

Progression of Skills and Learning in Design and Technology With GD

| | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| <p>Design</p> <p><i>Developing, planning and communicating ideas.</i></p> <p>Idea generating</p> <p>Drawing a design</p> <p>Giving a product context</p> <p><i>National Curriculum objectives</i></p> <p><i>KS1 NC – NC explore and evaluate a range of existing products NC design purposeful, functional, appealing products for themselves and other users based on design criteria</i></p> <p><i>KS2 - NC generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</i></p> | <p>Children use what they have learnt about media and materials in original ways, thinking about uses and purposes.</p> <p>Represent their own ideas, thoughts and feelings through a variety of media.</p> <p>Children recognise that a range of technology is used in places such as homes and schools.</p> | <p>Use their own experience to help generate their ideas.</p> <p>Explain how their products will look and work through talking and simple annotated drawings.</p> <p>work in a range of relevant contexts, for example imaginary, story-based, home, school and the local environment.</p> | <p>Use their knowledge of existing products and their own experience to help generate ideas.</p> <p>Explain how their products will look and work through talking, annotated drawings and testing similar products.</p> <p>work in a range of relevant contexts, for example imaginary, story-based, home, school and the local or wider environment.</p> | <p>Use their knowledge of a broad range of existing products to help generate their ideas</p> <p>Use annotated sketches to develop and communicate their ideas. explain how particular parts of their products work.</p> <p>work in a broader range of relevant contexts, for example entertainment, the home, school, leisure or the food industry.</p> | <p>Generate ideas through brainstorming and identify a purpose for their product</p> <p>Use annotated sketches and cross-sectional drawings to develop and communicate their ideas.</p> <p>work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the local or wider environment.</p> | <p>Generate ideas for an item, largely considering its purpose and the user/s</p> <p>Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas. explain how particular parts of their products work.</p> <p>consider the availability of resources when planning out designs.</p> <p>work in a broad range of relevant contexts, for example conservation, the home, school, leisure and culture.</p> | <p>Use their knowledge and in depth research to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market</p> <p>Use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas. explain how particular parts of their products work.</p> <p>consider the availability and costings of resources when planning out designs.</p> <p>work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment.</p> |

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| <p><i>NC evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</i></p> | | | | | | | |
| <p>Make & technical knowledge</p> <p><i>Working with tools, equipment, materials and components to make quality products.</i></p> <p>Selecting tools</p> <p>Handling tools</p> <p>Practical skills</p> <p><i>KS1 NC - design purposeful, functional, appealing products for themselves and other users based on design criteria</i></p> <p><i>KS2 NC - investigate and analyse a range of existing products</i></p> <p><i>NC apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i></p> | <p>Selects resources needed to shape, assemble and join materials they are using. Use simple tools to effect changes to materials.</p> <p>Shows a preference for a dominant hand.</p> <p>Handle tools, objects, construction and malleable materials safely and with increasing control.</p> <p>Handle equipment effectively, including pencils for writing.</p> <p>Understands that different media and materials can be combined to create new effects</p> | <p>begin to select from a range of hand tools and equipment, such as scissors, hole punchers, rulers, graters, zesters, safe knives, juicer,</p> <p>learn to use hand tools and equipment safely and appropriately with adult support where necessary.</p> <p>use a range of construction materials and components including cardboard, textiles and food ingredients with support from an adult.</p> <p>With help, measure and mark out templates for a product.</p> <p>Learn how to cut, shape and score materials. Assemble, join and combine materials.</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> | <p>Select and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Continue to learn, apply and practise using hand tools and equipment safely and appropriately.</p> <p>Use a range of construction materials and components including textiles, food ingredients, cardboard and recycled materials.</p> <p>Measure and mark out templates for a product.</p> <p>Practise and apply skills learnt when cutting, shaping and scoring materials. Assemble, join and combine materials.</p> <p>Learn about mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> | <p>Carefully select from a range of familiar tools and equipment, explaining their choices.</p> <p>Learn to use a range of tools and equipment safely, appropriately and accurately.</p> <p>use a wide range of materials and components, including wood and metal construction materials.</p> <p>Start to measure and mark out to the nearest cm and millimetre.</p> <p>Cut, shape and score materials with some degree of accuracy. Assemble, join and combine materials and components with some degree of accuracy.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> | <p>With growing confidence, select from a wide range of tools and equipment, explaining their choices.</p> <p>Learn to use a range of tools and equipment safely, appropriately and accurately with increasing independence.</p> <p>use a wider range of materials and components, including construction materials, textiles and mechanical components.</p> <p>With growing independence, measure and mark out to the nearest cm and millimetre.</p> <p>cut a range of materials with precision; shape and score materials with precision; assemble, join and combine materials and components.</p> <p>Apply understanding of how to strengthen, stiffen and reinforce</p> | <p>select from a range of tools and components talking accurately about their functional properties.</p> <p>Understand what a risk assessment is and follow agreed health and safety measures as a class.</p> <p>use a wider range of materials and components, including construction materials, textiles and mechanical and electrical components.</p> <p>Independently take mostly accurate measurements and mark out, to within 1 millimetre;</p> <p>cut a range of materials with precision; shape and score materials with precision; assemble, join and combine materials and components and make modifications as they go along.</p> <p>Understand and use mechanical systems in</p> | <p>Independently research and make informed choices when selecting from a wide range of tools.</p> <p>Include individual health and safety risk assessments when planning a product and refer to this when making.</p> <p>use a full range of materials and components confidently, independently selecting which material would be most effective.</p> <p>Independently take exact measurements and mark out, to within 1 millimetre;</p> <p>cut a range of materials with precision; shape and score materials with precision; assemble, join and combine materials and components and make modifications as they go along.</p> |

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| | | | | | more complex structures. | their products [for example, gears, pulleys, cams, levers and linkages]. | Apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. |
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| <p>Textiles</p> <p><i>Selecting and using fabric materials effectively.</i></p> <p><i>KS1 NC evaluate their ideas and products against design criteria NC select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i></p> <p><i>KS2 NC investigate and analyse a range of existing products NC evaluate their ideas and products against their own design criteria and consider the views of others to improve their work NC understand how key events and individuals in design and technology have helped shape the world</i></p> | <p>Experiment and investigate with different materials textures, including sensory experience.</p> | <p>Manipulate fabrics in simple ways to create the desired effect.</p> <p>Begin to use a variety of techniques (e.g. using felt squares, sewing, tie dyeing, weaving, plaiting, wax or oil resist, applique, embroidery and binca).</p> | <p>Cut fabric templates and attach together to create a product.</p> <p>Continue to use and apply skills learnt in a variety of techniques (e.g. sewing, using felt squares, tie dyeing, weaving, plaiting, wax or oil resist, applique, embroidery and binca).</p> <p>Learn how to thread a needle, knot, cut, glue and trim material.</p> | <p>Use a basic running stitch.</p> <p>Develop skills in cutting and joining fabric together.</p> <p>Learn to applique attaching decorations such as buttons, sequins and natural objects.</p> | <p>Join textiles with an appropriate sewing technique, for example running stitch.</p> <p>Refine and apply sewing techniques, joining two layers of fabric together.</p> <p>Colour fabric.</p> <p>Create weavings.</p> | <p>Tape, pin, cut, shape and join fabric with precision.</p> <p>Display awareness of the potential of the uses of material (link to science) while designing and evaluating in sketch books.</p> | <p>Tape, pin, cut, shape and join fabric with precision to make a more complex product.</p> <p>Show precision in techniques.</p> <p>Join fabric in different ways.</p> <p>Choose from a range of stitching techniques.</p> |
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| <p>Cooking and nutrition</p> <p><i>Learning how to cook and applying the principles of nutrition and healthy eating.</i></p> <p>Food hygiene and safety progression</p> <p>Health and nutrition progression</p> <p>Food origins and planting and growing</p> <p>Food preparation and cooking skills</p> <p><i>NC KS1 - explore and evaluate a range of existing products NC design purposeful, functional, appealing products for themselves and other users based on design criteria</i></p> <p><i>NC understand and apply the principles of a healthy and varied diet NC prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</i></p> | <p>Talk about ways to keep healthy and safe.</p> <p>Become increasingly confident managing basic hygiene and personal needs successfully.</p> <p>Understand how to wash hands properly</p> <p>Begin to understand the importance of good health and a healthy diet.</p> <p>Listen and respond to verbal and pictorial instructions while preparing food dishes.</p> | <p>Practise and apply basic hygiene practises.</p> <p>Understand how to wash hands properly and with increasing independence.</p> <p>Understand the basic principles of a healthy and varied diet</p> <p>Understand where food comes from (planting and growing)</p> <p>Start to independently follow a recipe. Prepare ingredients using appropriate cooking utensils.</p> | <p>Gain a deeper understanding of the importance of good personal hygiene.</p> <p>Understand what a balanced plate looks like. Name and sort foods into the five groups.</p> <p>understand that all food comes from plants or animals;</p> <p>Measure and weigh ingredients to the nearest gram and millilitre.</p> | <p>Demonstrate hygienic food preparation and storage (such as storing food effectively and learning about mould and decay)</p> <p>Understand the further principles of a healthy and varied diet (vitamins and minerals in foods)</p> <p>understand where food comes from (food lifecycles – seed to fruit, grain to bread)</p> <p>Prepare food using a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking.</p> | <p>Apply the rules for basic food hygiene and other safe practices</p> <p>Understand different foods impact on muscle and brain performance.</p> <p>start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world.</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> | <p>Understand and risk assess hazards relating to the use of ovens, utensils and kitchen appliances.</p> <p>Read and understand food nutrition labels.</p> <p>Apply understanding of when where and how food is grown when planning and designing food products.</p> <p>Use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven.</p> | <p>Understand national food hygiene regulations (such as best before and use by dates, allergy information and cross contamination.</p> <p>Apply understanding of food nutrition labels in planning and preparing dishes.</p> <p>Know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;</p> <p>Demonstrate how to use a range of cooking techniques, such as baking, grilling and boiling (such as soup in a saucepan, led by an adult)</p> |
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| <i>NC understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</i> | | | | | | | |
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| <p>Working at the expected standard NC objectives</p> <p>(for more specific strand/skill objectives please refer to your skills progression map)</p> | <p><i>Explore and evaluate a range of existing products. Design purposeful, functional, appealing products for themselves and other users based on design criteria.</i></p> | <p><i>Explore and evaluate a range of existing products. Design purposeful, functional, appealing products for themselves and other users based on design criteria.</i></p> | <p><i>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. 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 apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i></p> | <p><i>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. 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 apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i></p> | <p><i>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. 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 apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i></p> | <p><i>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. 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 apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i></p> |
| <p>Working above the expected standard</p> | <p>Display high quality presentation.</p> <p>Identify design problems.</p> | <p>Display high quality presentation.</p> <p>Identify design problems.</p> | <p>Display high quality presentation and precision in their design and make.</p> <p>Identify and solve their own design problems.</p> | <p>Display high quality presentation and precision in their design and make.</p> <p>Identify and solve their own design problems.</p> | <p>Display high quality presentation and precision in their design and make.</p> <p>Identify and solve own design problems and understand how to reformulate problems given to them.</p> | <p>Display high quality presentation and precision in their design and make.</p> <p>Identify and solve their own design problems and understand how to reformulate problems given to them.</p> |

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This document is to support class teachers when making formative and summative assessments of pupil's learning, across all areas of Art.

Each descriptor is intended to guide the teacher in making an accurate judgement. Teachers should provide opportunities by offering a range of resources and materials. Teachers should question and challenge GD artists, lessons will be differentiated and open ended to extended thinking.

Not all criteria must be fulfilled to award 'Greater Depth', but the overall picture for the child must be one of an understanding and ability significantly above and beyond meeting the national curriculum requirements.

See Progression of skills map for more detailed objectives and ideas for teaching each Art strand – drawing, painting, sculpting, designing, collage, printing and digital media.