WOMBWELL PARK STREET PRIMARY SCHOOL

WHOLE SCHOOL SUBJECT OVERVIEW

SUBJECT: Design and Technology SUBJECT LEADER: SLT

YEAR GROUP	Details of how the subject fits into the key areas of learning and FS provision				
FS	**DESIGN**	**MAKE**	**EVALUATE**	**TECHNICAL KNOWLEDGE**	**FOOD AND NUTRITION**
UtW (technology) EA&D (Exploring and using materials and media)	Pupils should be taught to: Explain what they are making and which materials they are using. Select materials from a limited range that will meet simple design criteria e.g. shiny. Select and name the tools needed to work the materials e.g. scissors for paper. Describe simple models or drawings of ideas and intentions. Explore ideas by rearranging materials.	Experience of using construction kits to build walls, towers, and frameworks. Experience of using of basic tools e.g. scissors or hole punches with construction materials e.g. plastic, card. Experience of different methods of joining card and paper. Joins construction pieces together to build and balance. Realises tools can be used for a purpose. Understands that different media can be combined to create new effects. Manipulates materials to achieve a planned effect. Constructs with a purpose in mind, using a variety of resources. Uses simple tools and techniques competently and appropriately. Selects appropriate resources and adapts work where necessary.	Select materials from a limited range that will meet simple design criteria e.g. shiny, smooth, stretchy etc) Select and name the tools needed to work the materials e.g. scissors for paper. Select appropriate sizes of material for purpose. Use adhesives to join material. Discuss their work as it progresses. Discuss possible changes and improvements they would make in the future. To operate simple equipment (programmable toys, remote controls, recordable devices).	Early experiences of working with paper and card to make simple flaps and hinges. Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners, and masking tape. Assemble vehicles using construction kits. Explores and uses a range of mechanisms.	Begin to develop a food vocabulary using taste, smell, texture, and feel. Stir, spread, knead, and shape a range of food and ingredients. Begin to work safely and hygienically- children know to wash hands before touching and eating food. Measure and weigh food items, non-statutory measures e.g. spoons, cups.

YEAR GROUP	ACTIVITIES PLANNED AND THEMATIC/TOPIC LINKS (What activities will be taught? What cross-curricular/ topic context will this be in?)CURRICULUM DELIVERY METHOD ENRICHMENT/EXTRA-CURRICULAR OPPORTUNITIES	National Curriculum: CONTENT AND SKILLS COVERED Details of which elements of the NC are covered. The skills and content are differentiated across age groups and to meet the needs of individual pupils.	LEARNING OUTCOMES	KEY VOCABULARY AND CONCEPTUAL LINKS
1 and 2 Year A	**AUTUMN:** Ya. **Weather and Seasons: What is the weather like around the world?** Design, make and evaluate, weather wheels and weather stations Weather Vane Weather Wheel	**KEY STAGE 1 D&T NATIONAL CURRICULUM** **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,	**DESIGN** **Y1** • I can say what I am making in different contexts: imaginary, story based, home, school, playground, nature reserve etc. • I am beginning to come up with ideas and experiment with different materials. **Y2**	**KEY VOCABULARY** **Y1** mix attach stick join materials model

1 and 2 **Year B**	**SPRING:** Ya.**<u>Explore castles: What was life like in a castle?</u>** Design, make and evaluate castles (key features of castles) Jousting banquet (Shields Banquet cookery) Castle visit Peg dolls for period costumes PLT Challenges **SUMMER:** Ya. **<u>What can we find out about where plants and animals live?</u>** Design make and evaluate shoe box habitats **AUTUMN:** Yb. **<u>What is it like in different parts of the UK?</u>** Familiar towns; Wombwell, exploring, researching, sorting, evaluating, buildings in our locality. Walk in our locality Afternoon tea for a famous person (British isles theme) Famous people from our area **SPRING:** Yb: **<u>Why are these people famous?</u>** Samuel Pepys' diary. Buildings linked to Great Fire of London. Design, make and evaluate buildings Special visitor from the Fire Department **SUMMER:** <u>Yb **What will you find at the seaside?**</u> Seaside visit Study of sea creatures Visit to Barnsley by the Sea Model seaside	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 KNOWELDGE** • 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** • understand where food comes from • use the basic principles of a healthy and varied diet to prepare dish the basic principles of a healthy and varied diet to prepare dishes	• I can say what I am making and who it is for. I can say what my product is for and how it will work. • I can generate ideas by drawing on my experiences. I can use my knowledge of existing products to help me generate my own. I can use construction kits and a range of other materials. **MAKE** **Y1** • I am beginning to plan by saying what I might do next. • I am beginning to use a range of materials including construction kits, textiles, and food ingredients. I am beginning to cut and shape materials independently. **Y2** • I can plan by saying what I might do next. I can select from a range of tools and equipment. • I can use a range of materials including construction kits, textiles, and food ingredients. I can mainly independently: measure, mark out, cut and shape materials. I am beginning to assemble, join and combine materials and components. **EVALUATE** **Y1** • I am beginning to talk about my design ideas and what I am making. • I have had the opportunity to explore a product I have found out what it is , who it is for and how it works **Y2** • I can talk about my designs and what I am making. I can make simple judgements about my products and ideas against a design criteria. • I have had the opportunity to explore a range of products. I have explored what they are, what they are for, who they are	**Y2** design support strengthen observe print dab craft ingredients recipe **<u>CONCEPTUAL LINKS ACROSS THE CURRICULUM</u>** **HISTORICAL CONCEPTUAL LINKS:** Importance of design and innovation through history **SCIENTIFIC CONCEPTUAL LINKS:** Application of scientific principles during the design process. Concepts of innovation and invention. **MATHEMATICAL CONCPETUAL LINKS:** The importance of accuracy in measurement. **ARTISTIC CONCEPTUAL LINKS:** The importance of aesthetics during the design process. Links between

	Sport and Health Week (including healthy eating) D&T is integrated into our creative curriculum through our thematic learning enquiries. D&T skills are taught and then applied through contextualised learning opportunities. There are also additional opportunities to develop D&T skills through PLT challenges and theme weeks.		for, how they are used, what they are made from and where they might be used. **TECHNICAL KNOWLEDGE** **Y1** • I can with support make freestanding structures stronger and more stable. I am beginning to understand the working characteristics of some materials and components. **Y2** • I have independently explored the movement of simple mechanisms such as wheels, levers, sliders and axles. I am beginning to use some correct technical vocabulary. **FOOD NUTRITION** **Y1** • I can name and sort foods into the 5 groups of the 'Eat Well' plate. I know that everyone should eat at least 5 portions of fruit and veg a day. Y2 • I can prepare simple dishes without using a heat source. I am beginning to use techniques such as cutting, peeling and grating. **EXT** • I can confidently use a range of materials including construction kits, textiles, and food ingredients. I can confidently: measure, mark out, cut and shape materials. I am beginning to assemble, join and combine materials and components. I can us finishing techniques including those from art and design. • I can confidently describe using appropriate technical vocabulary.	cultural traditions and design. Design within each art form. **GEOGRAPHICAL CONCEPTUAL LINKS:** How the physical and human characteristics link to the design process. Designs to make living in a particular geographical region more comfortable. Locality, habitats, wildlife, customs and traditions as inspiration for design.
3	**AUTUMN:** **<u>How does South America compare to Wombwell?</u>**	**LOWER KEY STAGE 2 D&T NATIONAL CURRICULUM** **DESIGN**	**DESIGN** **Y3**	**<u>KEY VOCABULARY</u>** **Y3** style

3 / 4	Design, make and evaluate rain sticks to meet a specified criteria to be played by pupils at the celebration carnival. Research and make Colombian food for Carnival day, which ingredients do we grow locally, compare with ingredients grown in Colombia. South American Carnival Celebration with costumes, samba music and food **SPRING:** **<u>What was life like from The Stone Age to the Iron Age?</u>** What was the influence of the Roman Empire on the British People? Design, make and evaluate a roundhouse. Food technology designing and making pancakes. French Food Educational Visit to Murton Park MfL week exploring French food. **SUMMER:** **<u>What is life like underwater?</u>** Design, make and evaluate a model of a deep sea creature. Educational Visit to The Deep Arts Week D&T is integrated into our creative curriculum through our thematic learning enquiries. D&T skills are taught and then applied through contextualised learning opportunities. There are also additional opportunities to develop D&T skills through PLT challenges and theme weeks. AUTUMN: <u>How does where we live compare to Brazil in South America?</u> model making SPRING:	• Use research and develop design criteria to inform the design of innovative, functional, appealing that are fit for purpose aimed at particular individuals or groups. • Generate, develop, model and communicate their ideas through discussion and annotated sketches. **MAKE** • Select from and use a wider range of tools and equipment to perform practical tasks accurately. • Select from and use a wider range of materials and components including, including construction materials, textiles and ingredients, according to their characteristics. **EVALUATE** • evaluate their ideas and products against 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, such as gears, pulleys, cams, levers and linkages **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.	• I can select tools and equipment suitable to the task. I can select materials and components suitable to the task • I can measure mark out, cut and shape materials. **Y4** • I can select tools and equipment suitable to the task. I can select materials and components suitable to the task. I can order the mainstages of making • I can measure mark out, cut and shape materials and components with some accuracy **MAKE** **Y3** • I can gather information about the needs and wants of particular individuals and groups. I am beginning to develop my own design criteria and use these to inform my own ideas. **Y4** • I can share and clarify ideas through discussion, model ideas with prototypes and use annotated sketches. I can generate realistic ideas, focusing on the needs of the user. **EVALUATE** **Y3** • I can identify strengths and weaknesses in my ideas and products. I can consider the views of others. • I am beginning to investigate how well products have been designed and made. Why materials have been used and which methods of construction have been used. • I am beginning to investigate how well products work and how well a product achieves its purposes. • I have also investigated who designed and made a product and when it was designed and made. **Y4** • I can consider the views of others including intended users to improve my	construct structure create textile 2d 3d equipment product inventor levers linkages **Y4** perspective layer focus costume criteria component pneumatic **<u>CONCEPTUAL LINKS ACROSS THE CURRICULUM</u>** **HISTORICAL CONCEPTUAL LINKS:** Importance of design and innovation through history **SCIENTIFIC CONCEPTUAL LINKS:** Application of scientific principles during the design process. Concepts of innovation and invention. **MATHEMATICAL CONCPETUAL LINKS:** The importance of accuracy in measurement.

4	<u>What was life like from the Stone Age to the Iron Age? Who were the Romans and why did they invade Britain?</u> SUMMER: <u>How have scientists and inventors changed our lives today?</u> Designing and making inventions. Model making. Sketching designs. D&T is integrated into our creative curriculum through our thematic learning enquiries. D&T skills are taught and then applied through contextualised learning opportunities. There are also additional opportunities to develop D&T skills through PLT challenges and theme weeks. **AUTUMN:** **<u>Where would you like to visit in Europe?</u>** Designing and making circuit based models linking to the electricity project. Creative European celebration banquet **SPRING:** **<u>What was life like in Anglo-Saxon and Viking Britain?</u>** Designing and making Viking shields and a Viking longboat Cookery for European Banquet Class Anglo-Saxon and Viking Learning celebration shared with whole school. **SUMMER:** **<u>What on Earth is beyond our planet?</u>** Space buggies Arts week Interactive Space display		work. I can refer to my design criteria as I design and make. • I am beginning to investigate if a product meets the needs of the user. • I can independently find out about one inventor, designer, engineer, chef or manufacturer who has developed ground-breaking products. **TECHNICAL KNOWLEDGE** **Y3** • I know that a single fabric shape can be used to make a 3d textile product. • I know how mechanical systems such as levers and linkages or pneumatic systems create movement. **Y4** • I know how to make strong, stiff shell structures. • I know how simple electrical circuits and components can be used to create functional products. I know how to program a computer to control my products. **FOOD AND NUTRITION** **Y3** • I know that a healthy diet is made up from a variety and balance of different food and drink as depicted on the 'Eat Well' plate. **Y4** • I know that a healthy diet is made up from a variety and balance of different food and drink as depicted on the 'Eat well' plate. I know that to be active and healthy, food and drink are needed to provide energy for the body. **Y3** • I know that food is grown, reared or caught in the UK and the wider world • I can use traditional ingredients from a place to design a menu **Y4** • I can explain where some foods come from.	**ARTISTIC CONCEPTUAL LINKS:** The importance of aesthetics during the design process. Links between cultural traditions and design. Design within each art form. **GEOGRAPHICAL CONCEPTUAL LINKS:** How the physical and human characteristics link to the design process. Designs to make living in a particular geographical region more comfortable. Locality, habitats, wildlife, customs and traditions as inspiration for design.

	D&T is integrated into our creative curriculum through our thematic learning enquiries. D&T skills are taught and then applied through contextualised learning opportunities. There are also additional opportunities to develop D&T skills through PLT challenges and theme weeks.		• I can design a menu showcasing traditional food from countries I have studied **EXT:** • I can order the mainstages of making and explain the rationale behind the order and implications for the final outcome. • I can accurately mark out, cut and shape materials and components. I can apply a range of finishing techniques, including those form art and design with some accuracy. • I can explain the importance of the work of this person and the impact they have had on users and everyday life.	
5	**AUTUMN:** **<u>How does Whitby compare to Wombwell?</u>** **<u>Visit to Whitby</u>** Whitby celebration assembly **SPRING:** **<u>Who were the Ancient Greeks?</u>** Design, make and evaluate Greek Pottery Visit from Experience Barnsley Staff **SUMMER:** **<u>I'm a celebrity get me out of where?</u>** Whole school Arts week. Design and make a habitat for a chosen ecosystem. D&T is integrated into our creative curriculum through our thematic learning enquiries. D&T skills are taught and then applied through contextualised learning opportunities. There are also additional opportunities to develop D&T skills through PLT challenges and theme weeks. Visit to SWP or BH to explore animals in their habitats.	**UPPER KEY STAGE 2 D&T NATIONAL CURRICULUM** **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 select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately **MAKE** • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	**DESIGN** **Y5** • I am beginning to independently carry out research, using surveys, interviews, questionnaires and web based resources. I can identify the needs, wants, preferences and values of a particular individuals and groups. **Y6** • I can confidently carry out research, using surveys, interviews, questionnaires and web based resources. I can identify the needs, wants, preferences and values of a particular individuals and groups. **MAKE** **Y5** • I can produce appropriate lists of tools, equipment and materials I will use • I can accurately assemble, join and combine materials and components. **Y6** • I can produce appropriate lists of tools, equipment and materials I will use and explain my choices according to functional properties and aesthetic qualities. • I can accurately apply a range of finishing techniques, including those from art and	**<u>KEY VOCABULARY</u>** **Y5** survey assemble questionnaire preference finishing technique pulleys gears project display reinforce **Y6** target audience purpose focal point annotate prototype manufacture **<u>CONCEPTUAL LINKS ACROSS THE CURRICULUM</u>** **HISTORICAL CONCEPTUAL LINKS:** Importance of design and

6	**AUTUMN:** **<u>What can we find out about the human and physical geography of the countries, oceans and cities of the Pacific Rim?</u>** **SPRING:** **Who were the Ancient Egyptians?** Generate ideas, develop model and communicate. Use a wider range of materials and construction materials to build models **SUMMER:** **<u>What is the story behind chocolate?</u>** Design, make and evaluate own chocolate boxes. Food technology: making chocolates. Chocolate development day, Pupils explore the work of a chocolatier and design their own chocolates to present in their individually designed chocolate presentation boxes. D&T is integrated into our creative curriculum through our thematic learning Develop Egyptian display of cross-curricular and creative work to share with the whole school enquiries. D&T skills are taught and then applied through contextualised learning opportunities. There are also additional opportunities to develop D&T skills through PLT challenges and theme weeks.	• 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 **TECHNICAL KNOWLIEDGE** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • **COOKING AND NUTRITION** • 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 (taught with Science)	design. I can use techniques that involve a number of steps **EVALUATE** **Y5** • I can critically evaluate the quality of the design, manufacture and fitness for purpose of my products as I design and make. • I can find out about more than one inventor, designer, engineer, chef or manufacturer who has developed ground-breaking products. I can explain the impact and importance of their work **Y6** • I can also investigate and analyse how much products cost to make and how innovative products are **TECHNICAL KNOWLEDGE** **Y5** • I understand how mechanical systems such as cams or pulleys or gears create movement. • I can use appropriate technical vocabulary **Y6** • I know how to reinforce and strengthen a 3d framework. • I can use appropriate technical vocabulary **FOOD AND NUTRITION** **Y5** • I know that different food and drink contain different substances - nutrients, water and fibre - that are needed for health. • I understand that seasons may affect the food available. **Y6** • I know that recipes can be adapted to change the appearance, taste, texture and aroma. • I understand that food is processed into ingredients that can be eaten or used in cooking. **EXT:**	innovation through history **SCIENTIFIC CONCEPTUAL LINKS:** Application of scientific principles during the design process. Concepts of innovation and invention. **MATHEMATICAL CONCPETUAL LINKS:** The importance of accuracy in measurement. **ARTISTIC CONCEPTUAL LINKS:** The importance of aesthetics during the design process. Links between cultural traditions and design. Design within each art form. **GEOGRAPHICAL CONCEPTUAL LINKS:** How the physical and human characteristics link to the design process. Designs to make living in a particular geographical region more comfortable. Locality, habitats, wildlife, customs

			• I can make design decisions, taking account of constraints such as time, resources and cost. • I can formulate detailed step-by-step plans as a guide to making and explain each step in detail.	and traditions as inspiration for design.

ADDITIONAL WHOLE SCHOOL INFORMATION: (displays, website, theme weeks, initiatives, PLT challenges, community links, competitions, etc.)

D & T integrated into creative and enquiry based thematic planning. Theme weeks throughout the year present opportunities for pupils to develop their D&T skills, PLT challenges, teachers to add photographs and evidence to their class pages on the school website.

Community Cohesion, enrichment and extra-curricular: School takes part in National Events (science and technology week Pupils have the opportunity to take part in school trips to further their knowledge of design and technology. All classes have the opportunity to take part in cookery and nutrition based activities.

Theme Weeks: We have an annual science and technology week.

PLT challenges: Many of our half termly PLT challenges have a design and technology focus

Pupil Premium/Dis: Any events or activities in school requesting a voluntary contribution PP funding is used to ensure engagement from all PP|Dis students. Teachers are aware of the individuals making up this group within the class and monitor progress and attainment closely.

G&T/Challenge: All D&T activities are differentiated. Teachers are aware of the individuals making up this group within the class and monitor progress and attainment closely.

SEN/Inclusion: All lessons are differentiated and the school's inclusion policy followed. Teachers are aware of the individuals making up this group within the class and monitor progress and attainment closely.