

### Key Skills

Design and make high quality prototypes and products for a range of users.  
 Critique, evaluate and test ideas and products.  
 Develop technical and practical expertise to problem solve.  
 Understand the principles of a healthy and varied diet and prepare dishes.

## Heamoor School DT Non-Negotiables

# Heamoor School Non-Negotiables



### DT

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	<b>All year groups will design purposeful and functional products for an authentic audience.</b>						
	<p>Begin to describe and draw what they want to make.</p> <p>Discuss their designs and consider improvements</p>	<p>Use pictures and words to convey what they want to make and design.</p> <p>Use critique to improve upon designs.</p>	<p>Use drawings and notes to record ideas as they are developed.</p> <p>Use peer critique to improve and redraft designs</p>	<p>Plan products with drawings and detailed notes offering a range of designs. Present designs in group contexts.</p> <p>Use peer critique using design vocabulary</p>	<p>Consider different ways in which they can creatively record and share their planning including annotated sketches in group and whole class contexts.</p> <p>Consider audience and product research to peer critique</p>	<p>Develop and communicate ideas using annotated sketches, cross-sectional and exploded diagrams, oral and digital presentations.</p> <p>Use research of products and audience to explore user needs in design and critique.</p>	<p>Develop and communicate ideas using annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces, oral and digital presentations including computer based tools.</p> <p>Use research of products and audience to understand user needs in design and critique.</p>

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Make	All year groups will design AND make purposeful and functional products for an authentic audience.						
	<p>Begin to use basic tools to make products, name them and understand how to use them safely.</p>	<p>To use a range of tools, name them and use them safely.</p>	<p>Select appropriate tools to complete products, name them with accuracy and use them safely.</p>	<p>Think ahead about the order of their work and plan tools and materials needed with guidance. Consider safe use of tools</p>	<p>Think ahead about the order of their work and plan tools and materials needed with independence. Understand safe use of tools</p>	<p>Make choices and decisions using a wider range of tools and equipment to perform practical tasks safely.</p>	<p>Select from and use a wider range of tools and equipment with confidence to perform practical tasks safely and effectively.</p>
	<p>Begin to identify materials to make products based on their designs.</p>	<p>Select and use a range of materials to begin to meet and understand design criteria</p>	<p>Select and use a wide range of materials and components, according to their characteristics to meet design criteria.</p>	<p>Select and use a wide range of materials and components, according to their characteristics explore to meet design criteria, discuss and analyse choices.</p>	<p>Select and use a wide range of materials and components, according to their characteristics to meet design criteria. Begin to evaluate aesthetic qualities.</p>	<p>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 to meet design criteria</p>	<p>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 to successfully meet design criteria.</p>

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Evaluate	All year groups will use peer critique to evaluate products and re-draft as and where appropriate for an authentic audience.						
Will begin to explore a range of products and consider their purpose through discussion.	To explore a range of products and analyse their use.	Explore and evaluate a range of existing products.	Explore an existing range of products and consider how or who might use them.	Evaluate their own and the work of others and consider user needs.	Investigate and analyse a range of existing products and consider how different products meet user needs.	Investigate and analyse a range of existing products and understand how different products meet user needs using a specification.	
Discuss likes and dislikes of a final outcome.	Use design criteria to evaluate their own ideas.	Evaluate their ideas and products against design criteria using peer critique.	Understand how design and technology impacts our daily lives.	Understand the vocabulary within design and technology.	Research individuals in design and technology and 'magpie' ideas.	Understand how key events and individuals in design and technology have helped shape the world.	
Begin to establish design criteria.	Use peer critique to understand how improvements could be made to a product.	Use peer critique to re-draft where appropriate for an authentic audience.	Begin to develop their own design criteria and evaluate their work and that of others.	Use design and technology vocabulary to develop design criteria and peer critique.	Understand user needs and evaluate their own creations and the work of others using design criteria.	Use peer critique to evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	

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<p>Technical Knowledge</p>	<p>Play with a range of materials considering how they feel (soft, hard, flexible)</p> <p>Explore a range of mechanisms in play and begin to establish how they move and work (i.e. move, roll, up and down etc.)</p>	<p>Explore structures considering the materials that have been used and understand why.</p> <p>Begin to understand vocabulary of movement in toys (for example, levers, sliders, wheels and axles)</p>	<p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms (for example, levers, sliders, wheels and axles) in their products.</p>	<p>Design and create small scale structures testing materials for strength. Sketch up can be used in computing.</p> <p>Understand and use cams in design and creation.</p> <p>Understand how electricity is generated and used in a range of products.</p> <p>Understand how computing could be used in design and technology both in design and creation.</p>	<p>Design and create large scale structures testing materials for strength. Sketch up can be used in computing.</p> <p>Understand use, and choose between cams, levers and linkages.</p> <p>Understand and use series and parallel circuits.</p> <p>Understand how programming could be used in design and technology in their products.</p>	<p>Understand how to stiffen and strengthen structures to ensure that they are safe and useable.</p> <p>Understand and use gears and pulleys.</p> <p>Create series circuits using incorporating switches, bulbs, buzzers.</p> <p>Experience programming to control a product.</p>	<p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages).</p> <p>Understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors)</p> <p>Apply their understanding of computing to program, monitor and control their products</p>
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<p>Cooking and Nutrition</p>	<p>Begin to understand the importance of a healthy diet.</p> <p>Begin to identify fruits and vegetables and establish their own likes and dislikes.</p>	<p>To prepare and make healthy snacks.</p> <p>To know and understand how fruits and vegetables are grown.</p>	<p>Use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>Understand where meat comes from and how crops are grown and harvested.</p>	<p>Understand how sugar can affect our bodies and the importance of a healthy diet.</p> <p>Experience the preparation of food considering hygiene and quantities of sugar within a healthy diet.</p> <p>Begin to understand seasonality and explore fruit and vegetables from a range of climates.</p>	<p>Understand how other cultures maintain a healthy diet.</p> <p>Experience preparation of food from other cultures.</p> <p>To explore the origins of meat and understand how it is reared/caught.</p>	<p>Understand the process of creating a healthy dish from origin to consumption (I.E. net to plate)</p> <p>Prepare and cook meals considering hygiene and safety.</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared and caught.</p>	<p>Understand and apply the principles of a healthy and varied diet to create a range of outcomes.</p> <p>Prepare and cook a variety of dishes using a range of cooking techniques from a variety of cultures.</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>
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