



EYFS

Relevant Early Learning Goals
<p>Expressive Arts and Design (Exploring and Using Media and Materials) Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>
<p>Expressive Arts and Design (Being Imaginative) Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.</p>
<p>Physical Development (Moving and Handling) Children handle equipment and tools effectively, including pencils for writing.</p>
<p>Physical Development (Health and Self-care) Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe.</p>
Links to Characteristics of Effective Learning
<p>Playing with what they know Thinking of ideas Finding ways to solve problems Making links and noticing patterns in their experience Making predictions</p>

Area of DT	Skills
Developing, planning and communicating ideas	<p>Manipulate materials to achieve a planned effect. Construct with a purpose in mind, using a variety of resources. Selects appropriate resources and adapts work where needed. Selects tools and techniques needed to shape, assemble and join materials they are using. Choose particular colours to use for a purpose. Use what they have learnt about media and materials in original ways, thinking about uses and purposes.</p>
Working with tools, equipment, materials and	<p>Capture experiences and responses with a range of media, such as music, dance and paint and other materials or words. 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 using tools use one-handed tools and equipment, e.g. makes snips in paper with child scissors</p>



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components to make quality products	<p>Understand that equipment and tools have to be used, transported and stored safely.</p> <p>Begin to show understanding of the need for safety when tackling new challenges and consider and manage some risks.</p> <p>Begin to practise some appropriate safety measures without direct supervision.</p> <p>Use simple tools to effect changes to materials.</p> <p>Handle tools, objects, construction and malleable materials safely and with increasing control.</p> <p>Uses simple tools and techniques competently and appropriately.</p> <p>Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glue or masking tape.</p> <p>Understand that different media can be combined to create new effects.</p> <p>Select tools and techniques needed to shape, assemble and join materials they are using.</p>
Evaluating processes and products	<p>Develop preferences for forms of expression.</p> <p>Select appropriate resources and adapt work where necessary.</p> <p>Talks about why things happen and how things work.</p>
Technical knowledge	<p>Shows control in holding and using jugs to pour, hammers, books and mark making tools.</p> <p>Joins construction pieces together to build and balance (including, threading, weaving, sticking, taping and stapling)</p> <p>Realizes tools can be used for a purpose.</p> <p>Uses one handed tools and equipment.</p> <p>Show an interest in technological toys with knobs or pulleys, or real objects.</p> <p>Show skill in making toys work by pressing parts or lifting flaps to achieve effects, such as sound, movements or new images.</p>
Cooking and Nutrition	<p>Develops own likes and dislikes in food and drink.</p> <p>Willing to try new food textures and tastes.</p> <p>Eats a healthy range of foodstuffs and understands need for variety in food.</p> <p>Shows some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health.</p> <p>Developing an understanding of changes ... (eg. Melting, freezing, cooking)</p> <p>Use simple tools to effect changes to materials (eg. Use safety knives to chop and slice soft food stuffs; spoons and whisks to mix and combine ingredients etc)</p>



Year 1

KS1 National Curriculum Objectives

Pupils should be taught:

Design

- To design purposeful, functional, appealing products for themselves and other users based on design criteria;
- To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Make

- To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing];
- To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

Evaluate

- To explore and evaluate a range of existing products;
- To evaluate their ideas and products against design criteria.

Technical knowledge

- To build structures, exploring how they can be made stronger, stiffer and more stable;
- To explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Cooking and nutrition

- To use the basic principles of a healthy and varied diet to prepare dishes;
- To understand where food comes from.

Area of DT	Skills
Developing, planning and communicating ideas	<p>Begin to draw on their own experience to help generate ideas and research conducted on criteria.</p> <p>Begin to understand the development of existing products: What they are for, how they work, materials used.</p> <p>Start to suggest ideas and explain what they are going to do.</p> <p>Understand how to identify a target group for what they intend to design and make based on a design criteria.</p> <p>Begin to develop their ideas through talk and drawings.</p> <p>Make templates and mock ups of their ideas in card and paper or using ICT.</p>
Working with tools,	<p>Begin to make their design using appropriate techniques.</p>



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equipment, materials and components to make quality products	<p>Begin to build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p>With help measure, mark out, cut and shape a range of materials.</p> <p>Follow procedures for safety and hygiene</p> <p>Use simple tools competently and safely e.g. scissors and a hole-punch safely.</p> <p>Assemble, join and combine materials and components together using a variety of temporary methods e.g. glue or masking tape.</p> <p>Begin to use simple finishing techniques to improve the appearance of their product.</p>
Evaluating processes and products	<p>Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria).</p> <p>When looking at existing products explain what they like and dislike about products and why.</p> <p>Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.</p>
Technical Knowledge	<p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in my products.</p> <p>Know about the simple characteristics of materials and components.</p> <p>Know the correct technical vocabulary for the projects they are undertaking.</p> <p>Know that a 3D textiles product can be assembled from two identical fabric shapes using different joining techniques (gluing, stapling, sewing).</p>
Cooking and Nutrition	<p>Begin to understand that all food comes from plants or animals.</p> <p>Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught.</p> <p>Start to understand how to name and sort foods into the five groups in 'The Eat well plate'</p> <p>Begin to understand that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>Know how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>Know how to use techniques such as cutting, peeling and grating.</p>



Year 2

KS1 National Curriculum Objectives

Pupils should be taught:

Design

- To design purposeful, functional, appealing products for themselves and other users based on design criteria;
- To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Make

- To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing];
- To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

Evaluate

- To explore and evaluate a range of existing products;
- To evaluate their ideas and products against design criteria.

Technical knowledge

- To build structures, exploring how they can be made stronger, stiffer and more stable;
- To explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Cooking and nutrition

- To use the basic principles of a healthy and varied diet to prepare dishes;
- To understand where food comes from.

Area of DT	Skills
Developing, planning and communicating ideas	Start to generate ideas by drawing on their own, and other people's experiences. Begin to develop their design ideas through discussion, observation, drawing and modelling. Identify a purpose for what they intend to design and make. Understand how to identify a target group for what they intend to design and make based on a design criteria.



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	<p>Develop their ideas through talk and drawings and label parts. Make templates and mock ups of their ideas in card and paper or using ICT.</p>
Working with tools, equipment, materials and components to make quality products	<p>Begin to select tools and materials; use correct vocabulary to name and describe them. Build structures, exploring how they can be made stronger, stiffer and more stable. With help measure, cut and score with some accuracy. Follow procedures for safety and hygiene. Learn to use hand tools safely and appropriately. Start to assemble, join and combine materials in order to make a product. Assemble, join and combine materials and components (glue, tape, staples, velcro) Demonstrate how to cut, shape and join fabric to make a simple product. Use basic sewing techniques. Start to choose and use appropriate finishing techniques based on own ideas, including sanding and painting. Explore and use mechanisms e.g. levers, sliders, wheels and axles, in his/her products</p>
Evaluating processes and products	<p>Evaluate their work against their design criteria. Look at a range of existing products explain what they like and dislike about products and why. Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. With confidence talk about their ideas, saying what they like and dislike about them.</p>
Technical Knowledge	<p>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 my products. Know the correct technical vocabulary for the projects they are undertaking.</p>
Cooking and Nutrition	<p>Understand that all food comes from plants or animals. Know that food has to be farmed, grown elsewhere (e.g. home) or caught. Understand how to name and sort foods into the five groups in 'The Eat well plate' Know that everyone should eat at least five portions of fruit and vegetables every day. Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source. Demonstrate how to use techniques such as cutting, peeling and grating.</p>



Year 3

KS2 National Curriculum Objectives

Pupils should be taught:

Design

- To 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
- To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- To select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- To investigate and analyse a range of existing products
- To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- To understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- To apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- To understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- To understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- To apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

- To understand and apply the principles of a healthy and varied diet
- To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.



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Area of DT	Skills
Developing, planning and communicating ideas	<p>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.</p> <p>Generate, develop, model and communicate my ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <p>With growing confidence generate ideas for an item, considering its purpose and the user/s.</p> <p>Start to order the main stages of making a product.</p> <p>Identify a purpose and establish criteria for a successful product.</p> <p>Understand how well products have been designed, made, what materials have been used and the construction technique.</p> <p>Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.</p> <p>Start to understand whether products can be recycled or reused.</p> <p>Know to make drawings with labels when designing.</p> <p>When planning explain their choice of materials and components including function and aesthetics.</p>
Working with tools, equipment, materials and components to make quality products	<p>Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components.</p> <p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using.</p> <p>Start to understand that mechanical and electrical systems have an input, process and output.</p> <p>Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.</p> <p>Know how simple electrical circuits and components can be used to create functional products.</p> <p>Safely measure, mark out, cut, score and assemble components with more accuracy (to the nearest cm).</p> <p>Follow procedures for safety and hygiene.</p> <p>Start to work safely and accurately with a range of simple tools.</p> <p>Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work.</p> <p>Start to measure, tape or pin, cut and join fabric with some accuracy.</p> <p>Assemble, join and combine materials and components with some accuracy (glue, tape, staples, velcro, glue guns,).</p> <p>Apply a range of finishing techniques including sanding, painting and polishing.</p>
Evaluating processes and products	<p>Investigate and analyse a range of existing products.</p> <p>Start to evaluate product against original design criteria e.g. how well it meets its intended purpose. Evaluate ideas and products against own design criteria and consider the views of others to improve my work.</p> <p>Begin to disassemble and evaluate familiar products and consider the views of others to improve them.</p> <p>Evaluate the key designs of individuals in design and technology has helped shape the world.</p>
Technical Knowledge	<p>How to use learning from mathematics to help design and make products that work.</p> <p>How to use learning from science to help design and make products that work</p>



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	<p>Know that materials have both functional properties and aesthetic qualities.</p> <p>Know the correct technical vocabulary for the projects they are undertaking.</p> <p>Apply my understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in my products [for example, gears, pulleys, cams, levers and linkages].</p> <p>Understand and use electrical systems in my products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>Apply my understanding of computing to program, monitor and control my products.</p> <p>Know that a single fabric shape can be used to make a 3D textiles product.</p>
Cooking and Nutrition	<p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p>Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.</p> <p>Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</p> <p>Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Start to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'</p> <p>Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.</p>



Year 4

KS2 National Curriculum Objectives

Pupils should be taught:

Design

- To 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
- To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- To select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- To investigate and analyse a range of existing products
- To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- To understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- To apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- To understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- To understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- To apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

- To understand and apply the principles of a healthy and varied diet
- To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.



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Area of DT	Skills
Developing, planning and communicating ideas	<p>Start to generate ideas, considering the purposes for which they are designing- link with Mathematics and Science.</p> <p>Confidently make labelled drawings from different views showing specific features.</p> <p>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.</p> <p>Identify the strengths and areas for development in their ideas and products.</p> <p>When planning, consider the views of others, including intended users, to improve their work.</p> <p>Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground -breaking products.</p> <p>When planning explain their choice of materials and components according to function and aesthetic.</p>
Working with tools, equipment, materials and components to make quality products	<p>Follow procedures for safety and hygiene</p> <p>Select a wider range of tools and techniques for making their product safely.</p> <p>Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.</p> <p>Start to join and combine materials and components accurately in temporary and permanent ways (glue, tape, staples, velcro, glue guns, nails).</p> <p>Know how mechanical systems such as cams, pulleys, gears, levers and linkages or pneumatic systems create movement.</p> <p>Understand how more complex electrical circuits and components can be used to create functional products.</p> <p>Continue to learn how to program a computer to monitor changes in the environment and control their products.</p> <p>Understand how to reinforce and strengthen a 3D framework.</p> <p>Sew using a range of different stitches, to weave and knit.</p> <p>Demonstrate how to measure, tape or pin, cut and join fabric with some accuracy.</p> <p>Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including sanding, painting and polishing – describing the reasons for chosen technique</p>
Evaluating processes and products	<p>Investigate and analyse a range of existing products.</p> <p>Evaluate their products carrying out appropriate tests. Start to evaluate their work both during and at the end of the assignment.</p> <p>Be able to disassemble and evaluate familiar products and consider the views of others to improve them.</p> <p>Evaluate own ideas and products against own design criteria and consider the views of others to improve my work.</p> <p>Evaluate the key designs of individuals in design and technology has helped shape the world.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p>
Technical Knowledge	<p>Know how to use learning from science to help design and make products that work.</p> <p>Know how to use learning from mathematics to help design and make products that work.</p> <p>Know that materials have both functional properties and aesthetic qualities.</p>



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	<p>Know the correct technical vocabulary for the projects they are undertaking.</p> <p>Apply my understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in my products [for example, gears, pulleys, cams, levers and linkages or pneumatic systems create movement].</p> <p>Understand and use electrical systems in my products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>Apply my understanding of computing to program, monitor and control my products.</p>
Cooking and Nutrition	<p>Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.</p> <p>Begin to understand that seasons may affect the food available.</p> <p>Understand how food is processed into ingredients that can be eaten or used in cooking.</p> <p>Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</p> <p>Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'</p> <p>Know that to be active and healthy, food and drink are needed to provide energy for the body.</p> <p>Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.</p>