Werneth Primary School Curriculum Synopsis for Design and Technology

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**Within EYFS children work purposefully responding to colours, shapes and materials to create simple representations of people and other things. Children need to be provided with resources for mixing colours, joining things together and combining materials, demonstrating where appropriate. Children will also use their skills to explore concepts and ideas through their representations. Children will have access to repeated and varied opportunities to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; share their creations, explaining the process they have used; and practice of using small tools, with feedback and support from adults.**					
Nursery	**In Nursery, the children will develop their Design and Technology knowledge and skills, focussing on the following objectives:** • Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them. • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors. • Explore how things work. • Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects. Spring 2 **<u>Traditional Tales</u> – Children will find out about Sheila Sri Prakash – Famous for designing low cost houses**					
Reception	During our 'All About Me' topic, we will: Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. **Parents will join us every half term so that they can work alongside their children to create the craft activities planned for that term.**	During our 'Celebrations' topic children will continue to focus on the objective set out in Autumn 1. It addition, children will learn how to make the following: ● Diva lamp holders using clay ● Paper plate Diva Lamp ● Lolly stick Christmas trees(joining resources) ● Decorations for Christmas Tree festival ● cakes (baking) **Children will find out about Ainsley Harriott – Chef.**	During our 'Under the Sea' topic children will continue to focus on the objective set out in Autumn 1. It addition, children will learn how to make the following: ● Mask making- props to support role play ● Making submarines, under sea castles, shipwrecks- outdoor den building. ● Creating tropical fish	During our 'Space' topic children will continue to focus on the objective set out in Autumn 1. It addition, children will learn how to make the following: ● Design and create rockets, ● space vehicles, ● stars, ● planets	During our 'Growth' topic children will continue to focus on the objective set out in Autumn 1. It addition, children will learn: ● About seasonal vegetables and make a wrap based pizza ● Making (and eating) a healthy fruit salad using prepared fruit ● Plant vegetables in the outside area to learn about where food comes from.	During our 'Wild Things' topic children will continue to focus on the objective set out in Autumn 1. It addition, children will learn how to make the following: ● Open ended craft activities based on woodland animals ● Making Gruffalo crumble ● Food for a picnic
Year 1	**<u>DT Focus - Making toys from the past</u>** In this unit, the children will make a toy linked to their topic history within living memory. The specific skills and knowledge the children should learn is to develop their own idea to design a toy and describe how it would work. Make a toy and make their toy stronger if needed. This is the first time the children begin to plan, make a product and evaluate. This will be developed again in Year 2 when the children go on to create a space buggy including wheels and axles, again in Year 3 when the children create a moving flag and finally in Year 5 when they are taught to create part of the Globe Theatre which include a pulley and gear. **Children will find out about Arvind Gupta – Indian toy inventor and scientist**		**<u>DT Focus - To make a sandwich</u>** In this unit, the children are to choose which ingredients they want to put into a sandwich. The specific skills and knowledge the children should learn is to design their sandwich taking account of what is available to them and to explain why they have made the choice they have. Additionally, the children should learn how to cut food safely and use appropriate tools to do so. The children should then be given the opportunity to evaluate their own and others sandwiches. Children should be given an opportunity to create a sandwich that they enjoy. This is the first opportunity in KS1 where the children will begin working with food. They will build on the basic cutting skills they developed in EYFS. They can begin to discuss healthy choices, hygiene and flavours here and this is then developed later in Year 2 when they make flapjacks, Year 3 when they make Christmas pastry, Year 4 when they make wholemeal bread containing vegetables and Year 5 when they make coleslaw.			**<u>DT Focus - Make a moving picture</u>** In this unit, the children will design a product that has at least one moving part. The specific knowledge and skills children should learn is how to explain to someone how they will make a product that has a moving part. They will choose the appropriate resources and tools to make their product and finally, they will explain to others how well or not so well their product has been made. Children should be given a fairly free choice to make a product that has a moving part.
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2		**<u>DT Focus - To make a space vehicle.</u>** In this unit, the children are to make a space buggy. The specific skills and knowledge the children should learn is to think of an idea and plan what to do next. They should then choose the tools and materials that they will use and explain the reasons why they have		**<u>DT Focus – To make sewing card</u>** In this unit, the children are to make a sewing card which will demonstrate their sewing skills. The specific skills and knowledge the children should learn is to think of a design and plan what to do next. They should then choose the tools and materials that they will		**<u>DT Focus - To make heathy flapjack</u>** In this unit, the children are to make flapjack that contains dried fruit. The specific skills and knowledge the children should learn is to design a heathy flapjack that contains dried fruit. They should be given the opportunity to practise the skill of

		chosen them. They should then learn how to measure materials to use in their model. Eventually, they should explain what went well with their model and how they made their model stronger and more stable. Children link their knowledge of Neil Armstrong and should be asked to create a space buggy and be asked to design and make one. The children will build on their learning from Year 1 where they made a toy. They will now begin to develop these skills and they will build on this again in Year 3 when the children create a moving flag and finally in Year 5 when they are taught to create part of the Globe Theatre which include a pulley and gear.		use to show their sewing skills and explain the reasons why they have chosen them. This will also include learning how to learn how to thread a needle. The children will use pre holed material to support their sewing skills. They should then learn how to use a needle to sew. Eventually, they should explain what went well with their sewing card and how they developed their sewing skills. **Children will find out about Cath Kidston, Fashion designer and author.**		weighing ingredients to use a recipe and then they should evaluate each other's flapjacks and provide appropriate feedback based on the design criteria. Children should be given a free hand to designing the flapjack. They should be helped and supported to measure and mix the ingredients.
Year 3	**<u>DT Focus - To create a bug hotel</u>** In this unit, building on work studied in Year 2 Science (Habitats), children will be asked to create a bug hotel by cutting materials and making it sturdy. The specific skills and knowledge the children should learn are to draw an annotated sketch that meets some set criteria and to choose appropriate material both for suitability and its appearance. Children should select the most appropriate tool for a given task and they should work accurately to measure and make cuts. Children should aim to carry out some research on bug hotels and should be exposed to a variety of different models re-created by other children.	**<u>DT Focus - To prepare and make a Christmas pastry.</u>** In this unit, the children should be taught to cut soft fruit and vegetables (peppers, tomatoes). Children will learn how to use filo pastry and how to cut shapes from it. They will also recap their spreading skills. Children should recap their knowledge on hygiene and how to be safe when preparing food and using sharp tools. They should know how to prepare a pastry by collecting the ingredients in the first place and know which tools to use for different purposes. Finally, they should evaluate the outcome by tasting the pastry and its appearance. **Children will find out about Nadiya Hussain – Food scientist. Won Great British Bake Off.**			**<u>DT Focus - To explore levers and linkages.</u>** In this unit, the children are joining materials with at least one lever and linkage to make a moving flag. The specific skills and knowledge the children should learn are how to produce an annotated sketch and explain it. The children can learn and use ideas from other people. They should communicate their ideas through sketches or drawings and know which tool to use for particular tasks. They will use prototypes to develop, test and share ideas. They should select from a variety of materials with regards to which materials are likely to give the best outcome. The children should develop their measuring skills and measure accurately. They should evaluate and suggest improvements to design.	
Year 4	**<u>DT Focus - To make wholemeal bread containing vegetables.</u>** In this unit the children will make wholemeal bread containing vegetables. They will choose which vegetables they want to put in their bread (eg olives, sun dried tomatoes) Children should recap their knowledge on hygiene and how to be safe when preparing food. The children will measure and mix the ingredients for bread. They will be taught how to knead the bread. Once cooked, with adult supervision where needed, they will taste their bread and evaluate its appearance and taste.	**<u>DT Focus - To create an earthquake proof building.</u>** In this unit, the children are to make an earthquake proof building that must be sturdy enough to withstand an earthquake proof test. The specific skills and knowledge the children should learn are how to work in a group to produce a plan and share their ideas with their group and others. They can use the views of their group to communicate their ideas through sketches. . They will use prototypes to develop, test and share ideas. They should select the correct tools and materials in order to make their design sturdy. They should evaluate their product against the design criteria and discuss what was successful or unsuccessful about their design. The children should be shown a variety of earthquake proof designs and look at how the buildings have been made sturdy/stronger and they should incorporate this into their design. Their building must reach at least 2 stories high and they should use the design criteria to refer back to.		**<u>DT Focus - To create a pyramid.</u>** In this unit, the children must carefully measure and design a pyramid. The choice of material chosen will be a key factor in success. The specific skills and knowledge the children should learn are how to produce a detailed plan and explain it to others. They should persevere and adapt their work if their original idea does not work. They should know which tools and materials to use for the task and measure accurately to ensure the design meets the design criteria. Then they should evaluate their product giving attention to appearance and present their product to their peers in an interesting way. Children will need to give careful thought to the materials they are choosing to use and they must also remember that their measurements have to be very accurate to ensure their product is successful. **Children will find out about the STEM Event – The building of the pyramids. Ancient Egyptians. Discuss how they were built (mathematics and technology) and why they are an important form of architecture.**		
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	**<u>DT Focus - To construct a Viking shield</u>** In this unit, the children should be taught the skills of cutting, measuring and joining.	**<u>DT Focus - To prepare and make coleslaw.</u>** In this unit, the children should be taught to cut, measure, mix and design a coleslaw based on its appearance.		**<u>DT Focus - To create a model of the Globe Theatre (or a part of it e.g. the stage).</u>** In this unit, the children should make a product which includes a gear.		

	The specific skills and knowledge the children should learn are how to produce a detailed step-by-step exploded diagram and to use a range of tools and equipment competently. They will use computer aided design software to create a drawing and plan before making a final version. Then the children should evaluate their Viking shield based on its appearance and finish against the design criteria. Children should then test the protective features of the shield.	Children should recap their knowledge on hygiene and how to be safe when preparing food and using sharp tools. They should know how to prepare a salad by collecting the ingredients in the first place and know which tools to use for different purposes. They should know which fresh foods are available according to the time of the year. Finally, they should evaluate the outcome by tasting the coleslaw and its appearance.		The specific skills and knowledge the children should learn are to design a product, using an exploded diagram, which requires a gear. They should select a range of tools and equipment competently, make a prototype and suggest alternative plans, outlining the positive features and drawbacks. At the end, they should evaluate their products' appearance and function against the design criteria. Children should link back to their scientific knowledge of pulleys and gears. **Children will find out about Zaha Hadid - Iraqi-British architect.**		
Year 6	**2025/26** **DT Focus – To make bunting** In this unit the children should be taught to make bunting using upcycled materials. The specific skills and knowledge the children should learn are to think of an idea and create a cross sectional and exploded diagram and plan what to do next. The children will cut out a template and use dressmaking pens to draw it out on fabric. The children will then cut out the fabric using pinking shears and sew a channel at the top so they can attach their bunting onto a ribbon. They should then build on the skills taught in Year 2 on how to use a needle to sew. Eventually, they should explain what went well with their product and how they made their product stronger.			**DT Focus – To program, monitor and control a product** In this unit the children will be taught to apply their understanding of computing to program, monitor and control a product. The specific skills and knowledge the children should learn are to build, from instructions, a range of different designs. Once built, the children will program their creations. They will then test out their product and evaluate their product against the design criteria and then use their knowledge to improve the product.	**DT Focus - To make a buzz game.** In this unit, the children should make a buzz game with an electrical circuit. The specific skills and knowledge the children are taught will build on their knowledge of circuits from Science to plan a product that contains a bulb. The children will create a cross sectional and exploded diagram, plan their product and make a prototype. They should learn are how to follow and refine original plans. Justify their planning in a convincing way and know which tool to use for specific tasks to reach the desired outcome. The children must also be able to use these tools correctly and safely keeping in mind why they are using a specific tool They children should then know how to test and evaluate their product against the design criteria and then use their knowledge to improve a product by strengthening or reinforcing. **Children will find out about Caroline Haslett – Electrical engineer.**	