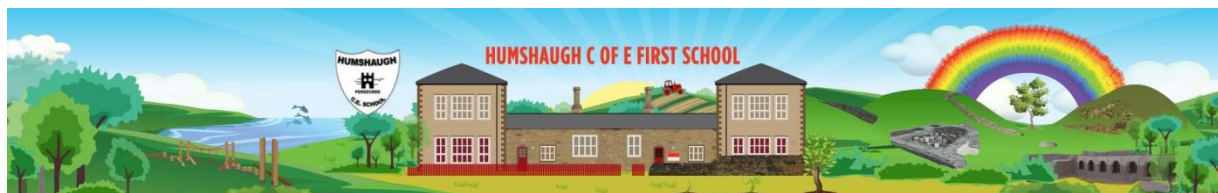


Design Technology Curriculum Progression in Skills



| What will a Humshaugh First School Designer look like? | | |
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| | At the end of Year 2 they will have the following knowledge: | At the end of Year 4 they will begin to have the following knowledge: |
| Being a Designer | <p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:</p> <p>Design -design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>Make -select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] -select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their</p> | <p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:</p> <p>Design -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</p> <p>Make -select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately -select from and use a wider range of materials and components, including</p> |

Design Technology Curriculum Progression in Skills

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| | <p>characteristics</p> <p>Evaluate -explore and evaluate a range of existing products -evaluate their ideas and products against design criteria</p> <p>Technical knowledge -build structures, exploring how they can be made stronger, stiffer and more stable -explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products</p> | <p>construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>Evaluate -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</p> <p>Technical knowledge -apply their understanding of how to strengthen, stiffen and reinforce more complex structures - understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] - understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] -apply their understanding of computing to program, monitor and control their products</p> |
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Progression of key skills from Y1 – 4

| Progression of key skills from Y1 – Y4 | Developing, planning and communicating ideas. | Working with tools, equipment, materials and components to make quality products (inc. food) *Most food related learning takes place during Cookery club sessions) | Evaluating processes and products |
|--|---|---|---|
| End of EYFS linked to ELGs | <p>-Select and use technology for particular purposes</p> <p>-Constructs with a purpose in mind</p> | <p>-Use a variety of resources</p> <p>-Use simple tools and techniques competently and appropriately</p> | <p>-Select appropriate resources and adapt work where necessary</p> <p>-Use what is known about media</p> |

Design Technology Curriculum Progression in Skills

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| | <ul style="list-style-type: none"> -Use what is known about media and materials, thinking about uses and purposes. -Represent ideas, thoughts and feelings through Design Technology (art, design, music, role play and stories) -Understand the importance and need for safety and hygiene when planning to make | <ul style="list-style-type: none"> -Select tools and techniques needed to shape, assemble and join materials -Safely use and explore a variety of tools, materials and techniques -Experiment with colour, texture, design, form and function. -Use simple tools to effect change to materials -Handle tools, objects, materials and construction safely and with increasing control -Practise some appropriate safety measures without direct supervision -Know about the need for safety, consider and manage some risks when preparing food -Know about the importance of hygiene when dealing with food. | <ul style="list-style-type: none"> and materials and its uses and purposes to improve work -Express ideas effectively, develop own explanations by connecting own ideas or events -Link statements together and stick to a main theme or intention when talking about design product |
| End of Year 1 | <ul style="list-style-type: none"> - Draw on their own experience to help generate ideas - Suggest ideas and explain what they are going to do - Identify who their design is for - Model their ideas -Talk about how they would improve their idea | <ul style="list-style-type: none"> - Make their design using appropriate techniques -With help measure, mark out, cut and shape a range of materials - Use tools e.g. scissors and a hole punch safely - Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape - Select and use appropriate ingredients, processes and tools | <ul style="list-style-type: none"> - Verbally evaluate their products identifying strengths and possible changes they might make -Talk about their ideas, saying what they like and dislike about them |

Design Technology Curriculum Progression in Skills

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| | | <ul style="list-style-type: none"> - Use basic food handling, hygienic practices and personal hygiene - Use simple finishing techniques to improve the appearance of their product | |
| End of Year 2 | <ul style="list-style-type: none"> -Generate ideas by drawing on their own and other people's experiences as well as knowledge of existing products -Communicate and develop their design ideas through discussion, observation, drawing and modelling -Identify a purpose and create a simple design criteria -Make simple drawings and label parts | <ul style="list-style-type: none"> -Begin to select tools and materials; use vocabulary to name and describe them, and explain choices for use -Measure, cut and score with some accuracy -Use hand tools safely and appropriately -Assemble, join and combine materials and components in order to make a product -Cut, shape and join fabric to make a simple garment. -Use basic sewing techniques -Follow safe procedures for food safety and hygiene -Choose and use appropriate finishing techniques | <ul style="list-style-type: none"> -Evaluate against their design criteria -Evaluate their products as they are developed, identifying strengths and possible changes they might make - Evaluate their product by answering simple questions about the design/make process |
| End of Year 3 | <ul style="list-style-type: none"> -Research and generate ideas for an item, considering its purpose and audience -Identify a purpose and establish criteria for a successful product -Plan the order of their work before starting -Explore, develop and communicate design proposals by modelling ideas | <ul style="list-style-type: none"> -Use tools and techniques for making their product to fit the needs of the task and purpose safely -Measure, mark out, cut, score and assemble components with more accuracy -Work safely and accurately with a range of simple tools -Think about their ideas as they make | <ul style="list-style-type: none"> -Evaluate their product against original design criteria e.g. how well it meets its intended purpose/audience -Evaluate their product by asking and answering questions about the design/make process -Identify strengths and improvements in relation to views of |

Design Technology Curriculum Progression in Skills

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| | (including use of ICT) -Make drawings with labels and annotations when designing | progress and be willing to change things if this helps them improve their work -Measure, tape or pin, cut and join fabric with some accuracy -Demonstrate hygienic food preparation and storage -Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT | the target audience/purpose |
| End of Year 4 | -Research and generate realistic ideas, considering the purpose, ensuring specific design features appeal to the target audience -Make annotated, labelled diagram from different views showing specific features -Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail -Disassemble existing products, evaluate and identify criteria that can be used to inform and improve their own designs | -Use appropriate tools and techniques for making their product in relation to functional properties and requirements safely -Measure, mark out, cut and shape range of materials, using appropriate tools, equipment and techniques -Join and combine materials and components accurately in temporary and permanent ways -Sew using a range of different stitches, weave and knit -Measure, tape or pin, cut and join fabric with some accuracy -Use simple graphical communication techniques | - Evaluate their work both during and at the end of the assignment -Evaluate their products and carrying out appropriate tests |

Design Technology Curriculum Progression in Skills

Concepts in Design Technology

| At the end of Early Years Foundation Stage, the pupils will have developed an understanding of the following concepts in Design Technology: | At the end of Key Stage 1, the pupils will have developed an understanding of the following concepts in Design Technology: | At the end of Lower Key Stage 2, the pupils will have developed an understanding of the following concepts in Design Technology: |
|--|---|--|
| Tools, ideas, safety, design, make, plan, colour, describe, make better, explore, mix, texture, playdough, junk model, construction, build, scissors, glue, sellotape, shape, join, draw, label, healthy, clean, control | Model, generate, explain, target audience, purpose, research, measure, plan, equipment, product, hygiene, technique, evaluate, question, strength, sequence, improve, changes, likes, dislikes, fabric, features, design criteria, finishing techniques, materials, tools | Healthy living, health and safety, designing to a brief, communicating ideas, labelling |