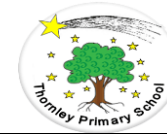
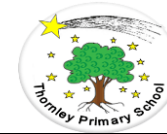


Design and Technology Long Term Plan Outline



Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS						
	Making face using natural materials	Large scale models	Fruit salad/ smoothies	Animal masks	Bug hotel	Puppets
2 year olds	Curriculum link: Experiments with a range of media – tools, materials, sound and whole body movement – through multisensory exploration.		Curriculum link: Continues to explore and experiment with an increasing range of media and movement through multi-sensory exploration and expression		Curriculum link: Notices and becomes interested in the transformative effect of their actions on materials and resources	
3 year olds	Curriculum link: Experiments with ways to enclose a space, create shapes and represent actions, sounds and objects	Curriculum link: Uses 3D and 2D structures to explore materials and /or express ideas	Curriculum link: Uses tools for a purpose	Curriculum link: Experiments with ways to enclose a space, create shapes and represent actions, sounds and objects	Curriculum link: Uses 3D and 2D structures to explore materials and /or express ideas	Curriculum link: Uses various construction materials Uses tools for a purpose
Reception	<p>Cooking and Nutrition: Soup (Kapow)</p> <p>Curriculum link: develops an awareness' of healthy lifestyles and the role of food / food preparation.</p> <p>Focus: In this unit, children explore the differences between fruits and vegetables using their senses (taste, texture, smell etc.). They listen to the story "Pumpkin Soup" and discuss the key ingredients the characters used before developing a class-based vegetable soup recipe.</p>	<p>Christmas crafts: Santa Chimney (Kapow)</p> <p>Curriculum link: Makes choices between materials to achieve an outcome.</p> <p>Focus: Children explore simple paper slider mechanism as part of a practical example and then apply it to create their own sliding Santa picture.</p>	<p>Structures: Boats (Kapow)</p> <p>Curriculum link: Developing an understanding of joining materials and discussing the outcome.</p> <p>Focus: In this unit, children explore what is meant by 'waterproof', 'floating' and 'sinking', then experiment and make predictions with various materials to carry out a series of tests. They learn about the different features of boats and ships before investigating their shape and structures to build their own.</p>	<p>Spring crafts: Flower threading</p> <p>Curriculum link: Makes choices between materials to achieve an outcome.</p> <p>Focus: Using a range of tools and techniques, pupils create their own flower threading pattern and complete it using coloured wool.</p>	<p>Textiles: Bookmarks (Kapow)</p> <p>Curriculum link: is able to manipulate materials to create a range of effects.</p> <p>Focus: Pupils develop and practise threading and weaving techniques using various materials and objects. They look at the history of the bookmark from Victorian times versus modern-day styles. The pupils apply their knowledge and skills to design and sew their own bookmarks.</p>	<p>Food and Nutrition: Rainbow Salad (Kapow)</p> <p>Curriculum link: develops an awareness' of healthy lifestyles and the role of food / food preparation.</p> <p>Focus: Pupils refresh their knowledge of fruits and vegetables and explore what it means to have a healthy balanced diet.</p>

Design and Technology Long Term Plan Outline



Key Stage 1

NC links Disciplinary /Knowledge

Children 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

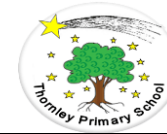
- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Cooking and Nutrition

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

Year 1	<p>Cooking and Nutrition: Fruit and Vegetables</p> <p>Focus: Learn to distinguish between fruit and vegetables and where they grow. Design a fruit and vegetable smoothie and accompanying packaging.</p>	Art	<p>Structures: Constructing a windmill</p> <p>Focus: Inspired by the song, 'Mouse in a windmill', design and construct a windmill for a client (mouse) to live in. Explore various types of windmill, how they work and their key features.</p>	Art	<p>Mechanisms: Wheels and axles</p> <p>Focus: Learn about the key parts of a wheeled vehicle, to develop an understanding of how wheels, axles and axle holders work. Design and make a moving vehicle.</p>	Art
Year 2	<p>Mechanisms: Making a moving monster</p> <p>Focus: Explore levers, linkages and pivots through existing products and experimentation, use this research to construct and assemble a moving monster</p>	Art	<p>Cooking and Nutrition: A balanced diet</p> <p>Focus: Learn about the food groups (carbohydrates, proteins, fruits and vegetables, dairy, oils and spreads) to understand a balanced diet to develop a healthy wrap.</p>	Art	<p>Textiles: Pouches</p> <p>Focus: Learn how to sew a running stitch ready to design, make and decorate a pouch using a template.</p>	Art

Design and Technology Long Term Plan Outline



Key Stage 2

NC links Disciplinary

NC links Disciplinary /Knowledge

Children 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.

Year 3	Art	Structures: Constructing a castle Focus: Identify and learn about the key features of a castle, before designing and making a recycled-material castle (structure).	Art	Mechanical Systems: Pneumatic toys Focus: Explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams.	Art	Digital World: Electronic Charm Focus: Design, develop a program, house and promote a Micro:bit electronic charm to use in low-light conditions.
Year 4	Art	Textiles: Fastenings Focus: Analyse and evaluate a range of existing fastenings, then devise a list of design criteria to design, generate templates and make a fabric book sleeve.	Art	Electrical Systems: Torches Focus: Identify the difference between electrical and electronic products. Evaluate a range of existing torches and their features, then develop a new functional torch design.	Art	Cooking and Nutrition: Adapting a recipe Focus: Work in groups to adapt an existing biscuit recipe, whilst taking into account the cost of the ingredients and other expenses against a set budget.

Design and Technology Long Term Plan Outline



Year 5	Art	<p>Structures: Bridges</p> <p>Focus: Test and analyse various types of bridge to determine their strength and stability. Explore material properties and sources, before marking, sawing and assembling a wooden truss bridge.</p>	Art	<p>Mechanical Systems: Making a pop-up book</p> <p>Focus: Create a functional four-page pop-up storybook design, using lever, sliders, layers and spacers to create paper-based mechanisms.</p>	Art	<p>Digital World: Monitoring devices</p> <p>Focus: Apply Computing knowledge and understanding to program a Micro: bit animal monitoring device. Develop 3D CAD skills by learning how to navigate the Tinkercad interface and essential tools to combine multiple objects.</p>
Year 6	Art	<p>Electrical Systems: Steady hand game</p> <p>Focus: Understand what is meant by fit for purpose design and form follows function. Design and develop a steady hand game using a series circuit, including housing and backboard.</p>	Art	<p>Cooking and Nutrition: Come dine with me</p> <p>Focus: Develop a three-course menu focused on three key ingredients, as part of a paired challenge to develop the best class recipes. Explore each key ingredient's farm to fork process.</p>	Art	<p>Textiles: Fabric books/pictures</p> <p>Focus: Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, children design, assemble and decorate to create fabric book.</p>