

Halesowen C of E Primary School



We care, we trust, we believe.

We share, we enjoy, we achieve.

DT Curriculum



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School Vision

Halesowen Church of England Primary School was a school built for the local community. Right from the beginning it was an inclusive school built on strong Christian beliefs. It is our duty to ensure that this deeply Christian core runs through everything we do at Halesowen C of E in the modern day.

We believe children can flourish if they are loved and valued. We have high expectations of everyone because we know they can achieve if someone believes in them. We trust each other and are proud that we are one big family. We care about each and every one of our families. We enjoy the job we do and make school a fun place to be. We share this place Halesowen C of E; a place special to all of us, a place where we can feel safe, a place where we can learn and thrive together.

Curriculum Vision

At Halesowen C of E we want all children to have access to a meaningful, fun and exciting, curriculum which is rich with first hand experiences and language. We will ensure pupils are given the opportunities to achieve. We believe that:

“A child is like a butterfly in the wind. Some can fly higher than others, but each one flies the best it can. Each one is different, each one is special, each one is beautiful.”

We value all of our children irrespective of background, culture or academic ability and want them all to experience the breadth of curriculum subjects we offer allowing them to develop their own preferences and interests which they can foster and develop as they learn grow and move on to their next phase of education.



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Curriculum Intent

<p>STATUTORY REQUIREMENTS AND NON- STATUTORY GUIDANCE</p>	<ul style="list-style-type: none"> • EYFS:- Statutory EYFS framework and Early learning goals. Use of Development Matters 2021- taken predominantly from the Expressive Arts and Design Section; whilst also drawing on skills from Communication and Language, and Physical Development. • Key stage 1 and 2: - National Curriculum. • Use of the document “Teaching a Broad and Balanced Curriculum for Education Recovery” • Use of additional resources such as (but not limited to) Twinkl, Prospectus Curriculum, Design and Technology Association, and STEM.
<p>PROVISION</p>	<ul style="list-style-type: none"> • DT is part of our humanities approach but not limited to only linking with humanities subjects. • In EYFS opportunities to learn DT through discussion, play and exploration within half termly topics. • Each term (in key stage 1 and 2) a DT aspect will be taught as part of a wider immersive thematic approach.
<p>KNOWLEDGE</p>	<ul style="list-style-type: none"> • Children need to know about how products are designed, produced and used, by them as consumers. • DT is split into two key areas: Design and Technology and Cooking and Nutrition. • Both Design and Technology and Cooking and Nutrition in the DT curriculum are intended to be progressive and is designed to build upon prior learning but to ensure acquisition deliberately overlaps and is repetitive, as children revisit and develop different disciplines through their school journey. Children will develop their knowledge in four key DT areas: structures, mechanical systems, textiles and electrical systems. • Through our Design and Technology teaching children will develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They will build and apply a repertoire of knowledge and understanding in order to design and make high-quality prototypes and products for a wide range of users. Also critiquing, evaluating and testing their ideas and products and the work of others. • Through our Cooking and Nutrition teaching children will be develop and understanding of and be able to apply the principles of nutrition as they learn how to cook. • Cross-curricular knowledge is also imbedded, making links to geography (where is my food from? What food can be grown here?) History (when was this product invented? How has this product changed over time?) And science (how has this food been grown? What properties do these materials need to have?)
<p>SKILLS</p>	<ul style="list-style-type: none"> • There is a planned skills progression through identified key aspects of the subject. • These skills are categorised in the following key areas: design, make, evaluate and technical knowledge/ skill. • Opportunities to practise skills in pure “skills” sessions before applying. As part of each unit opportunities will be given to learn, practise and develop these skills, before being applied to a “final piece” of work.



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	<ul style="list-style-type: none">• Transfer of skills encouraged across different subjects for example using presentation skills such as writing (English) graphs (maths) Sketching (art)
MEANINGFUL START POINTS	<ul style="list-style-type: none">• Children need to know where subjects exist in real life. “We are Designers”. They need to understand what DT is and when we are learning a DT aspect within our topic.• Initial learning should link to the child and their part in the subject in real life. In DT each theme or topic should always start with “What solution can I find to a problem?...”• Children will work in a range of relevant contexts such as home, school and enterprise; or be set a problem to resolve to give their learning meaning.
VOCABULARY AND LANGUAGE	<ul style="list-style-type: none">• Children should build a bank of subject and topic specific vocabulary – understanding meanings and define words then use in the correct context.• They should use language to question, enquire, compare, contrast, explain, justify and debate.
ENRICHMENT OPPORTUNITIES	<ul style="list-style-type: none">• To broaden their first-hand experiences of design. Children should be exposed to a wide range of products and innovations that have impacted their daily lives. They should gain an understanding of how their choices as a consumer influence and change the way things are designed and produced.• Using all of our senses to be fully immersed in learning- what can they hear, see, smell, feel etc, when exploring different products.• Further aspects of DT can be developed through the use of technology e.g. using resources such as museum websites to explore the work of designers and innovators, using Ipads/ computers/ cameras as an additional method of recording ideas and exploring designs.• Relevant and meaningful opportunities should be provided linked to their local area, individual interests, current affairs or events, culture, community. For example- visits from local designers and producers, trips to local factories/ production companies to understand processes on a larger scale. In EYFS looking at everyday products that we use, and how we can replicate those in our play, or using imagination to create new objects.• Participating in enterprise programmes such as Young Enterprise, to give children a purpose for design and a greater understanding of budgeting and designing for a target audience.



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INDIVIDUAL DEVELOPMENT

- Ensure equality so all children can access learning (SEND). Consider ways children who struggle with English skills can access and present learning, or children with physical impairments can access tools and resources.
- Allow opportunities for curiosity and fascination in all subjects and topics- create awe and wonder about the world they live in.
- Make time for children to be inquisitive and develop learning in their own way- let them own their learning journey, by making individual decisions about “final pieces” applying skills they have been taught.
- Nurture ambitions and aspirations- talk about the variety of careers that can use their design skills.
- Develop a curiosity for how everyday products have been made, how they have developed and how they will continue to develop in the future.



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Knowledge Progression map

Aspect	EYFS	Key stage 1	Lower key stage 2	Upper key stage 2
Structures	<ul style="list-style-type: none"> Join different materials Create closed shapes and use these shapes to represent objects. Work with a range of different materials to construct with. 	<ul style="list-style-type: none"> Build structures, exploring how they can be made stronger stiffer and more stable. 	<ul style="list-style-type: none"> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Include free standing and shell structures. Develop and use knowledge of nets of cubes and cuboids to make more complex structures. 	<ul style="list-style-type: none"> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Include free standing and shell structures as well as compound 3D shapes. Develop and use knowledge of nets of 3D shapes to make more complex structures.
Mechanical Systems		<ul style="list-style-type: none"> Explore and use mechanisms such as levers, sliders, wheels and axles in their products. Understand that different mechanisms produce different types of movement. Distinguish between fixed and freely moving axles. 	<ul style="list-style-type: none"> Understand and use mechanical systems in their products such as gears, pulleys, cams, levers and linkages. Understand that different mechanisms produce different types of movement. Be able to make an informed choice about which type of mechanism to use. Distinguish between fixed and loose pivots. 	<ul style="list-style-type: none"> Understand and use mechanical systems in their products such as gears, pulleys, cams, levers and linkages. Understand that different mechanisms produce different types of movement. Be able to make an informed choice about which type of mechanism to use. Understand that mechanical systems have an input, process and output.



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				<ul style="list-style-type: none"> Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.
Textiles	<ul style="list-style-type: none"> Explore different materials freely, in order to develop their ideas about how to use them and what to make. 	<ul style="list-style-type: none"> Understand how simple 3-D textile products are made, using a template to create two identical shapes. Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. Explore different finishing techniques 	<ul style="list-style-type: none"> Know how to strengthen, stiffen and reinforce existing fabrics. Understand how to securely join two pieces of fabric together. Understand the need for patterns and seam allowances 	<ul style="list-style-type: none"> Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics. Understand how fabrics can be strengthened, stiffened and reinforced where appropriate.
Electrical Systems			<ul style="list-style-type: none"> Understand and use electrical systems in their products. For example, series circuits incorporating switches and bulbs. Apply their understanding of computing to program, monitor and control their products. 	<ul style="list-style-type: none"> Understand and use electrical systems in their products. For example, series circuits incorporating switches, buzzers and motors. Apply their understanding of computing to program, monitor and control their products.
Cooking and Nutrition	<ul style="list-style-type: none"> Know and talk about the different factors that support their overall 	<ul style="list-style-type: none"> Understand where our food comes from e.g. farmed, grown at home or made in factories. 	<ul style="list-style-type: none"> Know how to use appropriate equipment and utensils to prepare and combine food. 	<ul style="list-style-type: none"> Know how to use appropriate equipment and utensils to prepare and combine food.



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	<p>health and wellbeing including healthy eating.</p>	<ul style="list-style-type: none"> • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eat well plate. 	<ul style="list-style-type: none"> • Know that a healthy diet is made up from a variety and balance of different food and drink. • Know that to be active and healthy food and drink are needed to provide energy for the body. • Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. • Understand about how seasonality affects which products are available at different times of year. 	<ul style="list-style-type: none"> • Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Understand which foods can be produced locally, in the UK, Europe and the wider world. • Know that a healthy diet is made up from a variety and balance of different food and drink. • Know that to be active and healthy food and drink are needed to provide energy for the body. Begin to understand how different nutrients can impact on our body. • Understand about how seasonality affects which products are available at different times of year. • Begin to understand about affordability when planning a meal.
<p>Key Events and Individuals</p>			<ul style="list-style-type: none"> • Understand how key events and individuals in design and technology have helped shape the world. 	



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Skills Progression map

Aspect	EYFS	Key stage 1	Lower key stage 2	Upper key stage 2
<p>Design (Research, plan and communicate ideas)</p>	<ul style="list-style-type: none"> • Explain what they are making and which materials they are using. • Select materials from a limited range that will meet a simple design criteria e.g. shiny. • Select and name the tools needed to work the materials e.g. scissors for paper. • Explore ideas by rearranging materials. • Describe simple models or drawings of ideas and intentions. • Discuss their work as it progresses. 	<ul style="list-style-type: none"> • Start to generate ideas by drawing on their own and other people's experiences. • Begin to research to understand the development of existing products e.g. what they are for, how they work, materials used. • Identify a purpose for what they intend to design and make. • Understand an audience or target group for what they are designing. • Create a design criteria based on purpose, functionality, appeal and audience. • Use talk to develop and communicate their ideas. • Make templates and mock ups of their ideas- using card and 	<ul style="list-style-type: none"> • Generate ideas using research to develop a design criterion to inform their design. Criteria should ensure product is innovative, functional, appealing, fit for purpose and aimed at a particular group or individual. • Develop and communicate ideas through discussion- consider the views of others when designing. • Use annotated sketches as part of the design process. • From initial ideas and sketches create pattern pieces and prototypes of the product. • Begin to use computer aided design (CAD) when appropriate. 	<ul style="list-style-type: none"> • Generate ideas using research to develop a design criterion to inform their design. Criteria should ensure product is innovative, functional, appealing, fit for purpose and aimed at a particular group or individual. • Develop and communicate ideas through discussion- consider the views of others when designing. • Use annotated sketches, cross-sectional and exploded diagrams to communicate ideas as part of the design process. • From initial ideas and sketches create pattern pieces and prototypes of the product.



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		paper or ICT where appropriate.		<ul style="list-style-type: none"> • Use computer aided design (CAD) when appropriate. • Begin to consider cost and sustainability of their designs, and the impact their products have beyond their intended use.
<p>Make (working with tools, equipment and materials to make high quality products)</p>	<ul style="list-style-type: none"> • Start to build structures, joining components together. • Begin to use simple tools such as scissors, knives and hole punches. • Join materials together in different ways e.g. glue, tape, staples, threading. • Create collaboratively sharing resources and skills. 	<ul style="list-style-type: none"> • Select from and use a range of tools and equipment to perform practical tasks. • Select from a wide range of construction materials and textiles according to their characteristics. • With support measure, mark, cut out and shape a range of materials, with some accuracy. • Learn to use hand tools safely and appropriately. • Assemble product by joining and combining materials. Begin to use a range of methods for joining such as glue, 	<ul style="list-style-type: none"> • Select from and use a wider range of tools and equipment to perform practical tasks with some accuracy. • Select from and use a wider range of construction materials, textiles and electrical components. Considering their functional properties and aesthetic qualities. • Measure, mark out, cut, score and assemble components with more accuracy. • Work safely with a range of hand tools, selecting the appropriate tool for the task. 	<ul style="list-style-type: none"> • Select from and use a wider range of tools and equipment to perform practical tasks with accuracy. • Select from and use a wider range of construction materials, textiles and electrical components. Considering their functional properties and aesthetic qualities. Being able to justify their choices. • Confidently measure, mark out, cut, score and assemble components to achieve a quality product. • Work safely with a range of hand tools, selecting the



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		<p>tape, staples, basic stitches.</p> <ul style="list-style-type: none"> Start to choose and use simple finishing techniques to improve the appearance of their product. 	<ul style="list-style-type: none"> Use a wider range of methods for joining materials when assembling e.g. using a range of adhesives or stitches. Begin to apply their understanding of computing to program, monitor and control their products. Use a finishing techniques to strengthen and improve the appearance of their product, using ICT when appropriate. 	<p>appropriate tool for the task.</p> <ul style="list-style-type: none"> Use a wider range of methods for joining materials when assembling e.g. using a range of adhesives or stitches. Apply their understanding of computing to program, monitor and control their products. Use a range of finishing techniques to strengthen and improve the appearance of their product, using ICT when appropriate.
Evaluate	<ul style="list-style-type: none"> Say what they like and do not like about items they have made. Begin to explain why. Talk about their designs as they develop. Discuss changes they have made during the building process. 	<ul style="list-style-type: none"> Explore and evaluate a range of existing products. Consider purpose, functionality and appeal. Use communication and discussion to evaluate products. Evaluate their ideas as they are developed, making changes at various stages e.g. after 	<ul style="list-style-type: none"> Investigate and analyse a range of existing products. Begin to disassemble products to gain insight into how and why they have been designed in this way. Evaluate their ideas as they are developed, making changes at various stages e.g. after making a prototype, 	<ul style="list-style-type: none"> Investigate and analyse a range of existing products. Be able to disassemble products to gain insight into how and why they have been designed in this way. Evaluate their ideas as they are developed, making changes at various stages e.g. after making a prototype,



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		<p>making a mock up, during the construction.</p> <ul style="list-style-type: none"> Evaluate their product against an agreed design criterion. Begin to identify areas for improvement or change they might make. 	<p>during the construction.</p> <ul style="list-style-type: none"> Evaluate their product against an agreed design criterion. Consider a range of appropriate tests they could carry out. Begin to seek out evaluation from others. Begin to record their evaluations in different ways using diagrams, annotations and discussions. 	<p>during the construction.</p> <ul style="list-style-type: none"> Evaluate their product against an agreed design criterion. Carry out a range of appropriate tests on their products. Seek out evaluation from others. Record their evaluations in different ways using diagrams, annotations and discussions.
Food and Nutrition	<ul style="list-style-type: none"> Use a range of senses to explore different foods. Use simple on handed tools e.g. spoon, knife. Begin to work safely and hygienically. With support measure and weigh food items using non-statutory measures e.g. cups, spoons, jugs 	<ul style="list-style-type: none"> Use a range of tools and techniques to prepare food e.g. chopping, peeling and grating. Prepare simple dishes without using a heat source. Work safely and hygienically. 	<ul style="list-style-type: none"> Use a range of tools and techniques to prepare food e.g. peeling, grating, chopping, mixing, kneading. Prepare and cook simple dishes- predominantly savoury, where appropriate using a heat source. Work safely and hygienically. 	<ul style="list-style-type: none"> Use a range of tools and techniques to prepare food e.g. peeling, grating, chopping, mixing, kneading. Prepare and cook a variety dishes- predominantly savoury, using a heat source. Work safely and hygienically.



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Thematic overview

	Autumn	Spring	Summer
Year 1	<p>Home and Away</p> <p><u>Mechanical Systems</u></p> <p>Focus: wheels and axles</p> <p>Final product Ideas: car, train, van, bus. Design a new minibus for the school</p> <p><i>Link to key event/ individual (non- statutory at KS1): Henry Ford (cars), Stephenson Rocket (train)</i></p> <p>Other possible links: Coventry Transport museum, Thrust SSC (fastest land car speed record)</p>	<p>The Big Smoke</p> <p><u>Cooking and Nutrition</u></p> <p>Focus: healthy and varied diet, prepare simple dish.</p> <p>Final product ideas: design a healthy sandwich (link to bakery- Fire of London)</p> <p><i>Key individuals/ events (non-statutory at KS1): Warburtons (UK based bakers)</i></p> <p>Other possible links: visit local bakery/ bread counter at Asda.</p>	<p>Poles Apart</p> <p><u>Textiles</u></p> <p>Focus: cutting and joining techniques (basic stitch)</p> <p>Final product ideas: mittens for Arctic explorer or sunglasses pouch for desert explorer. Chn to have choice.</p> <p><i>Key individual/ events (non-statutory in KS1):</i></p> <p>Other possible links: changes in arctic expedition clothing</p>
Year 2	<p>Bostin' Black Country</p> <p><u>Mechanical Systems</u></p> <p>Focus: Levers and sliders</p> <p>Final Product ideas: moving pictures- linked to story book or Link to Christmas cards e.g. moving sleigh, Santa up and down chimney.</p>	<p>Iceberg Ahead!</p> <p><u>Structures</u></p> <p>Focus: shell structures (focus on strong joining techniques)</p> <p>Final product ideas: make a boat</p>	<p>African Adventure</p> <p><u>Cooking and Nutrition</u></p> <p>Focus: where does food come from</p> <p>Final product ideas: fruit kebabs/ salad</p> <p><i>Key individuals/ events (non-statutory at KS1):</i></p>



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	<p><i>Key individual/ events (non-statutory in KS1): Eric Hill- writer of Spot the Dog series made first lift the flap books.</i></p> <p>Other possible links: library service for books with moving parts</p>	<p><i>Key individual/ event (non- statutory at KS1): Thomas Andrews (builder of architect), Noah Hingley and Sons (anchor builder)</i></p> <p>Other possible links: canal boats (local canals- Hawne Basin, Canal Trust- Dudley)</p>	<p>Other possible links: local PYO farm (see what can be grown in UK), visit local greengrocer or Asda to buy ingredients</p>
Year 3	<p>The Chocolate Factory</p> <p><u>Cooking and Nutrition</u></p> <p>Focus: healthy and varied diet, prepare a dish using a range of cooking techniques</p> <p>Final product ideas: new “healthy” cereal bar for Cadbury</p> <p>Key individual/ events (if relevant): Cadbury (chocolate), Kelloggs (cereal)</p> <p>Other possible links: Cadbury world visit</p>	<p>Why Rome wasn’t built in a day</p> <p><u>Mechanical Systems</u></p> <p>Focus: use of cams</p> <p>Final product ideas: design a moving toy (possibly toy soldier)</p> <p>Key individuals/ events (if relevant): Jacques de Vaucanson (inventor of automata toys)</p> <p>Other possible links: MAD museum (Mechanical Art and Design)- Stratford Upon Avon (look at resources or potential trip)</p>	<p>Under the Canopy</p> <p><u>Textiles</u></p> <p>Focus: pattern pieces, cutting and joining materials</p> <p>Final product ideas: hat or head piece (link to carnival headdress).</p> <p>Key individuals/ events: different hat creators e.g. bowler, trilby, top hat...</p> <p>Other possible links: V and A museum (online) hat exhibition</p>
Year 4	<p>Best of British</p> <p><u>Structure</u></p> <p>Focus: free-standing structures, cutting and joining techniques (wood work)</p>	<p>Raid, Invade and Stayed!</p> <p><u>Cooking and Nutrition</u></p> <p>Focus: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p>	<p>Mexico and the Mayans</p> <p><u>Electrical Systems</u></p> <p>Focus: series circuit using bulb and switch. Use of CAD to make nets (Purple Mash- 2design and make)</p>



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	<p>Final product ideas: create a hotel bed (link to story "The Nothing to See Here Hotel")</p> <p>Key individual/ event (if relevant):</p> <p>Other possible links: visit a local hotel (Travelodge) to see what a hotel room looks like</p>	<p>Final product ideas: vegetarian dinner</p> <p>Key individual/ events (if relevant): link to Anglo-Saxon diet- predominantly vegetarian, especially when fasting.</p> <p>Other possible links:</p>	<p>Final product ideas: make a torch for an explorer in the rainforest.</p> <p>Link to key event/ individual: David Misell (torch)</p> <p>Other possible links: link to Science electricity (building a circuit)</p>
Year 5	<p>Rock and Roll</p> <p><u>Structure</u></p> <p>Focus: shell structure, Computer Aided Design (CAD) using tinkercad.com</p> <p>Final product ideas: create a roundhouse style structure (cardboard models- apply previous knowledge of nets and joining techniques)</p> <p>Key individual/ event (if relevant):</p> <p>Other possible links: Avoncroft museum- links to architecture and building structure. Immersion room tour of a roundhouse building.</p>	<p>Water of life</p> <p><u>Mechanical Systems</u></p> <p>Focus: pulleys and gears</p> <p>Final product ideas: create a lifting bridge similar to Tower Bridge (London)</p> <p>Key individual/ events (if relevant): John Wolfe Barry (Tower Bridge engineer)</p> <p>Other possible links: look at other famous bridges e.g. iron bridge</p>	<p>Battles, Blackout and Blitz</p> <p><u>Cooking and Nutrition</u></p> <p>Focus: prepare and cook a predominantly savoury meal. Seasonality and affordability.</p> <p>Final product ideas: create a meal based on war time ration portions.</p> <p>Key individuals/ events: rationing WW2</p> <p>Other possible links: Natwest Money sense- budgeting resources- link to relevant life skills</p>
Year 6	<p>Groovy Greeks</p> <p><u>Cooking and Nutrition</u></p>	<p>Peaks and Falls</p> <p><u>Textiles</u></p>	<p>Protect our planet</p> <p><u>Electrical Systems</u></p>



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	<p>Focus: prepare and cook predominantly savoury dishes using a range of cooking techniques</p> <p>Final product ideas: Greek banquet e.g. moussaka, falafel, flatbreads (pitta)</p> <p>Key individuals/ events (if relevant):: Jamie Oliver (healthy eating for children in schools campaign)</p> <p>Other possible links: trip to Asda to buy ingredients</p>	<p>Focus: joining using different stitches, using a range of openings and fastenings.</p> <p>Final product ideas: create a bag for a hiker</p> <p>Link to key event/ individual: Gideon Sundback (zipper), George De Mestral (Velcro)</p> <p>Other possible links: could link to Geography and sustainability- think about reusable materials and the focus on bags for life as opposed to single use bags.</p>	<p>Focus: simple/ series circuits to include switch, motor. Use of computing to program, monitor and control their products (use of Crumble)</p> <p>Final product ideas: Wind turbines.</p> <p>Key individual/ events (if relevant): Greta Thunberg- look at how she has campaigned for more action to be taken on climate change.</p> <p>Other possible links: Centre for Alternative Technology (CAT) website</p>
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[DT Vocabulary overview](#)



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This vocabulary is a starting point for staff to use with their knowledge organisers. Additional vocabulary should be introduced to the children, especially descriptive language- which can be added during research or evaluation steps dependent on the product.

Aspect	EYFS	Key stage 1	Lower key stage 2	Upper key stage 2
Design (Research, plan and communicate ideas)	<p>What doing: Planning, Investigating, Testing, Thinking, Creating, Imagining, Discussing, drawing</p> <p>Who: Audience</p> <p>Other: purpose</p>	<p>What doing: Planning, Investigating, researching, Testing, Thinking, Creating, Imagining, Discussing, drawing</p> <p>Who: Audience</p> <p>What: Prototypes/ mock up, Annotate sketches</p> <p>Other: Purpose, design criteria, materials</p>	<p>What doing: Planning, Investigating, researching, Testing, Thinking, Creating, Imagining, Discussing, drawing, sketching</p> <p>Who: Audience</p> <p>What: Annotated sketches. Diagrams. Prototypes. Pattern pieces. Nets. Computer technology</p> <p>Other: Purpose. Design criteria. Function. Appeal. Computer aided design (CAD). Materials</p>	<p>What doing: Planning, Investigating, researching, Testing, Thinking, Creating, Imagining, Discussing, drawing, sketching</p> <p>Who: Audience</p> <p>What: Annotated sketches. Cross sectional or exploded diagrams. Prototypes. Pattern pieces. Nets. Computer technology</p> <p>Other: Purpose. Design criteria. Function. Appeal. Computer aided design (CAD). Surveys/ interviews/ questionnaires. Budget/ cost. Resources. Sustainability. Impact</p>
Make (working with tools, equipment and materials to make high quality products)	<p>What: Structure, frame. Materials (wood, cardboard, paper, fabric, plastic, metal) . Glue, tape, blu tac, staples, pins. Tools: Scissors</p> <p>What doing: Joining, marking, cutting, finishing, shaping, folding, fixing,</p>	<p>What: Structure, frame. Materials (wood, cardboard, paper, fabric, plastic, metal). Glue, tape, blu tac, staples, pins, stiches. Tools: Scissors, knives, hole punches, rulers,</p> <p>What doing: Joining, marking, cutting, finishing, shaping, folding, fixing, measuring, assembling, scoring</p>	<p>What: Structure, frame. Materials (wood, cardboard, paper, fabric, plastic, metal) . Glue, tape, blu tac, staples, pins, stiches. Tools: Scissors, knives, hole punches, rulers,</p> <p>What doing: Joining, marking, cutting, finishing, shaping, folding, fixing, measuring, assembling, scoring,</p>	<p>What: Structure, frame. Materials (wood, cardboard, paper, fabric, plastic, metal). Glue, tape, blu tac, staples, pins, stiches. Tools: Scissors, knives, hole punches, rulers,</p> <p>What doing: Joining, marking, cutting, finishing, shaping, folding, fixing, measuring,</p>



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				assembling, scoring, strengthen, reinforce
Evaluate	What doing: Comment, discuss, evaluate Other: Opinion. Agree/ disagree. Changes	What doing: Explore, evaluate, comment, discuss, review Other: Opinion. Agree/ disagree. Adaptations. Design criteria	What doing: Explore, evaluate, comment, discuss, review, investigate, analyse, compare Other: Opinion. Agree/ disagree. Adaptations. Design criteria.	What doing: Explore, evaluate, comment, discuss, review, investigate, analyse, compare, disassemble Other: Opinion. Agree/ disagree. Adaptations. Design criteria/ specification.

	Autumn	Spring	Summer
Year 1	<p>Home and Away <u>Mechanical Systems</u></p> <p>Who: Henry Ford (car), Robert Stephenson (train)</p> <p>What doing: cutting, joining, assembling, finishing</p> <p>When:</p> <p>Where:</p> <p>What: wheel, axle, dowel, body/ cab, vehicle, chassis,</p> <p>Description:</p> <p>Other: fixed, free, mechanism</p>	<p>The Big Smoke <u>Cooking and Nutrition</u></p> <p>Who:</p> <p>What doing: baking, kneading, mixing, rolling, folding, weighing, measuring, spreading, tasting, cutting</p> <p>When:</p> <p>Where:</p> <p>What: ingredients, knife, chopping board, plate, bowls</p> <p>Description: soft, crunchy, sticky, smooth, sharp, crisp, sour, sweet, healthy, unhealthy</p> <p>Other: nutrition</p>	<p>Poles Apart <u>Textiles</u></p> <p>Who:</p> <p>What doing: cutting, sewing, stitching, joining, mark out</p> <p>When:</p> <p>Where: Arctic, polar, desert</p> <p>What: fabric (felt, cotton), thread, needle, pattern pieces</p> <p>Description: soft, warm</p> <p>Other: running stitch, blanket stitch, insulator, compartment</p>



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<p>Year 2</p>	<p>Bostin' Black Country <u>Mechanical Systems</u> Who: <i>Eric Hill</i> What doing: pulling, pushing, cutting, marking, measuring, sticking, taping, pinning When: Where: What: lever, slider, slot, pivot, guide/ bridge Description: Other: mechanism, levers and sliders</p>	<p>Iceberg Ahead! <u>Structure</u> Who: <i>Thomas Andrews (builder of architect), Noah Hingley and Sons (anchor builder)</i> What doing: cutting, folding, sticking, gluing, joining, fixing When: Where: What: glue, scissors, materials e.g. cardboard, plastic. Glue gun, glue sticks, tape, Description: strong, weak, brittle, Other: structure, base, body, shell structure</p>	<p>African Adventure <u>Cooking and Nutrition</u> Who: What doing: mixing, weighing, measuring, tasting, cutting, chopping, squeezing, slicing, peeling, When: Where: Africa What: ingredients, knife, chopping board, plate, bowls, seeds, flesh, skin, pip, core Description: soft, crunchy, sticky, smooth, sharp, crisp, sour, sweet, healthy, unhealthy Other: nutrition, harvested, origin, import</p>
<p>Year 3</p>	<p>The Chocolate Factory <u>Cooking and Nutrition</u> Who: Cadbury, Kelloggs What doing: baking, cooking, rolling, measuring, chopping, mixing, slicing, When: Where: What: knife, chopping board, bowl, ingredients, oven, tray, Description: soft, crunchy, sticky, smooth, sharp, crisp, sour, sweet, healthy, unhealthy, fresh, edible/ inedible Other: savoury, fat, sugar, carbohydrate, protein, nutrients, vitamins, nutrition, allergy, intolerance, hygienic</p>	<p>Why Rome wasn't built in a day <u>Mechanical Systems</u> Who: Jacques de Vaucanson (inventor of automata toys) What doing: cutting, joining, assembling, finishing, assembling, measuring When: Where: What: Description: Other: loose pivot, fixed pivot, input, process, output, linear, rotary, reciprocating, lever, linkage, oscillating</p>	<p>Under the Canopy <u>Textiles</u> Who: Brazilians, dancers, What doing: cutting, joining, connecting, assembling, finishing, sewing, stitching, decorating, embellishing When: Where: Central America What: Velcro, thread, needle, fabric (felt), embellishments (sequins, beads, glitter), ribbons, headdress Description: appealing, Other: running stitch, back stitch, blanket stitch</p>



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<p>Year 4</p>	<p>Best of British <u>Structure</u></p> <p>Who: What doing: cutting, sticking, adhering, joining, fixing, marking out, measuring, sawing, reinforce When: Where: What: wood, hacksaw, bench hook, glue gun, pva glue Description: stable, secure, strong, weak, Other: frame, free-standing, height, width, breadth</p>	<p>Raid, Invade and Stayed! <u>Cooking and Nutrition</u></p> <p>Who: What doing: kneading, baking, cooking, rolling, measuring, chopping, mixing, slicing, When: Where: What: knife, chopping board, bowl, ingredients, oven, tray, Description: soft, crunchy, sticky, smooth, sharp, crisp, sour, sweet, healthy, unhealthy, fresh, edible/ inedible Other: savoury, fat, sugar, carbohydrate, protein, nutrients, vitamins, nutrition, allergy, intolerance, seasonality, harvested, hygienic</p>	<p>Mexico and the Mayans <u>Electrical Systems</u></p> <p>Who: David Missell (torch), user What doing: cutting, joining, connecting, assembling, finishing When: Where: What: torch, circuit, switch, bulb, blub holder, battery, battery holder, wires, crocodile clips, cover Description: reflective, transparent, opaque, dark, light Other: series, fault, input device (switch), output device (bulb), types of switch: clicker switch, toggle switch, conductor</p>
<p>Year 5</p>	<p>Rock and Roll <u>Structure</u></p> <p>Who: What doing: cutting, sticking, adhering, joining, fixing, marking out, measuring, reinforce When: Where: What: scissors, glue, cardboard, net Description: stable, Other: Computer aided design (CAD), net, height, width, breadth</p>	<p>Water of life <u>Mechanical Systems</u></p> <p>Who: John Wolfe Barry (Tower Bridge engineer) What doing: rotating, turning, adhering, joining, measuring, finishing, When: Where: What: pulley, gear, driver, motor, circuit, handle, belt, spindle Description: Other: pulleys and gears</p>	<p>Battles, Blackout and Blitz <u>Cooking and Nutrition</u></p> <p>Who: What doing: chopping, cutting, slicing, grating, kneading, stirring, mixing, whisking, pouring, folding, beating, rolling, sprinkling When: WW2 Where: UK What: ingredients, knife, chopping board, plate, bowls, hob, cooker/ oven, trays, Description: soft, crunchy, sticky, smooth, sharp, crisp, sour, sweet, healthy, unhealthy, greasy, fresh, edible/ inedible, processed</p>



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			Other: savoury, fat, sugar, carbohydrate, protein, nutrients, vitamins, nutrition, allergy, intolerance, seasonality, harvested, hygienic, budget
Year 6	<p>Groovy Greeks <u>Cooking and Nutrition</u></p> <p>Who: Jamie Oliver (healthy meals) What doing: chopping, cutting, slicing, grating, kneading, stirring, mixing, whisking, pouring, folding, beating, rolling, sprinkling When: Where: What: ingredients, knife, chopping board, plate, bowls, hob, cooker/ oven, trays, Description: soft, crunchy, sticky, smooth, sharp, crisp, sour, sweet, healthy, unhealthy, greasy, fresh, edible/ inedible, processed Other: savoury, fat, sugar, carbohydrate, protein, nutrients, vitamins, nutrition, allergy, intolerance, seasonality, harvested, hygienic</p>	<p>Peaks and Falls <u>Textiles</u></p> <p>Who: Gideon Sundback (zipper), George De Mestral (Velcro), hiker/ traveller/ backpacker What doing: cutting, joining, connecting, assembling, finishing, sewing, stitching When: Where: What: claps, Velcro, zip, button, hook and eye, press stud, thread, needle, fabric Description: durable, strong, secure Other: running stitch, back stitch, blanket stitch</p>	<p>Protect our planet <u>Electrical Systems</u></p> <p>Who: Greta Thunberg What doing: cutting, joining, connecting, assembling, finishing, programming, When: Where: What: circuit, types of switch, battery, battery holder, crocodile clip, wire, Description: Other: insulator, conductor, input device, output device, series circuit, parallel circuit, program, system,</p>