ACE Learning Progression Grid : Design Technology (including Food Technology)

Main Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	-To manipulate materials to achieve a planned effect. -To capture experiences and responses with a range of media, such as paint and other materials, linking this to their own ideas. -To develop preferences for forms of expression. -To understand that simple tools can effect changes to materials.	-Draw on their own experiences to help generate ideas. -Suggest ideas and explain what they are going to do. - Identify a target group for what they going to design and make. -Model their ideas in card and paper. -Develop design and ideas.	-Generate ideas by drawing on their own and other people's experiences. -Develop their ideas through discussion, observation, drawing and modelling. -Identify a purpose for what they intend to design and make. -Identify simple design criteria. -Make simple drawings and label parts.	-Generate ideas for an item, considering the user and its purpose. -Plan and order their work before starting. -Explore, develop and communicate design ideas. -Make drawings with labels when designing.	-Generate ideas for an item, considering the user and its purpose. -Make labelled drawings from different views showing specific features. -Plan and order work before starting. -Suggest alternative methods of making if the first attempt fails. -Generate criteria for their own designs.	-Generate ideas for an item, considering the user and its purpose. -Develop a design specification. -Plan how to use materials, equipment and processes. -Suggest alternative methods of making if attempts fail. -Use results of investigation when designing.	-Communicate their ideas through detailed, labelled drawings. -Develop a design specification. -Explore, develop and communicate design ideas by modelling ideas in different ways. -Plan and order work choosing appropriate tools, materials and techniques.
Make	-Use a range of small tools, including scissors, paint brushes and cutlery -Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function with a purpose in mind.	-Make their design using appropriate techniques. -With help, measure, mark out, cut and shape a range of materials. -Use tools e.g. scissors safely. Assemble, join and combine materials and components using a variety of methods e.g. glue, tape. -Use simple finishing techniques to improve the	-Begin to select tools and materials; use vocab to name and describe them. -Measure, cut, score with some accuracy. -Use hand tools safely and appropriately. -Assemble, join and combine materials to make a product. -Cut, shape and join fabric	-Select tools and techniques for making their product. -Measure and mark out Work safely and accurately with a range of simple tools. -Be willing to change things as they progress if this improves their work.	-Select tools and techniques for making their product. -Measure, mark out, cut, score with more accuracy. -Measure, tape or pin, cut and join fabric with some accuracy. -Use finishing techniques to strengthen and improve their product.	-Select tools and techniques for making their product. -Measure, mark out, cut, score with accuracy. -Weigh and measure accurately. -Cut and join with accuracy to ensure a good- quality finish to the product.	-Select tools, materials, components and techniques. -Assemble components. Make working models. -Use tools safely and accurately. -Construct models using permanent joining techniques.

		appearance of their product.	to make a simple garment. -Use simple sewing techniques. -Choose and use appropriate finishing techniques.	-Begin to use finishing techniques to strengthen and improve their product			-Make modifications as they go along. -Pin, sew and stitch materials to create a product. -Achieve a quality product.
Evaluate	-Share their creations, explaining the process they have used. -Suggest improvements they could make and likes and dislikes	-Evaluate their product by discussing how well it works in relation to the purpose. -Evaluate their products as they are developed by identifying their strengths and possible changes they might make.	-Evaluate against their design criteria. -Evaluate their products as they are developed by identifying their strengths and possible changes they might make. -Talk about their work, saying what they like and dislike.	-Evaluate against their design criteria. -Peer assess the work of others	-Evaluate their work during and at the end of an assignment. -Evaluate their products, carrying out appropriate tests. -Peer assess the work of others. -Present skills learnt to an audience	-Evaluate their product against the original design specification. -Evaluate their products, and seek evaluation from others.	-Evaluate their products, identifying strengths and areas for development. -Record evaluations using drawings and labels. -Evaluate against the original specification and suggest ways their product could be improved.
Food Preparation and Nutrition	-To understand the need for basic safety and hygiene routines when handling food. -Understand the importance of healthy food choices.	-Understand where food comes from. -Understand the basic principles of a healthy and varied diet. -To understand the need for basic safety and hygiene routines when handling food. -Select tools and processes to use with veg and fruit. -Use the basic principles of a healthy and varied diet to produce dishes.	-Understand where food comes from. -Understand the basic principles of a healthy and varied diet. -To understand the need for basic safety and hygiene routines when handling food. -Use the basic principles of a healthy and varied diet to produce dishes.	-Understand and apply the principles of a healthy and varied diet including the importance of a balanced diet. -Understand and know where and how a variety of ingredients are grown, reared, caught and processed. -To understand the need for hygienic food preparation and storage. -Apply the basic principles of a healthy and varied diet to produce dishes. -Prepare and cook a variety of predominantly savory dishes using a range of cooking techniques.	-Understand and apply the principles of a healthy and varied diet including the importance of a balanced diet. -Understand and know where and how a variety of ingredients are grown, reared, caught and processed. -To understand the need for hygienic food preparation and storage. -Apply the basic principles of a healthy and varied diet to produce dishes. -Prepare and cook a variety of predominantly savory dishes using a range of cooking techniques.	-Understand and apply the principles of a healthy and varied diet including portion control, low fat diets and where certain vitamins can - be found. -Understand seasonality and affordability, and know where and how a variety of ingredients are grown, reared, caught and processed. -To understand the need for hygienic food preparation, storage and other safe practices. E.g. oven hazards.	-Understand and apply the principles of a healthy and varied diet including portion control, low fat diets and where certain vitamins can be found. -Understand seasonality and affordability, and know where and how a variety of ingredients are grown, reared, caught and processed. -To understand the need for hygienic food preparation, storage and other safe practices. E.g. oven hazards.

Skills vocabulary	Plan Draw Make Use Build Shape Tools Safely Colour Texture Cut Fold Join Fix	Ideas Prepare Design Investigate Target group Product User Explain Measure Mark Materials Evaluate Change	Order Sketch Label Develop Purpose Design criteria Method Equipment Fabrics Template Score Accuracy Assemble Combine strengths weaknesses technique	Organise Generate Purpose User Explore Communicate Annotated (sketch) progress attach components Edit strengthen improvements alter peer-assess	Design brief View-point Features Alternative methods Techniques Appropriate tests adapt Sensory evaluations	Design specification Processes Consumer decisions Quality Original	Specification Record Dimensions Protype Analyse Alternatives

Curriculum end points- what are we trying to achieve?

Design and Technology is often a favourite subject as children can apply their creative skills to plan, make and review a product! Design and Technology develops children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. It encourages children's creativity and encourages them to think about important issues in an ever-changing world. We feel it is vital to nurture creativity and innovation through design, and by exploring the designed and made world in which we all live and work. We aim to develop these through the key stages and their themes, as laid out in the ACE Curriculum.

EYFS (linked to ELG number)

- Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices (4)
- Use a range of small tools, including scissors, paint brushes and cutlery (7)
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (16)
- Share their creations, explaining the process they have used (16)
- Make use of props and materials when role playing characters in narratives and stories (16)

KS1

Design Technology

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

When designing and making, pupils should be taught to:

Design

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

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
- evaluate their ideas and products against design criteria

Technical knowledge

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

Cooking and Nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great

KS2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

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 perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- 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

- 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 use mechanical systems in their products

	expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from. •	[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. **Cooking and Nutrition** As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: • 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. •