Trinity St Mary's Church of England Primary School Subject Progression:
Key Stage 1 and 2
Subject Area: Design and 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, school, leisure, culture, enterprise, industry and the wider environment.

National Curriculum Objectives

Key Stage 1:
Pupils should be taught to:
Design:
- Purposeful, functional and appealing products for themselves and other users based on a 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 stringer, 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.

Key Stage 2:
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 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 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 n ad 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)
- Use and understand 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.

Year 1 – I Can…	Year 2 – I Can …	Year 3 – I Can …	Year 4 – I Can ….	Year 5 – I Can ….	Year 6 – I Can …
• begin to understand the development of existing products: What they are for, how they work, materials used. • begin to draw on their own experience to help generate ideas and research conducted on criteria. • start to suggest ideas and explain what they are going to do. • understand how to identify a target group for what they intend to design and make based on a design criteria. • begin to develop their ideas through talk and drawings. • make templates and mock ups of their ideas in card and paper or using ICT. • Begin to make their design using appropriate techniques. • Begin to build structures, exploring how they can be made stronger, stiffer and more stable. • Explore and use mechanisms [for example, levers,	• 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. • 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. • 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. • Learn to use hand	• identify the design features of their products that will appeal to intended customers; • use their knowledge of a broad range of existing products to help generate their ideas; • design innovative and appealing products that have a clear purpose and are aimed at a specific user; • explain how particular parts of their products work; • use annotated sketches • when designing, explore different initial ideas before coming up with a final design; • when planning, start to explain their choice of materials and components including function and aesthetics; • use computer-aided design to develop and communicate their ideas; • develop and follow simple design criteria; • work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment • with growing confidence, carefully select from a range of tools and equipment, explaining their choices;	• identify the design features of their products that will appeal to intended customers; • use their knowledge of a broad range of existing products to help generate their ideas; • design innovative and appealing products that have a clear purpose and are aimed at a specific user; • explain how particular parts of their products work; • use annotated sketches and cross-sectional drawings to develop and communicate their ideas; • when designing, explore different initial ideas before coming up with a final design; • when planning, start to explain their choice of materials and components including function and aesthetics; • develop and follow simple design criteria; • work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment. • with growing confidence, carefully select from a range of tools and equipment, explaining their choices;	• 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; • use their knowledge of a broad range of existing products to help generate their ideas; • design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user; • explain how particular parts of their products work; • generate a range of design ideas and clearly communicate final designs; • consider the availability and costings of resources when planning out designs; • work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment. independently plan by suggesting what to do next; • with growing confidence, select from a wide range of tools and equipment, explaining their choices • select from a range of materials and	• use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas; • 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; • use their knowledge of a broad range of existing products to help generate their ideas; • design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user; • explain how particular parts of their products work; • generate a range of design ideas and clearly communicate final designs; • consider the availability and costings of resources when planning out designs; • work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment. independently plan by suggesting what to do next; • with growing confidence, select from a wide range

sliders, wheels and axles], in their products. • With help measure, mark out, cut and shape a range of materials. • Explore using tools e.g. scissors and a hole punch safely. • Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. • Begin to use simple finishing techniques to improve the appearance of their product. • Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). • When looking at existing products explain what they like and dislike about products and why. • Begin to evaluate their products as they are developed, identifying strengths and	tools safely and appropriately. • Start to assemble, join and combine materials in order to make a product. • Demonstrate how to cut, shape and join fabric to make a simple product. Use basic sewing techniques. • Start to choose and use appropriate finishing technique shaped on own ideas. • 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. • Understand that all food comes from plants or animals. • Know that food has to	• select from a range of materials and components according to their functional properties and aesthetic qualities; • place the main stages of making in a systematic order; • learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures; • with growing independence, measure and mark out to the nearest cm and millimetre; • cut, shape and score materials with some degree of accuracy; • assemble, join and combine material and components with some degree of accuracy; • explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose; • explore what materials/ingredients products are made from and suggest reasons for this; • 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; • evaluate their product against their original	• select from a range of materials and components according to their functional properties and aesthetic qualities; • use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components; • with growing independence, measure and mark out to the nearest cm and millimetre; • cut, shape and score materials with some degree of accuracy; • assemble, join and combine material and components with some degree of accuracy; • explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose; • explore what materials/ingredients products are made from and suggest reasons for this; • 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; • evaluate their product against their original design criteria;	components according to their functional properties and aesthetic qualities; • create step-by-step plans as a guide to making; • learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures; • independently take exact measurements and mark out, to within 1 millimetre; • use a full range of materials and components, including construction materials and kits, textiles, and mechanical components; • cut a range of materials with precision and accuracy; • shape and score materials with precision and accuracy; • assemble, join and combine materials and components with accuracy; • complete competitor analysis of other products on the market; • evaluate the quality of design, manufacture and fitness for purpose of products as they design and make; • evaluate their ideas and products against the original design criteria, making changes as needed. apply their understanding of how to strengthen, stiffen	of tools and equipment, explaining their choices; • select from a range of materials and components according to their functional properties and aesthetic qualities; • create step-by-step plans as a guide to making; • learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures; • independently take exact measurements and mark out, to within 1 millimetre; • cut a range of materials with precision and accuracy; • shape and score materials with precision and accuracy; • assemble, join and combine materials and components with accuracy; • complete competitor analysis of other products on the market; • evaluate the quality of design, manufacture and fitness for purpose of products as they design and make; • evaluate their ideas and products against the original design criteria, making changes as needed. apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;

possible changes they might make. • Begin to understand that all food comes from plants or animals. • Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught. • Start to understand how to name and sort foods into the five groups in 'The Eat well plate' • Begin to understand that everyone should eat at least five portions of fruit and vegetables every day. • Know how to prepare simple dishes safely and hygienically, without using a heat source. • Know how to use techniques such as cutting, peeling and grating.	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.	design criteria; understand that materials have both functional properties and aesthetic qualities; • apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products; start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world; • understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically; • 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; • understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body; • prepare ingredients using appropriate cooking utensils; measure and weigh ingredients	• evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world. understand that materials have both functional properties and aesthetic qualities; • apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products; • understand and demonstrate how mechanical and electrical systems have an input and output process; • make and represent simple electrical circuits, such as a series and parallel, and components to create functional products; • explain how mechanical systems such as levers and linkages create movement; • use mechanical systems in their products. • understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically; • understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;	and reinforce more complex structures in order to create more useful characteristics of products • understand and demonstrate that mechanical and electrical systems have an input, process and output; • explain how mechanical systems, such as cams, create movement and use mechanical systems in their products; • apply their understanding of computing to program, monitor and control a product. 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; • understand about seasonality, how this may affect the food availability and plan recipes according to seasonality; • understand that food is processed into ingredients that can be eaten or used in cooking; • demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;	• understand and demonstrate that mechanical and electrical systems have an input, process and output; • explain how mechanical systems, such as cams, create movement and use mechanical systems in their products; • apply their understanding of computing to program, monitor and control a product. 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; • understand about seasonality, how this may affect the food availability and plan recipes according to seasonality; • understand that food is processed into ingredients that can be eaten or used in cooking; • demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;

			• prepare ingredients using appropriate cooking utensils; • measure and weigh ingredients		