National Curriculum
Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

|  | Designing | Making | Evaluating | Technical Knowledge | Cooking and Nutrition |
| :---: | :---: | :---: | :---: | :---: | :---: |
| KS1 | 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, mockups and, where appropriate, information and communication technology. | 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 characteristics. | Explore and evaluate a range of existing products evaluate their ideas and products against design criteria. | 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. | Use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from. |
| KS2 | 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, crosssectional 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 [for example, cutting, shaping, joining and finishing]. Accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. | 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. | 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. | Understand and apply the principles of a healthy and varied diet. 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 grown, reared, caught and processed. |

## Year 1 \& 2

## KS1 DT Curriculum NC <br> \section*{End Points:}

## Pupils should be

## taught to:

## Design:

- design purposeful, functional, appealing products for them selves and other users based on design criteria.
- generate, develop, model and communicate their ideas
through talking, drawing, templates, mockups and, where appropriate, information and communication technology.


## 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 characteristics.


## Evaluate:

- explore and evaluate a range of existing products.

| Term 1 | Term 2 | Term 3 |
| :--- | :--- | :---: |
|  |  | Sculpture - Clay Animals |
|  |  | Implementation |

- Use a range of simple tools to cut, join and combine materials and components safely.
- Ask simple questions about existing products and those that he/she has made.
- Create simple designs for a product.
- Use pictures and words to describe what they want to do.
- Select from and use a range of tools and equipment to perform practical tasks.
- Build structures exploring how they can be made stronger and more durable.
- Design purposeful, functional and appealing products for themselves and others based on a design criterion.
- Generate, develop, model and communicate their ideas.
- Choose appropriate materials, tools, techniques, equipment from a wide range.

| Term 4 |
| :---: |
| Construction - Plastic Sculpture |
| Implementation |

- Create simple designs for a product.
- Use pictures and words to describe what they want to do.
- Select from and use a range of tools and equipment to perform practical tasks.
- Use a range of simple tools to cut, join and combine materials and components safely.
- Investigate different techniques for stiffening different materials and explore methods of enabling structures to remain stable
- Generate, develop, model and communicate their ideas.
- Choose appropriate materials, tools, techniques, equipment from a wide range
- Safely measure, mark out, cut and shape materials and components using a range of tools.

| Term 5 | Term 6 |
| :--- | :--- |

## Implementation

- Sort, cut and shape fabric and experiment ways of joining them.
- Create simple designs for a product.
- Use pictures and words to describe what they want to do.
- Select from and use a range of tools and equipment to perform practical tasks.
- Use a range of simple tools to cut, join and combine materials and components safely.
- Design purposeful, functional and appealing products for themselves and others based on a design criterion.
- Generate, develop, model and communicate their ideas.
- Choose appropriate materials, tools, techniques, equipment from a wide range
- Safely measure, mark out, cut and shape materials and components using a range of tools
- Evaluate and assess existing products and those that they have made using a design criterion



## Pupils should be

## taught to:

## 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.


## Make:

- select from and use a wider range of tools and equipment to per form practical tasks for example, cutting, shaping, joining and finishing], accurately
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aes thetic qualities.


## Term 1 Creating structure <br> Implementation

- Use knowledge of existing products to design his/her own functional product.
- Create designs using annotated sketches, crosssectional diagrams and simple computer programmes.
- Safely measure, mark out, cut, assemble and join with some accuracy.
- Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.
- Investigate and analyse existing products and those he/she has made, considering a wide range of factors.
- Strengthen frames using diagonal strut
- Understand how mechanical systems such as levers and linkages or pneumatic systems create movement.
- Use knowledge of existing products to design a functional and appealing


## Term 6 Clay fossils

Implementation

- Create designs using annotated sketches, crosssectional diagrams and simple computer programmes.
- Safely measure, mark out, cut, assemble and join with some accuracy.
- Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them.
- Create designs using exploded diagrams.
- Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks.
- Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them


## 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.


## Technical Knowledge:

 - apply their understanding of how tostrengthen, stiffen and reinforce more complex structures

- understand and can use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].
- understands and can use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].
- apply their understand ing of computing to program, monitor and control their products.

Cooking and Nutrition: - understand and can apply the principles of a healthy and varied diet.

- prepare and cook a variety of predominantly savoury dishes using a ange of cooking techniques.
product for a particular purpose and audience.
- Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user.
- Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas.
- Understand and use electrical systems in products.
- Create designs using exploded diagrams.
- Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them.


## Impact

- To know that materials can be joined and connected in different ways.
- To know that different techniques can be used to ensure accuracy \& know how mechanical systems such as axels are created and evaluate

Impact

## To know what constitutes a

healthy diet.

- To know advantages of eating lothat diagrams are sketches, labelled cal and seasonal food for information.
- To know how to use
- To know which food must be techniques to develop a 3D structure (fossil) and that materials must be accurately marked and cut accurately to avoid errors.

| understand seasonality <br> and know where and <br> how a variety ingre- <br> dients are grown, <br> reared, caught and pro- <br> cessed. | movement in a devel- <br> oped structure. |  |  | To know how to use <br> techniques and the <br> functional and aesthetic <br> qualities of a wide range <br> of materials to plan how <br> to use them- e.g. clay <br> and modroc. |
| :--- | :--- | :--- | :--- | :--- | :--- |


| Year 5 \& 6 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| KS2 DT Curriculum NC End Points: <br> Pupils should be | Term 1 <br> Making an Anderson ShelterWW2 | Term 2 | Term 3 | Term 4 <br> Cooking | Term 5 | Term 6 <br> Making a Viking Longboat |
| Design: <br> 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. <br> - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and com-puter-aided design. <br> Make: <br> select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately <br> - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional | Implementation <br> - Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product. Create prototypes to show his/her ideas. <br> - Make careful and precise measurements so that joins, holes and openings are in exactly the right place. <br> - Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques. <br> - Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work. <br> - Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. |  |  | Implementation <br> - Understand the main food groups and the different nutrients that are important for health. <br> - Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable / tasty to eat. <br> - Select appropriate ingredients and use a wide range of techniques to combine them. <br> - Confidently plan a series of healthy meals based on the principles of a healthy and varied diet. <br> - Use information on food labels to inform choices. <br> - Research, plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills |  | - Implementation <br> - Make careful and precise measurements so that joins, holes and openings are in exactly the right place. <br> - Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques. <br> - Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work. <br> - Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. <br> - Understand how to use more complex mechanical and electrical systems. <br> - Use research he/she has done into famous |

## properties and aes thetic qualities.

## 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.


## Technical

## Knowledge:

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- understand and can use mechanical systems in their products Ifor example, gears, pulleys, cams levers and linkages].
- understands ana can use electrical systems in their products [for example, series circuits in corporating switches, bulbs, buzzers and motors].
- apply their under standing of computing to program, monitor and control their products.
- Use research he/she has done into designers and inventors to inform the design of his/her own in novative products.
- Generate, develop model and communicate his/her ideas through discussion, annotated sketches, cross-sectiona and exploded diagrams, prototypes, pattern pieces and computeraided design.
- Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities.
- Use technical knowledge accurate skills to problem solve during the making process
- Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately.
designers and inventors to inform the design of his/her own innovative products.
- Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.
- Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functiona properties and aesthetic qualities.
- Use technical knowledge accurate skills to problem solve during the making process.
- Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made
- Use a wide range of methods to
strengthen, stiffen and reinforce com plex structures and can use them accurately and appropri-



## CYCLE 1

## KS1 DT Curriculum

NC End Points:

## Pupils should be

taught to:

## Design:

- design purposeful, functional, appea ing products for themselves and other users based on design criteria.
- generate, develop model and com municate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.


## 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 com ponents, including construction mate rials, textiles and ingredients, according to their characteristics.

Evaluate:

| Term 1 |
| :---: |
| Creating toys |

- Create simple designs for a product
- Use pictures and words to describe what he/she wants to do.
- Ask simple questions about exist ing products and those that he/she has made. Y2
- Design purposeful, functional, appealing products for him/herself and other users, based on design criteria.
- Choose appropriate tools, equipment, techniques and materials from a wide range.
- Safely measure, mark out and cut and shape materials and components using a range of tools.
- Evaluate and assess existing products and those that he/she has made using a design criterion.
Term 2


## Implementation

- Know the names of tools, techniques and elements that he/she uses
- Make structures by joining simple objects together
- Explain what he/she likes about the work of others
- Use wheels and axles in a product
- Build structures, exploring how they can be made stronger, stiffer and more stable
- Experiment with basic tools on rigid and flexible materials
- Design purposeful functional, appealing products for himself/herself and other users based on design criteria
- Experiment with basic tools on rigid and flexible
- materials
- Generate, develop, model and communicate

Implementation

- Sort, cut and shape fabric and experimen ways of joining them.
- Create simple designs for a product.
- Use pictures and words to describe what they want to do.
- Select from and use a range of tools and equipment to perform practical tasks.
- Use a range of simple tools to cut, join and combine materials and components safely.
- Design purposeful, functional and appealing products for themselves and others based on a design criterion.
- Generate, develop, model and communicate their ideas.
- Choose appropriate materials, tools, techniques, equipment from a wide range
- Safely measure, mark out, cut and shape materials and components using a range of tools
- Evaluate and assess existing products and those that they have made using a design criterion
- Investigate different techniques for stiffening different materials and explore methods of enabling structures to remain stable.

| - explore and evaluate a range of existing products. <br> - evaluate their ideas and products against design criteria. <br> Technical <br> Knowledge: <br> - build structures, exploring how they can be made stronger, stiffer and more stable. <br> - explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. <br> Cooking and <br> Nutrition |  | - his/her ideas through talking, drawing, <br> - templates, mockups and, where appropriate, <br> - information and communication technology <br> - Explore and use mechanisms e.g. levers, sliders, <br> - wheels and axles, in his/her products <br> - Safely measure, mark out, cut and shape materials and components using a range of tools |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - use the basic principles of a healthy and varied diet to prepare dishes <br> - understand where food comes from. | Impact <br> - To know some differences and similarities in the design of old toys and current toys <br> - To know some features of toys they'd like to include in their own design <br> - To know what materials would suit the toy they are designing. | Impact <br> - To know how to develop perspective using tones and colour wheels. To know how to use different materials to create different textures |  |  | Impact <br> - To know how to do a basic running stitch. <br> - To know how to thread a needle. <br> - To know how to tie a knot to prevent the thread from slipping through. |


| DT Unit Progression | Cooking | Sculpture | Construction | Textiles |
| :---: | :---: | :---: | :---: | :---: |
| Nursery |  |  | Term 2-4 specific projects (Ongoing through provision) |  |
| Reception | Term 5 - Growing Topic | Term 2 - Diwali Lamps | Ongoing through provision |  |
| Year 1 / 2 | Cycle 1-T4 Topical Cooking | Cycle 2 - T3 Clay Animals | Cycle 2 - T4 Plastic Sculpture <br> Cycle 1-T1 Toys <br> Cycle 1-T2 Structures | Cycle 2 T5 - Sewing |
| Year 3/4 | Cycle 2 - T3 Cooking | Cycle 2 - T6 Clay Fossils Cycle 1 T6 - Clay Pots | Cycle 2-T1 Structures Cycle 1-T1 Technical Design | Cycle 1 T1-Sewing Materials |
| Year 5/6 | Cycle 1 - T4 Nutrition and Healthy Meals <br> Cycle 1-T6 Cooking | Cycle 1 Term 4 | Cycle 2 - T1 Anderson Shelters <br> Cycle 2 - T6 Viking Long Boats <br> Cycle 1 - Structures - Marble Runs |  |


| Year group | Cooking |
| :---: | :--- |
| Nursery | $\frac{\text { Rising 3's }}{\text { To explore making simple models such as trains, houses and a tower. }}$To explore and manipulate different materials, using hands. <br> $\frac{\text { Rising 5's }}{\text { To explore and manipulate different materials, using different tools such as rolling pins, wooden knives, cutters. }}$To explore creating own 'small worlds' using different materials such as wooden blocks and duplo. <br> To create our own role-play and stories using a small world. <br> R <br> $1 / 2$I know how to use a range of materials and techniques safely. <br> I know how to create art inspired by others. <br> I know how to talk about what I have created. <br> I know how to make things and include these in my roleplay. <br> To know how to design purposeful, functional and appealing products for them and other users based on a design criterion |



|  | To know that designs are needed to create accurate final products. |
| :---: | :---: |
| Year 3/4 | To know that materials can be joined and connected in different ways. |
|  | To know that different techniques can be used to ensure accuracy \& know how mechanical systems such as axels are created and evaluate movement in a developed structure. <br> To know how to create an invention to solve a problem and that designing something first, with a prototype initially developed, creates a better final result. <br> - To know the names and work of designers- Dyson |
| 5 / 6 | To know how structures are made and reinforced for strength. <br> To know facts about a famous architect and their work. <br> - To know how to effectively evaluate work against a design brief using appropriate vocabulary. <br> To know the process of using market research to inform designs. <br> To know what a prototype and how to evaluate and make effective adaptions. <br> To know inventors and designers of shelters and how effective their work was for the brief of design. <br> To know the process needed for strengthening and stiffening a structure. <br> To know how a range of structures have been strengthened-building on from previous techniques utilised. <br> To know which materials will be most effective for different requirements and to know how to evaluate the effectiveness of chosen materials and consider adaptions for future designs. |


| Year group | Sculpture |
| :--- | :--- |
| Year $1 / 2$ |  |

To know how to combine different materials.
To know how to use different materials to create different textures

To know how to reuse materials to creature a new structure.

To know that diagrams are sketches, labelled for information.
To know how to use techniques to develop a 3D structure (fossil) and that materials must be accurately marked and cut accurately to avoid errors.

To know how to use techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them- e.g. clay and modroc.
To know clay can be used for a variety of purposes.
To know the Ancient Greeks decorated their pots with stories and pictures \& to know how the Ancient Greeks used their pots.
To know how art relates to Greek story telling.
To know how to design and create a Greek clay pot, using research to develop knowledge of existing product.
Year 5 / 6 To know about the process of using clay to generate, develop, model and communicate ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes \& pattern pieces.
To know about effective techniques for creating designs.
To know how the Victorians used clay for artefacts and decorations.

| Year group | Textiles <br> Year 1/2 <br> To know how to do a basic running stitch <br> To know how to thread a needle <br> To know how to tie a knot to prevent the thread from slipping through. |
| :---: | :--- |
| Year 3/4 | To know some different ways to join and work with fabric. <br> To know how to thread a needle and secure it so the thread will not come loose. <br> To know how to do some stitching <br> To know the successes and ways forward in my own work. |

