

# YR-6 Design & Technology Knowledge, Skills & Vocabulary Overview



## Overview



Term	Click the links >>>	Reception	<a href="#">Y1</a>	<a href="#">Y2</a>	<a href="#">Y3</a>	<a href="#">Y4</a>	<a href="#">Y5</a>	<a href="#">Y6</a>
Autumn	Topic Title	<b>Celebrations</b>	<b>Seasonal Stockings</b>	<b>Perfect Puppets</b>	<b>Luminous Lamps</b>	<b>Perfect Pies</b>	<b>Perfect Pencil cases</b>	<b>Terrific Tote Bags</b>
	Area of DT	Food and Nutrition	Textiles	Textiles	Electronics	Food and Nutrition	Textiles	Textiles
	Final Product	Fruit Kebabs	Christmas Stocking	Puppet	Night Lights	Perfect Pies	Re-useable case	Tote Bags
Spring	Topic Title	<b>The World &amp; Beyond</b>	<b>Marvellous Moving Pictures</b>	<b>Pleasant Pizzas</b>	<b>Party Hats</b>	<b>Spring Decorations</b>	<b>Brilliant Bridges</b>	<b>Amazing Alarms</b>
	Area of DT	Construction	Construction	Food and Nutrition	Textiles	Textiles	Construction	Electronics
	Final Product	Transport with reusable materials	Moving Pictures on a canvas	Pizza	Party Hats	Christmas decoration	Freestanding Bridge	Cars with alarm circuit.
Summer	Topic Title	<b>Mini-beasts</b>	<b>Fabulous Fruit and Vegetables</b>	<b>Vibrant Vehicle</b>	<b>Moving Monsters</b>	<b>Glorious Greenhouses</b>	<b>Fantastic Fairgrounds</b>	<b>Burgers from Around the World</b>
	Area of DT	Mechanisms	Food and Nutrition	Construction	Mechanisms	Construction	Mechanisms	Food and Nutrition
	Final Product	Moving mini-beasts	Smoothies	Car model	Pneumatics toy	Greenhouse structure	Fairground ride with pulleys.	Burgers



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**Year One**

YEAR ONE		Seasonal Stockings	Marvellous Moving Pictures	Fabulous Fruit and Vegetables
Area of DT		Textiles	Construction	Food
Outcome		Christmas Stocking	Moving Pictures on a canvas	Smoothies
Term		Autumn 2	Spring 2	Summer 2
Contextual knowledge		<ul style="list-style-type: none"> <li>Understand why stockings remain popular around Christmas time.</li> <li>Recognise a range of fabrics that can be used to create their stocking.</li> </ul>	<ul style="list-style-type: none"> <li>Understand how moving pictures/ storybooks have developed</li> <li>Identify the different styles of pop –ups that can be used.</li> <li>Understand the reason they are making a Pop-Up Book.</li> </ul>	<ul style="list-style-type: none"> <li>Understand the need for a variety of foods in a diet.</li> <li>Understand how having a healthy balanced diet is important</li> <li>Understand what products are already available</li> </ul>
DESIGNER			Lothar Meggendorfer- Known as the father of the Pop- Up Book. He was the first creator of the Pop- Up book.	Innocent Smoothie Company – Discuss a range of their smoothies and how they make it a healthy snack.
Repeated skills	Design	1.Select materials from a limited range that will meet the design criteria 2. Colour fabrics using a range of techniques e.g fabric paints, printing, and painting. 3. Cut along lines, straight and curved.	1. Select materials from a limited range that will meet the design criteria 2. Use drawings to record ideas as they are developed ad talk about them 3. Talk about how structures can be made stronger 4. Use a range of materials to create models	1. Develop a food vocabulary using taste, smell, textures and feel. 2. Group familiar food products e.g. fruit and vegetable's 3.Work safely and hygienically 4. Work with an adult to make food following a simple recipe. 5. Cut, peel, grate, chop a range of ingredients.
	Evaluate	4.Discuss their work as it progresses 5. Say what they like and don't like about items they have made and attempt to say why. 6.Talk about changes made during the making process	5. Discuss their work as it progresses 6. Say what they like and don't like about items they have made and attempt to say why. 7. Talk about changes made during the making process	6. Discuss their work as it progresses 7. Say what they like and don't like about items they have made and attempt to say why. 8. Talk about changes made during the making process
Key vocabulary		materials needle fabric over running stitch stocking under	card construction join lever movement pivot slider	blend chop diet fruit grow nutritious ingredients label mix plant salad smoothie taste vegetables vitamins



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Year Two

YEAR 2		Perfect Puppets	Pleasant Pizzas	Vibrant Vehicle
Area of DT		Textiles	Food	Construction
Outcome		Puppet	Pizza	Car model
Term		Autumn 2	Summer 2	Spring 2
Contextual knowledge		<ul style="list-style-type: none"> <li>Understand why puppet have remained a popular toy.</li> <li>Recognise where puppets will be used within people's daily lives e.g. shows, to tell a story etc.</li> <li>Recognise a range of fabrics that can be used to create their puppet.</li> </ul>	<ul style="list-style-type: none"> <li>Understand the need for a variety of foods in a diet.</li> <li>Understand how having a healthy balanced diet is important</li> <li>Understand what products are already available</li> </ul>	<ul style="list-style-type: none"> <li>Understand how cars have developed since they were first invented</li> <li>Understand the impact vehicles have had on the lives of people in terms of travel.</li> <li>Identify different styles of cars and explain why they have chosen that style for their design</li> </ul>
DESIGNER		Jim Herton/ Frank Oz- Creator of the 'Muppets' and voice over.	Pizza Express: Discuss what they use to make their Pizzas. Look at menus from Pizza Express to explore toppings. Where do ingredients come from?	Karl Benz- first car design and made by him. Look at how people have used his invention and adapted it.
Repeated skills	Design	<ol style="list-style-type: none"> <li>Use pictures and words to convey what they are going to design and make</li> <li>Describe their models and drawings of ideas and intentions.</li> <li>Add notes to drawings to help explanations.</li> <li>Produce a mock up with kits/reclaimed materials or ICT.</li> <li>Design a product from a detailed design criterion.</li> </ol>	<ol style="list-style-type: none"> <li>Use pictures and words to convey what they are going to design and make</li> <li>Describe their models and drawings of ideas and intentions.</li> <li>Add notes to drawings to help explanations.</li> <li>Produce a mock up with kits/reclaimed materials or ICT.</li> <li>Design a product from a detailed design criterion.</li> </ol>	<ol style="list-style-type: none"> <li>Select appropriate technique explaining first.... Next.... Last.</li> <li>Add notes to drawings to help explanations.</li> <li>Design a product from a detailed design criterion.</li> </ol>
	Evaluate	<ol style="list-style-type: none"> <li>Talk about their designs as they develop and identify good and bad points</li> </ol>	<ol style="list-style-type: none"> <li>Explore and evaluate a range of existing products.</li> </ol>	<ol style="list-style-type: none"> <li>Explore and evaluate a range of existing products.</li> <li>Discuss how closely their finished product meet their design criteria.</li> </ol>
Key vocabulary		needle thread template woodland puppet fabric cross stitch	animals base carbohydrates crust diet pizza plants protein toppings	axels cardboard chassis design dowel wheels



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**Year Three**

YEAR THREE		Luminous Lamps	Party Hats	Moving Monsters
Area of DT		Electronics	Textiles	Mechanisms
Outcome		Night Lights	Party Hats	Pneumatics toy
Term		Autumn 2	Spring 2	Summer 2
Contextual knowledge		<ul style="list-style-type: none"> <li>Identify existing lamps that are available. Understand how this product has impacted the daily lives of the wider world.</li> </ul>	<ul style="list-style-type: none"> <li>Tote bags are reusable and help us to save the environment. They can be used for a range of things.</li> <li>Bonnie Cashin was the first designer of the tote bag but has been adapted by many over the years.</li> <li>Computer Aided Design is used by many companies to how their designs before making them.</li> </ul>	<ul style="list-style-type: none"> <li>Understand how Pneumatic toys have developed since they were first invented.</li> <li>Understand different ways that you can use pneumatics when creating a toy.                             <ul style="list-style-type: none"> <li>Look at existing toys that are already available.</li> </ul> </li> </ul>
DESIGNER		Thomas Edison – Creator of the first light bulb	Bonnie Cashin first designer of tote bags	John Boyd Dunlop- created pneumatic toy
Repeated skills	Design	<ol style="list-style-type: none"> <li>Draw/ sketch products to help analyse and understand how products are made.</li> <li>Think ahead about the order of their work and decide upon tools and materials</li> <li>Communicate their ideas through discussion and add notes to drawing to help explanations.</li> <li>Design innovative, functional products that are fit for purpose that are aimed at particular individuals or groups.</li> </ol>	<ol style="list-style-type: none"> <li>Draw/ sketch products to help analyse and understand how products are made.</li> <li>Think ahead about the order of their work and decide upon tools and materials</li> <li>Communicate their ideas through discussion and add notes to drawing to help explanations.</li> <li>Design innovative, functional products that are fit for purpose that are aimed at particular individuals or groups</li> </ol>	<ol style="list-style-type: none"> <li>Draw/ sketch products to help analyse and understand how products are made.</li> <li>Think ahead about the order of their work and decide upon tools and materials</li> <li>Communicate their ideas through discussion and add notes to drawing to help explanations.</li> <li>Design innovative, functional products that are fit for purpose that are aimed at particular individuals or groups</li> </ol>
	Evaluate	<ol style="list-style-type: none"> <li>Identify the strengths and weaknesses of their design idea</li> <li>Discuss how closely their finished product meet their design criteria</li> </ol>	<ol style="list-style-type: none"> <li>Identify the strengths and weaknesses of their design idea</li> <li>Discuss how closely their finished product meet their design criteria.</li> </ol>	<ol style="list-style-type: none"> <li>Identify the strengths and weaknesses of their design idea</li> <li>Discuss how closely their finished product meet their design criteria.</li> </ol>
Key vocabulary		alarm circuit design prototype structure	cross stich design fabric materials needle thread	design lever linkages properties pulleys structures



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**Year Four**

YEAR 4		Perfect Pies	Spring Decorations	Glorious Greenhouses
Area of DT		Food and Nutrition	Textiles	Construction
Outcome		Perfect Pies	Christmas decoration	Greenhouse structure
Term		Autumn 2	Autumn 2	Spring 2
<b>Contextual knowledge</b>		<ul style="list-style-type: none"> <li>Look at the existing pies and identify which pies are popular choices and why.</li> <li>Understand the importance of a variety of food within our diet.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss the importance of the product and why they are popular for Christmas.                             <ul style="list-style-type: none"> <li>Where are decorations available to purchase?</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Discuss how greenhouses have impacted the lives of the wider world.</li> <li>Identify the materials used to create a greenhouse.</li> </ul>
<b>DESIGNER</b>		Pukka Pies- investigate the different pies they manufacture	Hans Greiner- creator of the first Christmas decorations In Germany.	Charles Lucien Bonaparte- created the first greenhouse
<b>Repeated skills</b>	<b>Design</b>	<ol style="list-style-type: none"> <li>Investigate similar products to the one to be made to produce own design criteria.</li> <li>Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups.</li> <li>Produce annotated sketches</li> </ol>	<ol style="list-style-type: none"> <li>Investigate similar products to the one to be made to produce own design criteria.</li> <li>Propose realistic suggestion as to how they can achieve their design ideas.</li> <li>Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups.</li> <li>Produce annotated sketches</li> </ol>	<ol style="list-style-type: none"> <li>Propose realistic suggestion as to how they can achieve their design ideas.</li> <li>Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups.</li> <li>Produce annotated sketches</li> </ol>
	<b>Evaluate</b>	<ol style="list-style-type: none"> <li>Discuss how well the finished product meets the design criteria and how well it meets the need</li> <li>Evaluate the appearance and usability of their product. Explaining how their design could be improved.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss how well the finished product meets the design criteria and how well it meets the need</li> <li>Evaluate the appearance and usability of their product. Explaining how their design could be improved.</li> </ol>	<ol style="list-style-type: none"> <li>Discuss how well the finished product meets the design criteria and how well it meets the need</li> <li>Evaluate the appearance and usability of their product. Explaining how their design could be improved.</li> </ol>
<b>Key vocabulary</b>		annotate appearance chop cut freshness grate nutritious ingredients portion taste texture	annotate cotton cross stitch design brief fabric fabrics needle straight stitch thread	annotated sketch cellophane computer-aided design craft knife design brief dowel greenhouses plants structure





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**Year Five**

YEAR 5		Perfect Pencil cases	Brilliant Bridges	Fantastic Fairgrounds
Area of DT		Textiles	Construction	Mechanisms
Outcome		Re-useable case	Freestanding Bridge	Fairground ride with pulleys.
Term		Autumn 2	Spring 2	Summer 2
Contextual knowledge		<ul style="list-style-type: none"> <li>Discuss the use of Pencil cases and why they were invented</li> <li>How have pencil cases impacted the lives of people.</li> <li>Discuss how pencil cases are re-suable and sustainable for the environment.</li> </ul>	<ul style="list-style-type: none"> <li>When was London bridge constructed</li> <li>How has the construction of the bridge impacted the lives of those who live in London?</li> <li>What materials were used to ensure the structure was strong.</li> </ul>	<ul style="list-style-type: none"> <li>How do fairgrounds effect the lives of people today?</li> <li>Look into the importance of fairgrounds for the entertainment industry.</li> </ul>
DESIGNER		Verona Pearl Amoth- created the first pencil case.	William Holford and Baron Holford- creators of London Bridge.	Fredrick Savage- inventor whose inventions became the industry for playgrounds.
Repeated skills	Design	<ol style="list-style-type: none"> <li>Sketch and model alterative ideas.</li> <li>Develop one idea in depth.</li> <li>Combine modelling and drawing to refine ideas.</li> </ol>	<ol style="list-style-type: none"> <li>Sketch and model alterative ideas.</li> <li>Develop one idea in depth.</li> <li>Combine modelling and drawing to refine ideas.</li> <li>Use found information to inform decisions</li> </ol>	<ol style="list-style-type: none"> <li>Investigate products/ images to collect ideas and create own design criteria.</li> <li>Sketch and model alterative ideas.</li> <li>Develop one idea in depth</li> </ol>
	Evaluate	<ol style="list-style-type: none"> <li>Identify what does and does not work in the product</li> <li>Make suggestion as how their or others design could be improved.</li> </ol>	<ol style="list-style-type: none"> <li>Identify what does and does not work in the product</li> <li>Make suggestion as how their or others design could be improved.</li> <li>Investigate and analyse a range of existing products.</li> </ol>	<ol style="list-style-type: none"> <li>Make suggestion as how their or others design could be improved.</li> <li>Investigate and analyse a range of existing products.</li> <li>Justify their decisions about materials and methods of construction</li> </ol>
Key vocabulary		annotated sketch blanket stich cotton cross stich design brief existing products fabrics hem needle straight stich thread zigzag stich	beams computer-aided design craft knife pullet system straws structure suspension tape wood	annotate appearance computer-aided design pattern sound

**Year Six**

YEAR 6		Terrific Tote Bags	Amazing Alarms	Burgers from Around the World
Area of DT		Textiles	Electronics	Food and Nutrition
Outcome		Tote Bags	Cars with alarm circuit.	Burgers
Term		Autumn 2	Spring 2	Summer 2
Contextual knowledge		<ul style="list-style-type: none"> <li>Look into how Kites are a re-usable item.</li> <li>They have been around for many years and are still enjoyed by many today. Discuss why they are still popular.</li> <li>How have kites developed over the years.</li> </ul>	<ul style="list-style-type: none"> <li>Show an understanding of how the light bulb changed the wider world.</li> <li>Look into how programming has developed over the years.</li> <li>Understand how lights have developed over the years.</li> </ul>	<ul style="list-style-type: none"> <li>Look at the existing burgers and identify popular choices</li> <li>Understand the importance of a variety of food within our diet.</li> <li>Look into a range of countries for children to decide which country will influence their burger.</li> </ul>
DESIGNER		<ul style="list-style-type: none"> <li>Peter Lynn- Invented the first kite.</li> </ul>	<ul style="list-style-type: none"> <li>Thomas Edison – creator of the first light bulb</li> </ul>	<ul style="list-style-type: none"> <li>Gourmet Burger Kitchen – Look at the range of burgers they sell in their restaurants.</li> </ul>
Repeated skills	Design	<ol style="list-style-type: none"> <li>Investigate products. Images to collect ideas and create own design criteria.</li> <li>Sketch and model alternative ideas.</li> <li>Develop one idea in depth.</li> </ol>	<ol style="list-style-type: none"> <li>Sketch and model alternative ideas.</li> <li>Develop one idea in depth.</li> <li>Make prototypes</li> <li>Design innovative, functional, appealing produces that are fir for purpose that are aimed at particular individuals or groups.</li> </ol>	<ol style="list-style-type: none"> <li>Design innovative, functional, appealing produces that are fir for purpose that are aimed at particular individuals or groups.</li> <li>Combine modelling and drawing to refine ideas.</li> <li>Investigate and analyse a range of existing products</li> </ol>
	Evaluate	<ol style="list-style-type: none"> <li>Make quality products</li> <li>Reflect on their work using their design criteria stating how well the design fits the needs of the user.</li> <li>Make prototypes</li> </ol>	<ol style="list-style-type: none"> <li>Make quality products</li> <li>Make suggestion as how their or others design could be improved.</li> <li>Identify what does and does not work in the product</li> </ol>	<ol style="list-style-type: none"> <li>Make quality products</li> <li>Reflect on their work using their design criteria stating how well the design fits the needs of the user.</li> </ol>
Key vocabulary		appearance challenges cross stitch fabric materials needle pattern purpose stitching straight stitch strength string structure thread zigzag stitch	algorithm annotated sketch bulbs buttons computer-aided design control flow chart monitor motion sensor programmer prototypes research software	annotate appearance chip cook slice nutritious ingredients mix mould portion shape taste texture