

Design and Technology

Nursery	<p><b>End points</b></p> <ul style="list-style-type: none"> <li>• Have an awareness of safety and manage their own risks</li> <li>• Write recognisable marks and letters</li> <li>• Develop their small motor skills so they can use a range of tools safely and confidently.</li> <li>• Begin to construct, stacking blocks vertically, and horizontally, making enclosures and creating spaces.</li> <li>• Explore what happens when they mix colours</li> </ul>		
	<p>Suggested Themes- Autumn</p> <p>Routines, All about me, Autumn, Halloween. Diwali, Bonfire night, Christmas/ Winter</p> <p>Texts: Boo Hoo Baby, A dark, dark, tale, The Gingerbread man</p> <p>Brown bear, Brown Bear, The Tiger who came to tea, Dear Zoo</p> <p>Where's Spot, Owl Babies, Wow said the owl, Peace at last, Can't you sleep little bear, Whatever next, I went for a walk one day, We're going on a leaf hunt</p> <p>Concepts:</p> <p>Mark making around the learning environment using a variety of large and small writing implements to promote gross and fine motor skills – talk about what they have made</p> <p>Mark making to be encouraged vertically / horizontally / underneath things – use of different materials to mark make on such as tin foil/ cling film / stone / bark etc</p> <p>Experiment with blocks, colours and marks</p>	<p>Suggested Themes- Spring</p> <p>Winter, Valentines Day, Chinese New year Tasting Chinese food / pancakes, Spring/Farms/Traditional tales/Easter</p> <p>Mother's day/ hatching chicks</p> <p>Texts: We're going on a bear hunt, Polar Bear, Polar bear, Penguin</p> <p>Old MacDonald, The little Red Hen, Goldilocks and the 3 bears</p> <p>The three little Billy Goats Gruff, The Three little pigs, I went to visit a farm one day</p> <p>Concepts:</p> <p>To be able to experiment with a wide range of equipment, learning some degree of control.</p> <p>Use different construction materials</p>	<p>Suggested Themes- Summer</p> <p>Growing / Eid /Growing butterflies</p> <p>M Minibeasts/ Summer</p> <p>Texts: The hungry Caterpillar, The very busy spider, Jack and the Beanstalk</p> <p>Jasper's Beanstalk, The enormous turnip</p> <p>Concepts:</p> <p>Pencil grip should be comfortable and writing recognisable letters with good control and formation</p> <p>Continue to develop gross and fine motor skills. Use one-handed tools and equipment. Choose the correct resources to carry out their own plan.</p> <p>Collaborate with others to manage large items.</p> <p>Join construction pieces together to build and balance</p>
Reception	<p><b>End points</b></p> <ul style="list-style-type: none"> <li>• Hold a pencil effectively in preparation for fluent writing –using the tripod grip in almost all cases;</li> <li>• Use a range of small tools, including scissors, paint brushes and cutlery;</li> <li>• Begin to show accuracy and care when drawing.</li> <li>• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; -</li> <li>• Share their creations, explaining the process they have used</li> </ul>		
	<p>Suggested Themes/NC- Autumn</p> <p><b>Theme:</b> Settling in / Us /Autumn/ Festivals/Nocturnal/Where in the world</p> <p><b>Texts:</b> Ruby's Worries', The Colour Monster, Leaf Man, Brown Bear</p> <p>Brown Bear What Do You See?, Goldilocks and the 3 Bears, The Gingerbread Man, Hickory Dickory Dock, Owl Babies, The Story of Rita and Sita, Winnie the Witch, Peppa Pig and The Lost Christmas List, Room on the Broom</p> <p>Concepts:</p> <p>Use of malleable resources to help develop squeezing / pinching movements</p> <p>Tools that promote pinching movement (pipettes/tweezers)</p> <p>Starting to show preference for dominant hand</p>	<p>Suggested Themes/NC- Spring</p> <p><b>Theme:</b> Winter/Festivals/bears /growing/planting/</p> <p><b>Texts:</b> The Great Race, The 3 Billy Goats Gruff, The Legend of Nian, We're Going on a Bear Hunt, The Polar Bear and the Snow Cloud, Humpty Dumpty, Jack and Jill, The 3 Little Pigs, Jaspers Beanstalk, Mr Wolf's Pancakes, Mabel's Magical Garden, What The Ladybird Heard, The Easter story</p> <p>Pencil control and grip – use of fine motor skills – develop fine motor skills</p> <p>Concepts:</p> <p>Letter formation - starting to form recognisable letters</p> <p>Handles tools, objects, construction and malleable materials with increasing control</p>	<p>Suggested Themes/NC- Summer</p> <p><b>Theme:</b> Traditional stories/Festivals / transition/minibeasts</p> <p><b>Texts:</b> Little Red Riding Hood, Incy Wincy Spider, Grand Old Duke of York, The Hungary Caterpillar, Spinderella, Superworm, Supertato, Life Cycle of a Butterfly, Mad about Minibeasts</p> <p>Concepts:</p> <p>Forms recognisable letters and most are correctly formed with a good pencil grip</p> <p>Can use small tools efficiently and accurately</p> <p>Still life art work to promote accuracy and care</p> <p>Use of hammers to create prints with flowers /outside nature</p> <p>Water colours / textured paint with sand or mud etc</p> <p>Fine brushes / colour mixing</p>

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<p>Lots of opportunities for mark making with different resources Use tools to effect changes on materials</p> <p>Junk modelling – chn can label what they have made and display for others to see Story sacks / props / materials / boxes readily available to use in role play / retelling of stories</p> <p>Use of clay and playdough explore adding water / cutting with scissors Block printing patterns Large brushes/brooms/rollers</p>	<p>Pencil grip – hold pencil effectively with a comfortable grip</p> <p>Junk modelling – record videos of each other talking about what they have made and how – display their products in the classroom Story sacks / props / materials / boxes readily available to use in role play / retelling of stories Printing with bubbles / bubble painting Use of oil pastels / chalk to create different textures Nature brushes – how to create different textures with natural materials in the outside environment</p>	
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KS1

**Underpinning subject context Yr1**

**Conditions for learning (CL):** Curiosity about how things are made and how they work, observation, imagination, application, persistence, patience, safety using tools for cutting and sticking, collaboration, communication

**Learning for Social Mobility (LSM):** Knowledge of manufacturing of a single item to mass production,

**Learning for Spirituality (LS):** Focus on how we feel about our end products

**Learning for morality/character/values (LMCV):**

**Learning for Knowledge acquisition (LKA):**

**Learning for Language (LL):** Develop subject specific vocabulary - design, make, construct, craft, combine, evaluate, test, structure, materials, tools, product, quality, quantity

Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Theme/ Concept (NC)	Theme/ Concept (NC)	<b>Theme:</b> Rags to Riches		<b>Theme:</b> From the city to the seaside	
	<p><b>Theme:</b> Think Big <b>Texts:</b> Once There Were Giants by Martin Wadell, Giants by Mij Kelly, The Enormous Turnip, Finn MacCool and the Giant’s Causeway, The Smartest Giant in Town by Julia Donaldson, Greta and the Giants by Zoe Tucker <b>Text type:</b> Narrative</p> <p><b>Concept:</b> Structure (linked to Art - sculptures) Learn about the properties of a variety of materials and techniques used to create and maintain form. Use this knowledge to make sculptures. Evaluate the end products – did they stand/balance as intended?</p>	<p><b>Theme:</b> Into the Woods <b>Texts:</b> Little Red Riding Hood, Hansel &amp; Gretel, Into the Woods by Anthony Browne, The Deep Dark Wood by Algy Craig Hall <b>Text type:</b> Narrative</p> <p><b>Concept:</b> Wooden products Observe the design and make process: how a crafts person can make a rustic bench from a tree trunk. Learn about tools and techniques for shaping and joining wood. Learn how to safely use a hack saw to cut a piece of balsa wood.</p> <p>Structure/shelters (linked to RE) Design, make and evaluate a range of shelters using simple materials e.g. balance twigs/branches, fasten with string/twine and cover with sheets of fabric (plus Den Building, if possible).</p>	<p><b>Text:</b> : Sleeping Beauty, The Paper Bag Princess, Castle Poems, Jack and the Beanstalk, The Very Last Castle <b>Text type:</b> Narrative and Poetry</p> <p><b>Concepts:</b> Food technology Evaluate a range of produce. Design, make and evaluate a ‘three bean salad’.</p>	<p><b>Concepts:</b> To name and understand the functions of different parts of a castle. To learn about differences in design, through making and evaluating different types of functional/moving parts of a castle e.g. hinges, pulleys.  Know how stone is obtained through quarrying. How stone can be shaped using tools e.g. building blocks and ornamental parts of a castle. Know how bricks are made from clay. How they can be made into different colours. Mass production of bricks.</p>	<p><b>Text:</b> Nana in the City by Lauren Castillo, What if...? By Anthony Browne, Dick Whittington. The Snail and the Whale, The Lighthouse Keeper’s Lunch <b>Text type:</b> Narrative <b>Concepts:</b>  N/A</p>	

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**Underpinning subject context Yr2**

Conditions for learning (CL): working as pairs/small groups/developing collaborative working

Learning for Social Mobility (LSM): developing ability to evaluate objectively

Learning for Spirituality (LS): learning to persevere

Learning for morality/character/values (LMCV): developing evaluation and how we feel about our work

Learning for Knowledge acquisition (LKA): development of basic skills

Learning for Language (LL): vocabulary associated with the skills and the parts of construction e.g. joints/fold/bend etc

Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<b>Theme: From Bugs to Beasts!</b>		<b>Theme: Food of the Gods</b>		<b>Theme: The Greatest Show</b>	
	<p>Texts: The Very Hungry Caterpillar by Eric Carle Expert packs about fruit. The Bog Baby by Jeanne Willis and Gwen Millward</p> <p>Concept: Understanding where food comes from (fruits and vegetables)</p>	<p>Texts: Gorilla by Anthony Browne The Spider and the Fly by Tony DiTerlizzi Zerraffa Giraffa by Dianne Hofmeyr and Jane Ray</p> <p>Concept: Developing, planning and communicating ideas-Zerraffa Giraffa-design only</p>	<p>Texts: The Glassmaker's Daughter by Dianne Hofmeyr The Dragon Machine Chocolate: from bean to bar. by Anita Ganeri A chocolate bar by Sarah Ridley Expert pack about the manufacturing of chocolate Chocolate: A sweet history by Sandra Markle Ideas box: Chocolate by Jillian Powell</p> <p>Concept: Understanding where food comes from (cacao beans)</p> <p>Developing cutting skills Assembling, joining and combining materials Evaluating work-Making Toys Developing, planning and communicating ideas-The Dragon Machine</p>	<p>Texts: Charlie and the Chocolate Factory by Roald Dahl</p> <p>Concept: Explore and evaluate existing products (various chocolate bars) Design, make and evaluate an appealing product (individual chocolates)-making chocolates</p>	<p>Texts: Ahmed and the Feather Girl by Jane Ray Peter Spier's 'Circus!'</p> <p>Concept: Using instructions- Making a circus rider</p>	<p>Texts: Leon and the Place Between by Angela McAllister</p> <p>Concept: Creating ideas Constructing Evaluating Working collaboratively-Making a Big Top Tent</p>

**Underpinning subject context Yr3**

Conditions for learning (CL): Emphasis on collaboration and teamwork; design as a group effort.

Learning for Social Mobility (LSM): Experiencing new foodstuffs- unfamiliar sandwich ingredients, influential individuals in design, the windmill and its uses

Learning for Spirituality (LS): Encouraging analysis of own ideas and opinions about products, considering the impact of design on others

Learning for morality/character/values (LMCV): Food poverty, diversity in Highfields, environmental awareness

Learning for Knowledge acquisition (LKA): Continuing learning about food and its production (healthy eating), repeated steps of the design process

Learning for Language (LL): Subject specific use of familiar terms, e.g. evaluate, and key terms for the subject such as design brief, design criteria. Detailed and specific language; explaining thinking clearly both orally and in writing.

Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Theme/ Concept (NC)	Theme/ Concept (NC)	Theme/ Concept (NC)	Theme/ Concept (NC)	Theme/ Concept (NC)	Theme/ Concept (NC)
	<p><b>Theme:</b> Building a Civilisation <b>Text:</b> Black Dog The Tear Thief <b>Concept:</b></p>	<p><b>Theme:</b> Our Community- Highfields <b>Text:</b> Alice in Wonderland</p>	<p><b>Theme:</b> Latin and Londinium <b>Text:</b> Escape from Pompeii Roman Villas</p>	<p><b>Theme:</b> Environment: World in danger <b>Text:</b> The Great Kapok Tree <b>Concept:</b></p>	<p><b>Theme:</b> Navigating Our World <b>Text:</b> Treasure Island <b>Concept:</b></p>	<p><b>Theme:</b> Medieval Leicester <b>Text:</b> King Arthur <b>Concept:</b></p>

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N/A Art term	Food: healthy eating/ making designing a dish- sandwiches for the Mad Hatter’s Tea Party <b>Concepts:</b> - Understand how key events and individuals in design and technology have helped shape the world - 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 - 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 Gimson - Understand and apply the principles of a healthy and varied diet sandwich - Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques	<b>Concept:</b> - Select from and use a wider range of tools and equipment to perform practical tasks - 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 their ideas and products against their own design criteria and consider the views of others to improve their work - Apply their understanding of how to strengthen, stiffen and reinforce more complex structures - Understand and use mechanical systems in their products (pulleys) - Generate, develop, model and communicate their ideas through computer-aided design: TinkerCAD	- Select from and use a wider range of materials and components, including construction materials and textiles according to their functional properties and aesthetic qualities (Eco-friendly alternatives to plastic)	- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed (What can be grown on Treasure Island?) -Select from and use a wider range of tools and equipment to perform practical tasks (Setting up a shelter in a shipwreck) - Select from and use a wider range of materials and components, including construction materials and textiles according to their functional properties and aesthetic qualities (Setting up a shelter in a shipwreck)	Understand how key events and individuals in design and technology have helped shape the world (What was the impact of the invention of the windmill, and how do they work?)
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**Underpinning subject context Yr4**  
**Conditions for learning (CL):** Emphasis on collaboration and teamwork; design as a group effort.  
**Learning for Social Mobility (LSM):** Experiencing new foodstuffs- Greek pitta breads, exploring the development of electric lighting and famous designers in lamps  
**Learning for Spirituality (LS):** Representing diversity, encouraging analysis of own ideas and opinions about products, considering the impact of design on others  
**Learning for morality/character/values (LMCV):** Inclusion and diversity- lamp project, contributions of individuals from the Islamic Golden Age  
**Learning for Knowledge acquisition (LKA):** Continuing learning about food and its production (seasonality), applying knowledge of circuits, repeated steps of the design process  
**Learning for Language (LL):** Subject specific use of familiar terms, e.g. evaluate, and key terms for the subject such as design brief, design criteria. Detailed and specific language; explaining thinking clearly both orally and in writing.

Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Theme/ Concept (NC)	Theme/ Concept (NC)	Theme/ Concept (NC)	Theme/ Concept (NC)	Theme/ Concept (NC)	Theme/ Concept (NC)
	<b>Theme:</b> Anglo-Saxons and Vikings <b>Text:</b> Sir Gawain and the Green Knight <b>Context:</b> The Anglo-Saxon diet Understand seasonality, and	<b>Theme:</b> Ancient Greece <b>Text:</b> The Iliad <b>Context:</b> Pitta-bread pizzas	<b>Theme:</b> Antarctica <b>Text:</b> Shackleton’s Journey <b>Context:</b>  N/A	<b>Theme:</b> The Age of Enlightenment <b>Text:</b> Frankenstein’s Monster <b>Context:</b> Lamps  Important individuals in design- Thomas Edison and lightbulbs	<b>Theme:</b> Ancient Baghdad <b>Text:</b> The Breadwinner <b>Context:</b> Cam toys- Al Jazari, Islamic golden age  Evaluate work using feedback from others	

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know where and how a variety of ingredients are grown, reared, caught and processed	<p>Understand and apply the principles of a healthy and varied diet</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>use research and develop design criteria to inform their design generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams,</p> <p>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>		<p>Understand and use electrical systems in their products- lamp</p> <p>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</p> <p>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>	Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
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**Underpinning subject context Yr5**

**Conditions for learning (CL):** Oracy, group work with allocated role work, analysing current works, feedback opportunities, trial and error.

**Learning for Social Mobility (LSM):** Creator of water pumps, visits from local marketing companies, collaboration with group work.

**Learning for Spirituality (LS):** Building resilience through trial and error and multistep crafting, design and creativity based on personal ideas.

**Learning for morality/character/values (LMCV):** Turn taking, role allocations based on strengths, constructive peer feedback, resilience building and decision making.

**Learning for Knowledge acquisition (LKA):** Continuing learning about food and its production, , repeated steps of the design process

**Learning for Language (LL):** Subject specific use of familiar terms, e.g. evaluate, and key terms for the subject such as design brief, design criteria. Detailed and specific language; explaining thinking clearly both orally and in writing.

Year 5	Autumn 1 Theme/ Concept (NC)	Autumn 2 Theme/ Concept (NC)	Spring 1 Theme/ Concept (NC)	Spring 2 Theme/ Concept (NC)	Summer 1 and 2 Theme/ Concept (NC)
	<p><b>Theme:</b> N/A <b>Text:</b> Floodland <b>Concept:</b> Analyse a range of existing products (water pumps)</p> <p><b>NC objectives</b> Investigate and analyse a range of existing products. · Understand how key events and individuals in design and technology have helped shape the world.</p>	<p><b>Theme:</b> N/A <b>Text:</b> The Odyssey <b>Concept:</b> Understanding how individuals in design help shape the world.</p> <p>Investigate and analyse a range of existing products</p> <p>Designing an innovative and appealing product.</p> <p>Considering the views of others to evaluate my ideas.</p> <p><b>NC objectives</b> Use research and develop design criteria to inform the design of</p>	<p><b>Theme:</b> N/A <b>Text:</b> Richard III <b>Concept:</b> N/A – Art based term.</p>	<p><b>Theme:</b> N/A <b>Text:</b> The Tempest <b>Concept:</b> Make a mechanical system (pulley) within a product.</p> <p><b>NC objectives</b> Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p>	<p><b>Theme:</b> N/A <b>Text:</b> Rogue Male <b>Concept:</b> Investigate and analyse a range of existing products (tents)</p> <p>Create an appropriate design criteria for a product.</p> <p>Using a range of materials to create a functional tent structure.</p> <p>Performing practical tasks, such as cutting and shaping, to complete my final product.</p> <p><b>NC objectives</b> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Investigate and analyse a range of existing products</p>

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	innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. · Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. · Investigate and analyse a range of existing products. · Understand how key events and individuals in design and technology ·		Understand how key events and individuals in design and technology have helped shape the world. Select from and use a wider range of materials and components, including construction materials	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  Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately  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
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**Underpinning subject context Yr6**  
**Conditions for learning (CL):** Oracy, group work with allocated role work, analysing current works, feedback opportunities, trial and error.  
**Learning for Social Mobility (LSM):** Key individuals in design: bridges  
**Learning for Spirituality (LS):** Building resilience through trial and error. Teamwork  
**Learning for morality/character/values (LMCV):** Turn taking, role allocations based on strengths, constructive peer feedback, resilience building and decision making.  
**Learning for Knowledge acquisition (LKA):** Bridges and reinforcing structures. CAD  
**Learning for Language (LL):** Subject specific use of familiar terms, e.g. evaluate, and key terms for the subject such as design brief, design criteria. Detailed and specific language; explaining thinking clearly both orally and in writing.

<b>Year 6</b>	Autumn	Spring	Summer
	<b>Theme:</b> Victorian England <b>Text:</b> Great Expectation Writing text type: Wills/ Biography/ Instructional writing <b>Concept</b> <ul style="list-style-type: none"><li>Understanding the different types of bridges</li><li>Analysing famous bridges</li><li>Designing a bridge according to a brief</li><li>Assembling a bridge using various components</li></ul>	<b>Theme:</b> Partition of India <b>Text:</b> Ahimasa <b>Writing text type:</b> Intelligence report/Setting description <b>Concept::</b> <ul style="list-style-type: none"><li>Researching features of Indo-Saracenic architecture</li><li>Designing computer-aided models of Indo-saracenic architecture</li></ul>	<b>Theme:</b> Nature <b>Text:</b> Lord of the Flies <b>Writing text type:</b> Narrative /Persuasive letter /Psychiatric report/Leaflet <b>Concept:</b> <ul style="list-style-type: none"><li>Applying their knowledge of strengthening, stiffening and reinforcing to design, make and evaluate structures (bridges)</li><li>Designing masks and planning a fair test to evaluate different models</li></ul>