur and inventors such as Nicolas Appert have ensured decay can be prevented or delayed by preservation methods, such as drying, salting, pickling, canning, pasteurising, refrigerating or freezing the food. The 'use by' date shows when the food is no longer safe to eat. The 'best before' date shows the date after which the food will lose some flavour or texture. Design features are the aspects of a product's design that the designer would like to emphasise. For example, the use of a particular material or a feature that makes the product durable.	**Knowledge** A comparison table is an organised way to compare products. Fabrics can be natural or synthetic. Natural fabrics include cotton, silk and wool. Synthetic fabrics include Lycra, polyester and nylon. Design features are the aspects of a product's design that the designer would like to emphasise. For example, the use of a particular material or a feature that makes the product durable. William Morris was a British textile designer, artist and socialist activist associated with the British Arts and Crafts Movement.	**Knowledge** Simple machines make physical jobs easier by changing the strength or direction of a force. There are six simple machines: pulley, lever, wheel and axle, wedge, inclined plane and screw. Simple machines can be combined to make complex, compound machines. For example, a wheelbarrow combines a lever with a wheel and axle. Characteristics of materials, such as rigidity, strength and smoothness will affect the success of a working model. Evaluation can be done by considering whether the product does what it was designed to do, whether it has an attractive appearance, what changes were made during the making process and why the changes were made.

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Particular areas of the world have conditions suited to growing certain crops, such as coffee in Peru and citrus fruits in California in the United States of America. Annotated sketches and exploded diagrams show specific parts of a design, highlight sections or show functions. They communicate ideas in a visual, detailed way. A prototype is a mock-up of a design that will look like the finished product but may not be full size or made of the same materials. Cooking techniques include baking, boiling, frying, grilling and roasting. Foods need packaging to keep them fresh, safe to eat and free from damage. Food packaging also provides nutritional information about the food inside. Chemicals are used in the home every day. They include cleaning products, such as bleach and disinfectant, but also paints, glues, oils, pesticides and medicines. Chemicals should only be used under adult supervision. Evaluation can be done by considering whether the product does what it was designed to do,	William Morris was a significant contributor to the revival of traditional British textile arts and methods of production. William Morris' motifs consisted mainly of leaves, flowers, fruits and birds. Block printing and fabric paint are used to create decorative, repeated patterns on fabrics. A motif is a recurring shape in a design or pattern. Motifs can be figurative, vegetal, abstract or geometric. Islamic art features geometric motifs, which are made from regular shapes. A hem runs along the edge of a piece of cloth or clothing. It is made by turning under a raw edge and sewing to give a neat and quality finish. Stitches include running stitch, cross stitch and blanket stitch. Embroidery stitches, such as scatter stitches, satin stitch and back stitch, embellish fabric. Annotated sketches and exploded diagrams show specific parts of a design, highlight sections or show functions. They communicate ideas in a visual, detailed way. Evaluation can be done by considering whether the product does what it was designed to do,	The evaluation process can include suggesting improvements and explaining why they should be made.

whether it has an attractive appearance, what changes were made during the making process and why the changes were made. The evaluation process can include suggesting improvements and explaining why they should be made.	whether it has an attractive appearance, what changes were made during the making process and why the changes were made. The evaluation process can include suggesting improvements and explaining why they should be made.	
Skills Explain how and why a significant designer or inventor shaped the world. Investigate and identify the design features of a familiar product. Identify and name foods that are produced in different places in the UK and beyond. Explain how and why a significant designer or inventor shaped the world. Use annotated sketches and exploded diagrams to test and communicate their ideas. Prototype shell and frame structures, showing awareness of how to strengthen, stiffen and reinforce them. Design a healthy snack or packed lunch and explain why it is healthy.	**Skills** Create and complete a comparison table to compare two or more products. Choose from a range of materials, showing an understanding of their different characteristics. Create and complete a comparison table to compare two or more products. Investigate and identify the design features of a familiar product. Explain how and why a significant designer or inventor shaped the world. Represent the detailed patterns found in natural phenomena, such as water, weather or animal skins. Create detailed decorative patterns on fabric using printing techniques.	**Skills** Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products. Choose from a range of materials, showing an understanding of their different characteristics. Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements.

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Identify and use a range of cooking techniques to prepare a simple meal or snack. Design a healthy snack or packed lunch and explain why it is healthy. Choose from a range of materials, showing an understanding of their different characteristics. Work safely with everyday chemical products under supervision, such as disinfectant hand wash and surface cleaning spray. Design a healthy snack or packed lunch and explain why it is healthy. Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements.	Combine a variety of printmaking techniques and materials to create a print on a theme. Hand sew a hem or seam using a running stitch. Use a range of stitches to add detail and texture to fabric or mixed-media collages. Use annotated sketches and exploded diagrams to test and communicate their ideas. Select, name and use tools with adult supervision Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements.	

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BATS YEAR 6 CURRICULUM

Autumn	Spring	Summer
Food for Life *This project teaches children about processed food and healthy food choices. They make bread and pasta sauces and learn about the benefits of whole foods. They plan and make meals as part of a healthy daily menu, and evaluate their completed products.*	**Engineer** *This project teaches children about remarkable engineers and significant bridges, learning to identify features, such as beams, arches and trusses. They complete a bridge-building engineering challenge to create a bridge prototype*	**Make Do and Mend** *This project teaches children a range of simple sewing stitches, including ways of recycling and repurposing old clothes and materials*
Knowledge A processed food is changed during preparation and includes processes, such as cooking, freezing, pasteurising, or the addition of ingredients. Processed foods can be convenient and increase availability, but often lack of nutrients and contain unhealthy ingredients when compared to whole foods. Ingredients can usually be bought at supermarkets, but specialist shops may stock different items such as specialist vegetables or coffees. Greengrocers sell fruit and vegetables, butchers sell meat, fishmongers sell fresh fish and delicatessens usually sell some unusual prepared foods, as well as cold meats and cheeses.	**Knowledge** Bridge structures have changed over time. This is due to factors such as technology, design innovation and new and better access to materials. Significant engineers have improved, safety, people's lives and trade through their constructions. Significant bridges include: the Menai Bridge, Clifton Suspension Bridge and Forth Bridge. It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability. Strength can be added to a framework by using multiple layers or changing its shape.	**Knowledge** Make Do and Mend was a campaign run by the Ministry of Information during the Second World War to encourage people to recycle and repurpose their old clothes rather than buy new. The Make Do and Mend campaigns aimed to limit the amount of labour and materials used in clothes production, so that it could be used to support the greater war effort. Deconstructing garments identifies how they were made, the materials used and their properties. Hand stitches include running stitch, blanket stitch and whip stitch. It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might

Sliced bread is processed. It can contain many more ingredients than homemade bread, including preservatives and artificial ingredients. Whole foods have not been changed from their natural form. Organic whole foods are grown without the use of man-made fertilisers, pesticides, growth regulators or animal feed additives. Eating a balanced diet is a positive lifestyle choice that should be sustained over time. Food packaging provides important nutritional information about the food inside. An iterative process starts with requirements and continues by creating a product, testing it, and revising it before creating a better version. The iterative process is a series of steps that are repeated, improving the product with each cycle.	Triangles do not collapse or distort easily and so are used in architecture to provide support and stability. Ideas can be communicated in a range of ways, including through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability. An iterative process starts with requirements and continues by creating a product, testing it, and revising it before creating a better version. The iterative process is a series of steps that are repeated, improving the product with each cycle.	include flexibility, waterproofing, texture, colour, cost and availability. Products and inventions can be compared using a range of criteria, such as the impact on society, ease of use, appearance and value for money.
Skills Create a detailed comparative report about two or more products or inventions. Analyse how an invention or product has significantly changed or improved people's lives.	**Skills** Analyse how an invention or product has significantly changed or improved people's lives. Present a detailed account of the significance of a favourite designer or inventor.	**Skills** Analyse how an invention or product has significantly changed or improved people's lives. Select appropriate tools for a task and use them safely and precisely.

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DT Curriculum Overview

Birtley House Independent School

Follow a recipe that requires a variety of techniques and source the necessary ingredients independently. Analyse how an invention or product has significantly changed or improved people's lives. Create a detailed comparative report about two or more products or inventions. Explain how organic produce is grown. Plan a healthy daily diet, justifying why each meal contributes towards a balanced diet. Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others.	Create a detailed comparative report about two or more products or inventions. Choose the best materials for a task, showing an understanding of their working characteristics. Select the most appropriate materials and frameworks for different structures, explaining what makes them strong. Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways. Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others.	Pin and tack fabrics in preparation for sewing and more complex pattern work. Choose the best materials for a task, showing an understanding of their working characteristics. Pin and tack fabrics in preparation for sewing and more complex pattern work. Use different methods of fastening for function and decoration, including press studs, Velcro and buttons. Create a detailed comparative report about two or more products or invention