

# Hazel Slade Primary Academy



## Design and Technology Policy

July 2021



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## 1. Rationale

Design and Technology prepares children to take part in the development of tomorrow's rapidly changing world. Through this subject children are given the opportunity to expand and experiment their own creative ideas, whilst learning new skills and reflecting on technology in today's society.

## 2. Aims and Objectives

- To develop knowledge and understanding of materials and components; mechanisms and control systems; structures; existing products, and health and safety.
- To develop the skills of designing, planning, making, adapting and evaluating products for a particular purpose.
- To look for needs, wants and opportunities and respond to them by developing a range of ideas and making products and systems.
- To develop an understanding of technological processes, products and their manufacture, and their contribution to our society.
- To nurture creativity, design and innovation and become creative and autonomous problem solvers, as individuals and as part of a team.
- To develop ICT skills to allow children to program and control products, to nurture their understanding of mechanical and electrical systems.
- To reflect on and evaluate present and past design and technology, its uses and effects.
- To promote pupils spiritual, moral, social and cultural development.

## 3. Teaching and Learning Approaches

A variety of teaching techniques are used for design and technology to appeal to a range of learning styles. The principal aim of the new National Curriculum is to develop children's knowledge, skills and understanding in the subject, whilst providing enjoyable, creative and inspiring design and technology lessons.

During design and technology lessons children are encouraged to apply their knowledge and understanding when developing ideas, planning, making and evaluating products. Cross curricular approaches with Maths, English and Science is encouraged to support children's understanding of conceptual and procedural knowledge and ensure it is applied. Children are provided with a mixture of whole class teaching, individual and group activities, as well as homework opportunities, encouraging both independence and collaborative working.

## 4. Planning

Design and technology is planned in accordance with the schools foundation subject planning framework. Planning is highlighted on both a medium term and weekly plan, which includes reference to the National Curriculum objectives. The planning of design and technology ensures that all the National Curriculum targets are met throughout the year, making sure the two strands ('cooking and nutrition' and 'designing and making') are linked and covered in equal measure.

Design and technology planning for the foundation stage comes under the area of Knowledge and Understanding of the World and planning is led by the children's interests. Planning will ensure that, in addition to the requirements of the National Curriculum, there are frequent and regular opportunities to enhance learning through cross-curricular teaching, extra-curricular activities, homework, planned enrichment (Enterprise) and extension work.

## **5. Assessment and Recording**

Pupils' progress is assessed and monitored during the year through normal teacher marking, planning and observation. Pupils' Design and Technology work is marked by the teacher in line with the School's Marking policy. A record of class achievement for each topic is collated by the teacher on the schools foundation assessment documents, this is used to help evaluate the children's progress and assist with future planning.

## **6. Resources**

Our school has a range of resources to support the teaching of design and technology across the school. The resources are stored in a central design and technology store of which all staff has access to. The resources are reviewed and restocked to ensure that enough resources are available and staff are encouraged to feedback when additional resources are required that may benefit their teaching of design and technology.

## **7. Equal Opportunities and Inclusion**

All children will be provided with equal access to the design and technology curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background and according to their individual abilities.

## **8. Special Education Needs / Gifted, Able and Talented**

Differentiation in terms of learning objectives, tasks, teaching methods and resources are planned for pupils with SEN. All pupils have access to materials and opportunities that are suitable to their specific needs. Gifted and talented pupils are challenged with open-ended tasks which provide opportunities to tackle more complex issues and use a wider range of resources.

## **9. Computing**

Opportunities to use ICT to support teaching and learning in design and technology will be planned for and used as appropriate. In Key Stage 2 the computing curriculum will be used to program and control the children's design products, helping them to understand the concept of mechanical and electrical systems.

## **10. Cross-Curricular Links**

Design and technology contribute significantly to the teaching of other curriculum areas in our school by actively promoting skills such as:

- Teamwork and co-operation.
- Problem solving.
- Speaking and Listening.
- Planning and evaluating.
- Keyboard skills.

With an aim of actively improving:

- Writing.
- Mathematical knowledge and confidence.

## **11. Health and Safety**

The general teaching requirement for health and safety applies in this subject. We encourage the children to consider their own safety and the safety of others at all times. Teachers refer to the School's Health and Safety Policy and the safety procedures recommended in the DfE 'Health and Safety of Pupils on Educational Visits' guidelines for the educational visits aspects of this subject.

## **12. Role of Subject Leader / Monitoring**

The role of the subject leader is to ensure that there is good monitoring of quality teaching of design and technology within the school making sure the standards of children's work remains of a high standard. The work of the subject leader also involves supporting colleagues in the teaching of the subject, so all children have the opportunity to be innovative and creative. In addition the subject leader must inform colleagues about any current developments in the subject, and providing a strategic lead and direction for the subject in the school.

# Design and Technology Progression Map

### 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.

### 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.

### Physical Development (Moving and Handling)

Children handle equipment and tools effectively, including pencils for writing.

## Key Stage 1 National Curriculum Expectations

### Design

Pupils should be taught to:

- 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

Pupils should be taught to:

- 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

Pupils should be taught to:

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

### Technical Knowledge

Pupils should be taught to:

- 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

Pupils should be taught to:

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

### Design

Pupils should be taught 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;
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

### Make

Pupils should be taught to:

- 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

Pupils should be taught to:

- 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 [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

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.

## Intent

PlanIt Design and Technology offers a coherently planned sequence of lessons to help teachers ensure they have progressively covered the knowledge, understanding and skills required in the National Curriculum. PlanIt Design and Technology aims to inspire children through a broad range of practical experiences to create innovative designs which solve real and relevant problems within a variety of different contexts. The iterative design process is fundamental and runs throughout the PlanIt units. This iterative process encourages children to identify real and relevant problems, critically evaluate existing products and then take risks and innovate when designing and creating solutions to the problems. As part of the iterative process, time is built in to reflect, evaluate and improve on prototypes using design criteria throughout to support this process. Opportunities are provided for children to evaluate key events and individuals who have helped shape the world, showing the real impact of design and technology on the wider environment and helping to inspire children to become the next generation of innovators.



## Implementation

Design and Technology skills and understanding are built into lessons, following an iterative process. However, this is not to say that this structure should be followed rigidly: it allows for the revision of ideas to become part of good practice and ultimately helps to build a depth to children's understanding. Through revisiting and consolidating skills, our lesson plans and resources help children build on prior knowledge alongside introducing new skills, knowledge and challenge. We suggest a specific series of lessons for each key stage, which offer structure and narrative but are by no means to be used exclusively, rather to support planning. The revision and introduction of key vocabulary is built into each lesson. This vocabulary is then included in display materials and additional resources to ensure that children are allowed opportunities to repeat and revise this knowledge. Adult guides and accurate design and technology subject knowledge are always provided within lessons to allow the teacher and adults working in those lessons to feel confident and supported with the skills and knowledge that they are teaching.

Through these lessons, we intend to inspire pupils and practitioners to develop a love of Design and Technology and see how it has helped shaped the ever-evolving technological world they live in.

## Impact

The impact of using the full range of resources, including display materials, will be seen across the school with an increase in the profile of Design and Technology. The learning environment across the school will be more consistent with design and technology technical vocabulary displayed, spoken and used by all learners. Whole-school and parental engagement will be improved through the use of design and technology-specific home learning tasks and opportunities suggested in lessons and overviews for wider learning. We want to ensure that Design and Technology is loved by teachers and pupils across school, therefore encouraging them to want to continue building on this wealth of skills and understanding, now and in the future. Impact can also be measured through key questioning skills built into lessons, child-led assessment such as success criteria grids, jigsaw targets and KWL grids and summative assessments aimed at targeting next steps in learning.

	KS 1	LKS2	UKS2
Design	<p>KS1 Design and Technology National Curriculum</p> <p>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.</p> <p>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].</p> <p>Children design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>They generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a use their knowledge of existing products and their own experience to help generate their ideas;</li> <li>b design products that have a purpose and are aimed at an intended user;</li> <li>c explain how their products will look and work through talking and simple annotated drawings;</li> <li>d design models using simple computing software;</li> <li>e plan and test ideas using templates and mock-ups;</li> <li>f understand and follow simple design criteria;</li> <li>g work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment.</li> </ul>	<p>KS2 Design and Technology National Curriculum</p> <p>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.</p> <p>They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].</p> <p>Children 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.</p> <p>They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a identify the design features of their products that will appeal to intended customers;</li> <li>b use their knowledge of a broad range of existing products to help generate their ideas;</li> <li>c design innovative and appealing products that have a clear purpose and are aimed at a specific user;</li> <li>d explain how particular parts of their products work;</li> <li>e use annotated sketches and cross-sectional drawings to develop and communicate their ideas;</li> <li>f when designing, explore different initial ideas before coming up with a final design;</li> <li>g when planning, start to explain their choice of materials and components including function and aesthetics;</li> <li>h test ideas out through using prototypes;</li> <li>i use computer-aided design to develop and communicate their ideas (see note on p. 1);</li> <li>j develop and follow simple design criteria;</li> <li>k work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.</li> </ul>	<p>KS2 Design and Technology National Curriculum</p> <p>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.</p> <p>They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].</p> <p>Children 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.</p> <p>They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a use research to inform and develop detailed design criteria to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market;</li> <li>b use their knowledge of a broad range of existing products to help generate their ideas;</li> <li>c design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user;</li> <li>d explain how particular parts of their products work;</li> <li>e use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas;</li> <li>f generate a range of design ideas and clearly communicate final designs;</li> <li>g consider the availability and costings of resources when planning out designs;</li> <li>h work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment.</li> </ul>

Make	<p>KS1 Design and Technology National Curriculum</p> <p>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 making.</p> <p>Children select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>They select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Children can:</p> <p>Planning</p> <ul style="list-style-type: none"> <li>a with support, follow a simple plan or recipe;</li> <li>b begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer;</li> <li>c select from a range of materials, textiles and components according to their characteristics;</li> </ul> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> <li>d learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;</li> <li>e use a range of materials and components, including textiles and food ingredients;</li> <li>f with help, measure and mark out;</li> <li>g cut, shape and score materials with some accuracy;</li> <li>h assemble, join and combine materials, components or ingredients;</li> <li>i demonstrate how to cut, shape and join fabric to make a simple product;</li> <li>j manipulate fabrics in simple ways to create the desired effect;</li> <li>k use a basic running stitch;</li> <li>l cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;</li> <li>m begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.</li> </ul>	<p>KS2 Design and Technology National Curriculum</p> <p>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 making.</p> <p>Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.</p> <p>They 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.</p> <p>Children can:</p> <p>Plan</p> <ul style="list-style-type: none"> <li>a with growing confidence, carefully select from a range of tools and equipment, explaining their choices;</li> <li>b select from a range of materials and components according to their functional properties and aesthetic qualities;</li> <li>c place the main stages of making in a systematic order;</li> </ul> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> <li>d learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;</li> <li>e use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components;</li> <li>f with growing independence, measure and mark out to the nearest cm and millimetre;</li> <li>g cut, shape and score materials with some degree of accuracy;</li> <li>h assemble, join and combine material and components with some degree of accuracy;</li> <li>i demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product;</li> <li>j join textiles with an appropriate sewing technique;</li> <li>k begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.</li> </ul>	<p>KS2 Design and Technology National Curriculum</p> <p>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 making.</p> <p>Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>They 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.</p> <p>Children can:</p> <p>Planning</p> <ul style="list-style-type: none"> <li>a independently plan by suggesting what to do next;</li> <li>b with growing confidence, select from a wide range of tools and equipment, explaining their choices;</li> <li>c select from a range of materials and components according to their functional properties and aesthetic qualities;</li> <li>d create step-by-step plans as a guide to making;</li> </ul> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> <li>e learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures;</li> <li>f independently take exact measurements and mark out, to within 1 millimetre;</li> <li>g use a full range of materials and components, including construction materials and kits, textiles, and mechanical components;</li> <li>h cut a range of materials with precision and accuracy;</li> <li>i shape and score materials with precision and accuracy;</li> <li>j assemble, join and combine materials and components with accuracy;</li> <li>k demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product;</li> <li>l join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch;</li> <li>m refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.</li> </ul>
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Evaluate	<p>KS1 Design and Technology National Curriculum</p> <p>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.</p> <p>Children explore and evaluate a range of existing products.</p> <p>They evaluate their ideas and products against design criteria. Children can:</p> <ul style="list-style-type: none"> <li>a explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;</li> <li>b explain positives and things to improve for existing products;</li> <li>c explore what materials products are made from;</li> <li>d talk about their design ideas and what they are making;</li> <li>e as they work, start to identify strengths and possible changes they might make to refine their existing design;</li> <li>f evaluate their products and ideas against their simple design criteria;</li> <li>g start to understand that the iterative process sometimes involves repeating different stages of the process.</li> </ul>	<p>KS2 Design and Technology National Curriculum</p> <p>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.</p> <p>Children investigate and analyse a range of existing products.</p> <p>They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>They understand how key events and individuals in design and technology have helped shape the world.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;</li> <li>b explore what materials/ingredients products are made from and suggest reasons for this;</li> <li>c consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product;</li> <li>d evaluate their product against their original design criteria;</li> <li>e evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.</li> </ul>	<p>KS2 Design and Technology National Curriculum</p> <p>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.</p> <p>Children investigate and analyse a range of existing products.</p> <p>They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>They understand how key events and individuals in design and technology have helped shape the world.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a complete detailed competitor analysis of other products on the market;</li> <li>b critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make;</li> <li>c evaluate their ideas and products against the original design criteria, making changes as needed.</li> </ul>
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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Technical Knowledge</p>	<p>KS1 Design and Technology National Curriculum</p> <p>Children build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>They explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a build simple structures, exploring how they can be made stronger, stiffer and more stable;</li> <li>b talk about and start to understand the simple working characteristics of materials and components;</li> <li>c explore and create products using mechanisms, such as levers, sliders and wheels.</li> </ul>	<p>KS2 Design and Technology National Curriculum</p> <p>Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>They understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p> <p>They understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>They apply their understanding of computing to program, monitor and control their products.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a understand that materials have both functional properties and aesthetic qualities;</li> <li>b apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;</li> <li>c understand and demonstrate how mechanical and electrical systems have an input and output process;</li> <li>d make and represent simple electrical circuits, such as a series and parallel, and components to create functional products;</li> <li>e explain how mechanical systems such as levers and linkages create movement;</li> <li>f use mechanical systems in their products.</li> </ul>	<p>KS2 Design and Technology National Curriculum</p> <p>Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>They understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p> <p>They understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>They apply their understanding of computing to program, monitor and control their products.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;</li> <li>b understand and demonstrate that mechanical and electrical systems have an input, process and output;</li> <li>c explain how mechanical systems, such as cams, create movement and use mechanical systems in their products;</li> <li>d apply their understanding of computing to program, monitor and control a product.</li> </ul>
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## KS1 Design and Technology National Curriculum

Children use the basic principles of a healthy and varied diet to prepare dishes.

They understand where food comes

from. Children can:

- a explain where in the world different foods originate from;
- b understand that all food comes from plants or animals;
- c understand that food has to be farmed, grown elsewhere (e.g. home) or caught;
- d name and sort foods into the five groups in the Eatwell Guide;
- e understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why;
- f use what they know about the Eatwell Guide to design and prepare dishes.

## KS2 Design and Technology National Curriculum

Children understand and apply the principles of a healthy and varied diet.

They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.

They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Children can:

- a start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world;
- b understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically;
- c with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;
- d use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking;
- e explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes;
- f understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;
- g prepare ingredients using appropriate cooking utensils;
- h measure and weigh ingredients to the nearest gram and millilitre;
- i start to independently follow a recipe;
- j start to understand seasonality.

## KS2 Design and Technology National Curriculum

Children understand and apply the principles of a healthy and varied diet.

They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.

They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Children can:

- a know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;
- b understand about seasonality, how this may affect the food availability and plan recipes according to seasonality;
- c understand that food is processed into ingredients that can be eaten or used in cooking;
- d demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;
- e demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;
- f explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;
- g adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;
- h alter methods, cooking times and/or temperatures;
- i measure accurately and calculate ratios of ingredients to scale up or down from a recipe;
- j independently follow a recipe.