Cassop Primary School & Nursery

KS2 National Curriculum Programmes of Study

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 [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 - 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.

KS2 **Cycle A** **Term: Spring** **Topic: Food (Link to Italy)**

	Yr 3/4 **Pizzas**	**Yr 4/5** **Pizzas**	**Yr 5/6** **Pasta**
Design	* I can use research and develop a design to produce an innovative, functional and appealing product that is fit for a purpose, aimed at a particular group. * I can communicate and develop ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.		
Progression	*I can gather information about the needs and wants of particular groups. * I can develop my own design for a pizza and use this to inform ideas. * I can research pizza designs. * I can share ideas through discussion. * I can model ideas through prototypes and pattern pieces. * I can use annotated sketches, cross sectional drawing and diagrams. * I can use computer-aided design.	* I can carry out research, use surveys, interviews, questionnaires and web-based resources. * I can identify needs, wants, preferences and values of particular groups. * I can make design decisions, taking into account constraints such as time, resources and cost. * I can research pizza designs. * I can share ideas through discussion. * I can model ideas through prototypes and pattern pieces. * I can use annotated sketches, cross sectional drawing and diagrams. * I can use computer-aided design.	* I can carry out research, use surveys, interviews, questionnaires and web-based resources. * I can identify needs, wants, preferences and values of particular groups. * I can develop a simple design specification to guide thinking. * I can recognise when products have to fulfil conflicting requirements. * I can generate innovative ideas, drawing on research. * I can make design decisions, taking into account constraints such as time, resources and cost. * I can develop prototypes.
Make	* I can select from a wider range of tools and equipment to perform practical tasks (cutting, shaping, joining, finishing), accurately. * I can select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to functional properties and aesthetic qualities.		
Progression	* I can select suitable tools and equipment needed for making a pizza. * I can explain my choices of tools and equipment in relation to skills and techniques I will be using. * I can order the main stages of making. * I can produce detailed list of tools, equipment and ingredients needed. * I can follow safety procedures. * I can use a wide range of food ingredients.		

	* I can measure, mark out, cut and shape with some accuracy. * I can follow a design to make a pizza with some accuracy. * I can assemble, join and combine ingredients with some accuracy.	* I can begin to accurately measure to nearest cm, mark out, cut and shape ingredients. * I can follow a design to make a pizza with growing accuracy. * I can assemble, join and combine ingredients with some accuracy.	* I can accurately measure to nearest mm, mark out, cut and shape pasta. * I can accurately assemble, join and combine materials. * I can accurately apply finishing techniques. * I can use techniques that involve a number of steps. * I can demonstrate resourcefulness.
Evaluate	* I can investigate and analyse a range of existing products. * I can evaluate my ideas and products against my own design criteria and consider the views of others to improve their work. * I understand how key events and individuals in DT have helped shape the world.		
Progression	* I can identify strengths and weaknesses of my ideas and products. * I can consider the views of others, including intended users, to improve my work. * I can investigate who designed and made pizzas, where pizzas were designed and made and whether products are recycled/reused. * I can find out about chefs such as Gino Sorbillo.	* I can begin to evaluate the quality of my design, manufacture and fitness for purpose of my product as I design and make. * I can consider the views of others, including intended users, to improve my work. * I can compare my ideas and products to my original design specification. * I can investigate who designed and made pizzas, where pizzas were designed and made and whether products are recycled/reused. * I can find out about chefs such as Gino Sorbillo.	* I can critically evaluate the quality of my design, manufacture and fitness for purpose of my product as I design and make. * I can compare my ideas and products to my original design specification. * I can investigate how much pasta costs to make, how innovative products are and how sustainable pasta is. * I can name and find out about some famous Italian chefs.
Technical Knowledge	* I can understand how to use learning from maths and science to help design and make products. * I know that food needs to be functional and aesthetic. * I know that food can be combined and mixed to create more useful characteristics. * I can use the correct technical vocabulary for my projects.		
Progression	* I know that food ingredients can be fresh, pre-cooked and processed.	* I know that food ingredients can be fresh, pre-cooked and processed.	* I know that a recipe can be adapted by adding or substituting one or more ingredients.

Cooking and Nutrition	* I understand and apply the principles of a healthy and varied diet. * I can prepare and cook a variety of savoury dishes using a range of cooking techniques. * I understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.		
Progression	* I know that food is grown (such as tomatoes, wheat), reared (such as pigs, chicken, cattle) and caught (fish) in the UK, Europe and the wider world. * I know that seasons may affect the food available. * I understand how food is processed into ingredients that can be eaten or used in cooking. * I know how to prepare and cook pizza/pasta safely and hygienically including, where appropriate, the use of a heat source. * I know how to use techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.		
	* I know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the eat well plate. * I know that to be active and healthy, food is needed to provide energy for the body. * I can measure using grams. * I can follow a recipe.	* I know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the eat well plate. * I know that to be active and healthy, food is needed to provide energy for the body. * I can measure using grams. * I can follow a recipe. * I know that recipes can be adapted to change the appearance, taste, texture and aroma.	* I know that recipes can be adapted to change the appearance, taste, texture and aroma. * I know that different foods contain different substances – nutrients, water, fibre – that are needed for health. * I understand the need for correct storage. * I can measure accurately. * I can work out ratios in recipes.

KS1 National Curriculum Programmes of Study

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

- understand where food comes from.

KS1 **Cycle A** **Term: Spring** **Topic: Make a bug hotel**

	Yr 1/2
Design	* I can design purposeful, functional, appealing products based on a design criteria. * I can generate, develop, model and communicate ideas through talking, drawing templates, mock-ups and, where appropriate, ICT. * I can state the purpose of the design and the intended user. * I can explore materials, make templates and mock ups – of an insect hotel * I can think of my own ideas for a design by drawing on my own experiences
Make	* I can select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining, finishing) * I can select from and use a wider range of materials and components, including construction materials, according to their characteristic. * I can select from a range of tools and equipment explaining their choices. * I can select from a range of materials according to their characteristics. * I can follow safety procedures. * I can use and make my own templates. * I can measure, mark out, cut out and shape materials. * I can assemble, join and combine materials. * I can use fixing materials if needed. * I can use finishing techniques.
Evaluate	* I can explore and evaluate a range of existing products (look at previously made hotels). * I can evaluate my ideas and products against design criteria. * I can talk about my design, ideas and what I am making. * I can make simple judgements about my products and ideas against design criteria. * I can suggest how the hotel can be improved. * I can evaluate products and the materials I have used. * I can investigate what products are, who they are for, how they are made and what materials are used.
Technical Knowledge	* I can build structures, exploring how they can be made stronger, stiffer and more stable. * I understand about the simple working characteristics of materials. * I know the correct technical vocabulary for the project. * I understand how freestanding structures can be made stronger, stiffer and more stable.