**Early Years**

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|  | **ELG Statements**  *(Endpoints children will achieve)* | **Substantive – Practical Knowledge**  *(Design, Make, Evaluate,)* | **Disciplinary Technical Knowledge** | **Concepts**  *(Resilience, Ambition)* | **Vocabulary** | **Culture**  *(How is a love of Design fostered school wide? How is DT represented across the curriculum? What enrichment opportunities for each topic are there?)* |
|  |  | Children will know how to/be able to: | Children will know how to/be able to: | Children will appreciate: | Children will recall and verbalise: |  |
| **Nursery** | Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.  Share their creations, explaining the process they have used.  Use a range of small tools, including scissors, paintbrushes and cutlery.  Use various construction materials, e.g. joining pieces, stacking vertically and horizontally,  balancing, making enclosures and creating spaces.  • Use tools for a purpose. | Use one-handed tools and equipment, including scissors, paintbrushes and **cutlery**. | Explore different materials freely, in order to develop their ideas about how to use them and what to make.  Choose the right resource to carry out their own plan.  Develop their own ideas and then decide which materials to use to express them.  Join different materials and explore different textures. | Gaining different experiences of ‘thinking through’ what they want to join or build.  Exploring different materials and their textures.  Developing their own ideas whilst exploring different materials and deciding on how to use them. | Materials  Textures  Explore  Build  Join  Tools  Plan | Planned practical activities where children can explore and develop their own ideas.  A variety of toy tools and role play situations available.  Outside learning area with a workbench and tools.  Different materials available for the children to explore in lessons.  Planned activities linked to cooking and using cutlery (small tools). |
| **Reception** | Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.  Share their creations, explaining the process they have used.  Use a range of small tools, including scissors, paintbrushes and cutlery.  Use various construction materials, e.g. joining pieces, stacking vertically and horizontally,  balancing, making enclosures and creating spaces.  • Use tools for a purpose. | Return to and build on their previous learning, refreshing ideas and developing their ability to represent them.  Use one-handed tools and equipment, including scissors, paintbrushes and **cutlery**. | Create collaboratively sharing ideas, resources and skills.  Choose the right resource to carry out their own plan.  Develop their small motor skills so that they can use a range of tools competently, safely and confidently.  Explore different materials freely, in order to develop their ideas about how to use them and what to make.  Develop their own ideas and then decide which materials to use to express them.  Join different materials and explore different textures. | Building on the different experiences they have gained.  Creating ideas and sharing resources and skills with their peers.  Exploring new materials and textures.  Exploring and using new tools.  Developing fine motor skills. | Materials  Textures  Explore  Build  Join  Tools  Plan  Share  Use safely | Planned practical activities where children can explore and develop their own ideas.  A variety of toy tools and role play situations available.  Outside learning area with a workbench and tools.  Different materials available for the children to explore in lessons.  Planned activities linked to cooking and using cutlery (small tools). |

**Key Stage 1**

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|  | **National Curriculum Outcomes**  *(Endpoints children will achieve)* | **Substantive – Practical Knowledge**  *(Design, Make, Evaluate,)* | **Disciplinary Technical Knowledge** | **Concepts**  *(Resilience, Ambition)* | **Vocabulary** | **Culture**  *(How is a love of Design fostered school wide? How is DT represented across the curriculum? What enrichment opportunities for each topic are there?)* |
|  |  | Children will know how to/be able to: | Children will know how to/be able to: | Children will appreciate: | Children will recall and verbalise: |  |
| **Year 1 – To plan and make a castle.** | To design purposeful, functional, appealing products for themselves and other users based on a design criteria.  Select from and use a range of tools and equipment to perform practical tasks.  Select from and use a wide range of materials and components. | Know how to create and develop a purposeful product based on a design criteria.  Know how to use a range of tools and equipment to perform practical tasks, for example, cutting and joining to allow movement and finishing.  Know how to select from and use a range of materials and components such as paper, card and plastic according to their characteristics.  Know how to assemble and join materials using different methods.  Know how to evaluate their product by identifying what went well, what was challenging and whether it met the original design criteria. | Use own ideas to make something.  Build Structures, exploring how they can be made stronger, stiffer and more stable.  Assemble and join materials using a variety of methods.  Begin to assemble, join and combine materials and components together using a variety of temporary methods (e.g. glue or Sellotape). | How to create and develop a final design.  How to talk about ideas, draw sketches and label their final designs.  How to use different tools to complete practical tasks.  How to select from a range of materials, including construction materials, textiles and ingredients.  How to evaluate ideas and products against a design criteria. | Design  Design Criteria  Product  Materials  Tools  Equipment  Structure  Make  Join  Evaluate | Design and Technology becomes a natural, embedded element of the school curriculum linking well to half termly topics in each year group. Design and Technology will provide children with inspiring opportunities to use creativity and imagination to design, make and evaluate their own products. |
| **Year 2 – To plan and make recyclable rubbish igloos & Papier Mache igloos.** | To design purposeful, functional, appealing products for themselves and other users based on a design criteria.  Select from and use a range of tools and equipment to perform practical tasks.  Select from and use a wide range of materials and components. | Know how to create and develop a purposeful, functional product based on a design criteria.  Know how to use a range of tools and equipment to perform practical tasks for example, cutting and joining to allow movement and finishing.  Know how to assemble and join materials using different methods.  Know how to build structures, exploring how they can be made stronger, stiffer and more stable.  Know how to evaluate ideas and finished products against the design criteria, including intended user and purpose. | Use own ideas to make something.  Build Structures, exploring how they can be made stronger, stiffer and more stable.  Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.  Assemble, join and combine materials using a variety of methods.  Carry out finishing techniques that have been modelled by the teacher. | How to create and develop a final design.  How to talk about ideas, draw sketches and label their final designs.  How to use different tools to complete practical tasks.  How to select from a range of materials, including construction materials, textiles and ingredients.  How to evaluate ideas and products against a design criteria. | Design  Design Criteria  Product  Recyclable materials  Papier Mâché  Tools  Equipment  Make  Cutting  Joining  Finishing  Evaluate  Technical Vocabulary | Design and Technology becomes a natural, embedded element of the school curriculum linking well to half termly topics in each year group. Design and Technology will provide children with inspiring opportunities to use creativity and imagination to design, make and evaluate their own products. |

**Key Stage 2**

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|  | **National Curriculum Outcomes**  *(Endpoints children will achieve)* | **Substantive – Practical Knowledge**  *(Design, Make, Evaluate,)* | **Disciplinary Technical Knowledge** | **Concepts**  *(Resilience, Ambition)* | **Vocabulary** | **Culture**  *(How is a love of Design fostered school wide? How is DT represented across the curriculum? What enrichment opportunities for each topic are there?)* |
|  |  | Children will know how to/be able to: | Children will know how to/be able to: | Children will appreciate: | Children will recall and verbalise: |  |
| **Years 3/ 4 – To plan and make a Viking catapult.** | 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, diagrams, prototypes and computer-aided designs.  Select from and use a wider range of tools and equipment to perform practical tasks.  Select from and use a wider range of materials and components.  Understand how key events and individuals in DT have helped shape the world. | Know how to create and develop a design criteria for a purposeful product. This may include annotated sketches, prototypes and computer-aided designs.  Know which tools to use for a particular task and show knowledge of handling the tool accurately and safely.  Know how to mark, measure and cut accurately a range of materials using appropriate tools, equipment and techniques.  Know how to explore and use mechanisms (for example, levers.)  Know how to evaluate their own product using the design criteria and consider the views of others to improve their work. | Mark, measure and cut accurately a range of materials using appropriate tools, equipment and techniques.  Start to join and combine materials and components accurately in temporary and permanent ways.  Talk about ideas and examples of how the DT product is used in real life.  Explore new materials, equipment and tools. | How to create and develop a final design.  How to communicate ideas in discussions, draw annotated sketches, create prototypes and generate computer-aided designs.  How to select from a wider range of tools and equipment to complete practical tasks (for example, cutting, shaping, joining and finishing).  How to select from and use a wider range of materials and components, including construction materials, textiles and ingredients. Also knowing how to select a ‘suitable’ material according to their functional properties and aesthetic qualities.  How to investigate and analyse a range of existing products.  How to evaluate their own design criteria and consider the views of others to improve their work. | Design  Design Criteria  Prototypes  Product  Materials  Construction materials  Components  Tools  Equipment  Make  Cutting  Joining  Finishing  Evaluate  Technical Vocabulary | Design and Technology becomes a natural, embedded element of the school curriculum linking well to half termly topics in each year group. Design and Technology will provide children with inspiring opportunities to use creativity and imagination to design, make and evaluate their own products. |
| **Year 5 – To plan and make Tudor felt purses.** | 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, diagrams, prototypes and computer-aided designs.  Select from and use a wider range of tools and equipment to perform practical tasks.  Select from and use a wider range of materials and components.  Understand how key events and individuals in DT have helped shape the world. | Know how to create and develop a design criteria for a purposeful product. This may include annotated sketches, prototypes and computer-aided designs.  Know how to select appropriate materials, tools and techniques (e.g. cutting, shaping, joining and finishing) accurately.  Know how to select and use a range of materials and components, including textiles, according to their functional properties and aesthetic qualities.  Know how to sew, weave or knit using different stitches.  Know how to evaluate ideas and finished products against the design criteria, including intended user and purpose. Know the impact or purpose of their design and technology product in relation to everyday life. | Select and use a range of materials and components, including **textiles**, according to their functional properties and aesthetic qualities.  Know which tools to use for a particular task and show knowledge of handling the tool accurately and safely.  Sew, weave or knit using a range of stitches.  Mark, measure and cut accurately a range of materials using appropriate tools, equipment and techniques.  Start to join and combine materials and components accurately in temporary and permanent ways. | How to create and develop a final design.  How to communicate ideas in discussions, draw annotated sketches, create prototypes and generate computer-aided designs.  How to select from a wider range of tools and equipment to complete practical tasks (for example, cutting, shaping, joining and finishing).  How to select from and use a wider range of materials and components, including construction materials, textiles and ingredients. Also knowing how to select a ‘suitable’ material according to their functional properties and aesthetic qualities.  How to investigate and analyse a range of existing products.  How to evaluate their own design criteria and consider the views of others to improve their work. | Design  Design Criteria  Prototypes  Product  Materials  Textiles  Tools  Equipment  Make  Cutting  Joining  Finishing  Evaluate  Technical Vocabulary | Design and Technology becomes a natural, embedded element of the school curriculum linking well to half termly topics in each year group. Design and Technology will provide children with inspiring opportunities to use creativity and imagination to design, make and evaluate their own products. |
| **Year 6 - To plan and make a movable circus character or animal with a cam or cams.** | 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, diagrams, prototypes and computer-aided designs.  Select from and use a wider range of tools and equipment to perform practical tasks.  Select from and use a wider range of materials and components.  Understand how key events and individuals in DT have helped shape the world. | Know how to create and develop a design criteria for a purposeful product. This may include annotated sketches, prototypes and computer-aided designs.  Know and understand how to use a mechanical system in their product (for example, cams).  Know how to confidently select appropriate tools, materials, components and techniques and use them efficiently.  Know how to make modifications as they go along and explain their reasons.  Know how to evaluate ideas and finished products against the design criteria, including intended user and purpose. Know the impact or purpose of their design and technology product in relation to everyday life. | Understand and use mechanical systems in their products (for example, cams).  Know how to use a selection of tools correctly and safely.  Construct products using permanent joining techniques.  Use finishing techniques to strengthen and improve the appearance of their products using a range of equipment including ICT. | How to create and develop a final design.  How to communicate ideas in discussions, draw annotated sketches, create prototypes and generate computer-aided designs.  How to select from a wider range of tools and equipment to complete practical tasks (for example, cutting, shaping, joining and finishing).  How to select from and use a wider range of materials and components, including construction materials, textiles and ingredients. Also knowing how to select a ‘suitable’ material according to  their functional properties and aesthetic qualities.  How to investigate and analyse a range of existing products.  How to evaluate their own design criteria and consider the views of others to improve their work. | Design  Design Criteria  Prototypes  Product  Materials  Construction materials  Components  Tools  Equipment  Cams  Make  Cutting  Joining  Finishing  Evaluate | Design and Technology becomes a natural, embedded element of the school curriculum linking well to half termly topics in each year group. Design and Technology will provide children with inspiring opportunities to use creativity and imagination to design, make and evaluate their own products. |