

Dane Ghyll Community Primary School Non-Negotiables

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Key Skills
 Design Technology being used effectively in
 the classroom
 Awareness of safety
 How design technology is used in the world
 Basic skills with different tools

Design and Technology

Skills	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Designing	Design for a particular audience. Design mechanisms.	Design packaging. Creating and using design criteria, generating ideas Planning for design and manufacture. Consider purpose of the design process.	Generating and communicating ideas using sketching and modelling, using the views of others to improve their designs Planning for manufacture. Establishing and using design criteria to help focus and evaluate their work. Using design criteria to develop ideas	Exploring and designing within a given context/theme Designing for others and planning production. Developing designs using the views of others to improve them. Using nets and tabs to design.	Planning using storyboards and designs, communicating through words and illustrations. Applying knowledge to generate design ideas. Identifying target audiences. Design arch and truss bridges.	Using recipe books/websites. Experimenting with cams to make suitable design decisions. Generating ideas through sketching and discussion. Modelling ideas through prototypes. Establishing and using a design criteria to help focus and evaluate their work.

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Making	<p>Chopping fruit and vegetables safely.</p> <p>Making a smoothie.</p> <p>Assembling accurately.</p> <p>Creating different movements (up, down, along and around)</p> <p>Assembling different components to work together to create motion</p> <p>Cutting neatly</p> <p>Selecting suitable equipment.</p> <p>Sequencing steps for construction.</p> <p>Adapting Mechanisms.</p> <p>Measuring accurately.</p> <p>Following a design brief.</p> <p>Working to scale.</p> <p>Identifying materials commonly used for</p>	<p>Preparing food safely and hygienically.</p> <p>Chopping safely using the bridge grip.</p> <p>Cutting and assembling accurately.</p> <p>Selecting appropriate equipment and materials.</p> <p>Threading a needle.</p> <p>Sewing a running stitch.</p> <p>Preparing fabrics for sewing.</p> <p>Working to scale and following a design brief.</p>	<p>Following a recipe.</p> <p>Selecting appropriate materials and equipment for functional and aesthetic purposes</p> <p>Using more demanding practical skills (paper engineering/paper folding techniques).</p> <p>Sewing cross stitch and using applique.</p> <p>Using electrostatic energy to move objects in isolation as well as part of a system.</p>	<p>Following but adapting a recipe.</p> <p>Preparing food hygienically.</p> <p>Using a range of materials and equipment to create frame structures.</p> <p>Selecting suitable tools.</p> <p>Creating neatly presented work.</p> <p>Making an electrical circuit.</p> <p>Measuring, marking, cutting and assembling accurately.</p>	<p>Cooking meat safely.</p> <p>Making functional components.</p> <p>Using layers and spacers to construct pages.</p> <p>Cutting and assembling with accuracy.</p> <p>Accurately joining.</p> <p>Make electrical circuits.</p> <p>Selecting materials and equipment according to functional properties.</p> <p>Working with increasing accuracy in practical tasks.</p> <p>Use triangulation for bracing.</p>	<p>Working to a timescale with food (hygienically)</p> <p>Measuring, marking and cutting woodwork accurately.</p> <p>Selecting appropriate equipment.</p> <p>Assembling components accurately.</p> <p>Accurate cutting and joining, using running stitch.</p> <p>Creating something in a given style .</p> <p>Use increasingly more demanding practical skills.</p> <p>Selecting materials for their aesthetic and functional properties.</p>

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	wheels.					Make, strengthen and stiffen a range of structures
Evaluating	<p>Evaluating and adapting designs.</p> <p>Testing a finished product.</p> <p>Reflecting on their finished product</p> <p>Researching and testing mechanisms.</p>	<p>Conducting product research.</p> <p>Carrying out primary research and applying to design.</p> <p>Understand examples of natural & manmade structures.</p> <p>Testing and evaluating products.</p> <p>Discuss the making process and the finished product.</p>	<p>Tasting and evaluating desserts.</p> <p>Assessing how well their product works and if it matches their design.</p> <p>Evaluating as they work.</p> <p>Evaluating their own and other's final product.</p> <p>Compare to designs.</p> <p>Evaluate and adapt designs.</p>	<p>Discuss flavours identified.</p> <p>Discuss existing structures.</p> <p>Researching existing products.</p> <p>Evaluating to improve their work.</p> <p>Testing their final products.</p> <p>Testing products in time trials.</p> <p>Using data to inform evaluations.</p>	<p>Tasting and adapting the dish during cooking process.</p> <p>Constantly evaluating progress against design.</p> <p>Experimenting with circuits to consolidate knowledge of function.</p> <p>Testing function of product.</p> <p>Testing to destruction to evaluate the successful and unsuccessful properties of a design and its materials.</p>	<p>Tasting and evaluating their own food.</p> <p>Checking accuracy of work.</p> <p>Adapting products to improve functionality.</p> <p>Testing finished products.</p> <p>Exploring existing playground structures.</p>

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<p>Technical Knowledge</p>	<p>Describing and grouping fruits by texture and taste.</p> <p>Understanding the difference between fruit and vegetables.</p> <p>Understanding what a mechanism is.</p> <p>Understanding how to create different movements.</p> <p>Developing awareness of different structures for different purposes.</p> <p>Understanding how to turn 2D nets into 3D structures.</p> <p>Understanding what mechanisms are.</p> <p>Knowing the different ways fabric can be joined.</p>	<p>Understanding how fruit and vegetables grow.</p> <p>Knowing the food groups.</p> <p>Understanding what makes a balanced diet.</p> <p>Learning mechanical components.</p> <p>Identifying input and output.</p> <p>Understanding the definition and importance of strength, stability and stiffness.</p> <p>Knowing that different shapes can strengthen or weaken structures and that materials can be manipulated to improve strength</p>	<p>Knowing what foods are in season and when</p> <p>Understanding the benefits of foods by their colour.</p> <p>Knowing how climate alters the sweetness of food.</p> <p>Understanding how pneumatic systems work.</p> <p>Application of prior knowledge and increasing knowledge of nets.</p> <p>Construction of cushions.</p> <p>Understanding that fabrics can be layered for effect.</p> <p>Knowing different</p>	<p>Understanding the costs behind professional food preparation.</p> <p>Understanding the factors that contribute to product design.</p> <p>Building on prior knowledge of net structures and broadening knowledge of frame structures.</p> <p>Knowing that architects consider light, shadow and patterns when designing.</p> <p>Understanding stitches and their benefits.</p> <p>Knowing how to use templates.</p> <p>Know terminology of: insulator,</p>	<p>Know where meat comes from and understand ethical issues around beef.</p> <p>Know nutritional values of packaged food.</p> <p>Understand sliders, levers and linkages</p> <p>Understand structures and mechanisms.</p> <p>Understand constructions methods for 3D shapes.</p> <p>Knowing how to create a hidden seam.</p> <p>Drawing circuit diagrams.</p> <p>Knowing the</p>	<p>Understanding the risks of meat or fish when not cooked or stored properly.</p> <p>Understanding safe storage of meat/fish.</p> <p>Naming types of cam</p> <p>Knowing how cams impacts follower movements.</p> <p>Knowing how to create hidden seams.</p> <p>Creating and using electric circuits in their designs.</p> <p>Knowing how to make electromagnetic motors.</p> <p>Applying knowledge of construction techniques to realise design ideas.</p>

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	<p>Understanding how to prepare fabric for joining.</p> <p>Understanding how an axle works.</p>	<p>and stiffness.</p> <p>Identifying parts of a needle (point and eye).</p> <p>Understand the alternative ways of joining fabrics and embellishments.</p>	<p>stitch types.</p> <p>Understanding what static electricity means and how to generate it.</p> <p>Knowing what a target audience is.</p>	<p>conductor, L.E.D., battery, coin cell batteries and electricity is energy and batteries store electricity.</p> <p>Know Component names (chassis, axle etc.)</p> <p>Understand how car body shape can impact speed (air resistance).</p>	<p>function of different components.</p> <p>Understanding the terminology: insulator, conductor, LED, battery.</p> <p>Understanding the importance of compression and tension in bridge structures.</p>	<p>Stabilising more complex structures using bracing.</p>
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