



WILLOW WOOD COMMUNITY PRIMARY SCHOOL

Medium Term Planning

Design Technology

***Statements in bold are taken directly from NC documents. Statements not in bold are skills we think are important for the topic. Key art skills to be taught across all topics and considered when making an assessment judgement include:**

Year 1

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| Aims |
| Use creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts considering their own and other's needs, wants and values. |
| Draw on disciplines such as mathematics, science, engineering, computing and art. |
| Learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. |
| Develop a critical understanding of design and technology and its impact on daily life and the wider world. |
| Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate effectively in an increasingly technological world. |

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| Sock Puppets | Term 1 |
| | Explore and evaluate a range of existing products. |
| | Design purposeful, functional and appealing products for themselves and other users based on design criteria. |
| | Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups, information and ICT. |
| | Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) |
| | Select from and use a wide range of materials and components, including textiles, according to their characteristics. |
| | Be able to cut and join at least 2 different materials safely, using appropriate techniques/tools with some accuracy. |
| | Be able to create & follow a plan for a sock showing the sequence of their work & make it similar to their original design. |
| Evaluate their ideas and products against design criteria. | |

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| Make a model building | Term 2 |
| | Design purposeful, functional and appealing products for themselves and other users based on design criteria. |
| | Be able to make a representation of a historic building, using construction toys or junk materials, following simple instructions |
| | Build structures, exploring how they can be made stronger, stiffer and more stable. |
| | Be able to draw and talk about their plans for their model building. |
| | Explore and use mechanisms e.g. levers, sliders, wheels and axles in their products. |
| | Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) |
| | Select from and use a wide range of materials and components, including textiles, according to their characteristics. |
| | Evaluate their ideas and products against design criteria. |
| Understand how key events and individuals in design and technology have helped shape the world. | |

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| Making Fruit Salad | Term 3 |
| | Design purposeful, functional and appealing products for themselves and other users based on design criteria. |
| | Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups, information and ICT. |
| Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) | |

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| | Select from and use a wide range of materials and components, including textiles, according to their characteristics. |
| | Explore and evaluate a range of existing products. |
| | Know appropriate vocabulary related to fruit & food preparation, raw, cooked, skin, pips, peel, scrape, slice, grate, chop etc. |
| | Evaluate their ideas and products against design criteria. |
| | Use the basic principles of a healthy and varied diet to prepare dishes. |
| | Understand where food comes from. |

Year 2

| Aims |
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| Use creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts considering their own and other's needs, wants and values. |
| Draw on disciplines such as mathematics, science, engineering, computing and art. |
| Learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. |
| Develop a critical understanding of design and technology and its impact on daily life and the wider world. |
| Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate effectively in an increasingly technological world. |

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| Castles | Term 1 |
| | Look at pictures, models & ICT sources to identify the main features of a castle. |
| | Be able to talk about their ideas for making a model castle from junk materials or cardboard. |
| | Design purposeful, functional, appealing products for themselves and other users based on design criteria. |
| | Generate, develop, model and communicate their ideas through talking, drawing and where appropriate ICT. |
| | Select from and use a range of tools and equipment to perform practical tasks eg cutting, shaping, joining and finishing. |
| | Select from and use a wide range of materials and components, including construction materials and textiles according to their characteristics. |
| | Build structures, exploring how they can be made stronger, stiffer and more stable. |
| | Explore and use mechanisms e.g. levers, sliders, wheels and axles in their products. |
| Evaluate their ideas and products against design criteria. | |

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| African Animals | Term 2 |
| | Look at a range of pictures, photographs, videos etc to identify the distinctive features of their chosen animals. |
| | Design purposeful, functional, appealing products based on design criteria. |
| | Generate, develop, model and communicate their ideas through talking, drawing and where appropriate ICT. |
| | Explore and evaluate a range of existing products. |
| | Identify the defining features of their chosen animal and develop ways of representing them using different structures and mechanisms. |
| | Select from and use a range of tools and equipment to perform practical tasks eg cutting, shaping, joining and finishing. |
| | Select from and use a wide range of materials and components, including construction materials and textiles according to their characteristics |
| | Explore and use mechanisms e.g. levers, sliders, wheels and axles in their products. |
| Evaluate their ideas and products against design criteria. | |

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| <i>Making Soup</i> | Term 3 |
| | Design purposeful, functional, appealing products based on design criteria. |
| | Generate, develop, model and communicate their ideas through talking, drawing and where appropriate ICT. |
| | Select from and use a range of tools and equipment to perform practical tasks eg cutting, shaping, joining and finishing. |
| | Select from and use a wide range of materials and components, including construction materials and textiles according to their characteristics |
| | Be able to identify & choose at least 4 different vegetables they would like to put in vegetable soup & talk about their choice |
| | Explore and evaluate a range of existing products. |
| | Know appropriate vocabulary related to vegetables and food preparation, raw, cooked, skin, pips, peel, scrape, slice, grate, chop etc. |
| | Be able to say what they liked/disliked about vegetables Soup, exploring taste, texture, colour and smell, using sensory vocabulary |
| | Evaluate their ideas and products against design criteria. |
| | Make a written plan/diagram showing the sequence of making vegetable soup. |
| | Use the basic principles of a healthy and varied diet to prepare dishes. |
| Understand where food comes from. | |

Year 3

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| Aims |
| Use creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts considering their own and other's needs, wants and values. |
| Draw on disciplines such as mathematics, science, engineering, computing and art. |
| Learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. |
| Develop a critical understanding of design and technology and its impact on daily life and the wider world. |
| Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate effectively in an increasingly technological world. |

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| Shelters (natural vegetation / stone and Iron) | Term 1 |
| | Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. |
| | Identify which parts support and strengthen simple structures. |
| | Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross sectional and exploded diagrams of their designs. |
| | Select from and use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. |
| | Select from and use a wider range of materials and components, including construction materials, textiles etc according to their functional properties and aesthetic qualities. |
| | Investigate and analyse a range of existing products. |
| | Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. |
| | Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. |

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| Pizza Making | Term 2 |
| | Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. |
| | Select from and use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. |
| | Investigate and analyse a range of existing products. |
| | Understand and apply the principles of a healthy and varied diet. |
| | Understand seasonality and know where and how a variety of ingredients are grown, reared caught and processed. |
| | Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | |

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| Roman Shields | Term 3 |
| | Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. |
| | Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross sectional and exploded diagrams of their designs. |
| Select from and use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. | |

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| | Select from and use a wider range of materials and components, including construction materials, textiles etc according to their functional properties and aesthetic qualities. |
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| | Investigate and analyse a range of existing products. |
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| | Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. |
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Year 4

| Aims |
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| Use creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts considering their own and other's needs, wants and values. |
| Draw on disciplines such as mathematics, science, engineering, computing and art. |
| Learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. |
| Develop a critical understanding of design and technology and its impact on daily life and the wider world. |
| Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate effectively in an increasingly technological world. |

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| <i>Indian Food</i> | Term 1 |
| | Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. |
| | Select from and use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. |
| | Be able to identify at least 4 different types of Indian foods. |
| | Investigate and analyse a range of existing products. |
| | Know appropriate vocabulary related to Indian foods including, raw, cooked, skin, pips, peel, scrape, slice, grate, chop etc. |
| | Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. |
| | Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. |
| | Understand seasonality and know where and how a variety of ingredients are grow, reared, caught and processed. |
| Understand and apply the principles of a healthy and varied diet. | |

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| <i>Greek Vases</i> | Term 2 |
| | Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. |
| | Examine pictures of ancient Greek Vases and know that pictures on the vases told of ancient events. |
| | With help, have worked with others to design & make simple clay / papier Mache vases. |
| | Select from a wide range of tools and equipment to perform practical tasks eg cutting, shaping, joining and finishing with accuracy. |
| | Select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities. |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | |

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| <i>Model Lighthouse</i> | Term 3 |
| | Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. |
| | Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design. |
| | Construct with help a model lighthouse with a simple circuit, switch & bulb that lights up. |
| Make their own switch and know how to place it in a circuit to control the bulb, using battery safely | |

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| | Select from a wide range of tools and equipment to perform practical tasks eg cutting, shaping, joining and finishing with accuracy. |
| | Select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities. |
| | Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. |
| | Understand and use electrical systems in their products (series circuits, switches, bulbs etc) |
| | Understand how key events and individuals in design and technology have helped shape the world. |
| | Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. |

Year 5

| Aims |
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| Use creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts considering their own and other's needs, wants and values. |
| Draw on disciplines such as mathematics, science, engineering, computing and art. |
| Learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. |
| Develop a critical understanding of design and technology and its impact on daily life and the wider world. |
| Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate effectively in an increasingly technological world. |

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| <i>Tudor Court Jester / Sceptre</i> | Term 1 |
| | Investigate and analyse a range of existing products. |
| | Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose. |
| | Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design. |
| | Select from and use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. |
| | Select from and use a wider range of materials and components, including textiles according to their functional and aesthetic properties. |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | |

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| <i>Moving Toys (CAMS)</i> | Term 2 |
| | Investigate and analyse a range of existing products. |
| | Understand how key events and individuals in design and technology have helped to shape the world. |
| | Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose. |
| | Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design. |
| | Select from and use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. |
| | Select from and use a wider range of materials and components, including construction materials according to their functional and aesthetic properties. |
| | Understand and use mechanical systems in their products (gears, cams, levers, linkages and pulleys) |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | |

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| <i>Pop-Up Books</i> | Term 3 |
| | Examined a variety of books with pop up or moving parts |
| | Investigate and analyse a range of existing products. |
| Understand how key events and individuals in design and technology have helped to shape the world. | |

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| | Investigate books with pop-up or moving mechanisms and how they work. |
| | Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose. |
| | Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design. |
| | Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. |
| | Select from and use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. |
| | Understand and use mechanical systems in their products (gears, cams, levers, linkages and pulleys) |
| | Select from and use a wider range of materials and components, including construction materials according to their functional and aesthetic properties. |
| | Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. |

Year 6

| Aims |
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| Use creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts considering their own and other's needs, wants and values. |
| Draw on disciplines such as mathematics, science, engineering, computing and art. |
| Learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. |
| Develop a critical understanding of design and technology and its impact on daily life and the wider world. |
| Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate effectively in an increasingly technological world. |

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| Making a Phone Case | Children will: |
| | Investigate and analyse a range of existing products. |
| | Use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose. |
| | Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design. |
| | Select from and use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. |
| | Select from and use a wider range of materials and components, including textiles, according to their functional properties and aesthetic qualities. |
| | Understand how key events and individuals in design and technology have helped shape the world. |
| | Be able to give clear reasons about choosing their design and construction methods |
| Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | |

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| Make a Controlled Vehicle | Children will: |
| | Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. |
| | Generate, develop, model and communicate their ideas through discussion, annotated, sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design. |
| | Investigate and analyse a range of existing products. |
| | Draw an exploded diagram of a vehicle. |
| | Select and safely use a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing) accurately. |
| | Select from and use a wider range of materials and components, including construction materials, textiles etc according to their functional properties and aesthetic qualities. |
| | Understand and use mechanical systems in their products (gears, pulleys, cams, levers and linkages etc) |
| | Understand and use electrical systems in their products (eg series circuits, motors etc) |
| | Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. |
| Apply their understanding of computing to program, monitor and control their products. | |

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| | Understand how key events and individuals in design and technology have helped shape the world. |
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| | Evaluate their ideas and products against their own design criteria and consider the views of others when improving their work. |
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