Nursery Scheme of Work

Specific DT Projects for Nursery

-Make a healthy sandwich for our picnic
-Make musical shaker for our music sessions
-Make a mini me for our small world play
- how will you make it stand up? Must include some fabric/metal/ natural material

	Opportunities for D&T	Examples of how to support this	Notes on effective design and technology practice
C&L	*Use longer sentences of four to six words. *Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions. *Use talk to organise themselves and their play: "Let's go on a bus... you sit there... I'll be the driver."	•Expand on children's phrases. For example, if a child says, "going out shop", you could reply: "Yes, Henna is going to the shop". As well as adding language, add new ideas. For example: "I wonder if they'll get the 26 bus?" *Model language that promotes thinking and challenges children: "I can see that's empty – I wonder what happened to the snail that used to be in that shell?" Open-ended questions like "I wonder what would happen if….?" encourage more thinking and longer responses. Sustained shared thinking when two or more individuals (adult and child, or children) 'work together' in an intellectual way to solve a problem, clarify a concept, evaluate activities, extend a narrative.	**Overview:** Through D&T children listen carefully to instructions and follow them accurately when using tools and practising techniques. When responding to questioning, children explain how their own and others' products work, say who they think they are for and what purposes they fulfil. They develop technical vocabulary and learn how to express their ideas for what they want to design and make. **Tips on effective practice:** • Use the correct technical terms specific for tools and materials. • Sort and store materials into different categories based on their properties e.g.opaque, transparent. This may be changed at different times eg.materials that can bend, be folded • Provide a range of non-fiction books related to machines, vehicles, buildings etc.
PSED	*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.	• Respond to children's increasing independence and sense of responsibility. As the year proceeds, increase the range of resources and challenges, outdoors and inside. Eg. you might start off with light hammers, plastic golf tees and playdough. This equipment will offer children a safe experience of hammering. Wait until the children are ready to follow instructions and use tools safely. Then introduce hammers with short handles, nails with large heads, and soft blocks of wood. • Widen the range of activities that children feel confident to take part in. Model inviting new activities that encourage children to come over and join in, such as folding paper to make animals, sewing or weaving.	**Overview:** D&T is about people and making things better for people. Design and technology also provides unique opportunities for children to develop their self confidence and self awareness, manage their feelings and make relationships. **Tips on effective practice:** • Provide opportunities for children to work collaboratively. • Begin with simple tools that can be used one-handed (e.g. sandpaper block) and allow them to experience a range of tools, including those that require 2 hands too (e.g. twist drill). • Including some aspects of (low) risk situations can help develop self-esteem. Use a hammer to drive a nail under supervision. Consider holding the nail with a strip of cardboard -keeps fingers away. • Have children understand risks and what we do to reduce them, for example, wearing goggles. This will help to develop self-care. • When designing and/or making things for other people, ask the children what they think the user would like/need.

Physical	•Continue to develop their movement, balancing, riding (scooters, trikes and bikes) and ball skills • Choose the right resources to carry out their own plan. For example, choosing a spade to enlarge a small hole they dug with a trowel. • Use one-handed tools and equipment, for example, making snips in paper with scissors.	• Encourage children to transfer physical skills learnt in one context to another one. eg. children might first learn to hammer in pegs to mark their Forest school boundary, using a mallet. Then, they are ready to learn how to use hammers and nails at the woodwork bench. • Explain why safety is an important factor in handling tools, and moving equipment and materials. Have clear and sensible rules for everybody to follow. • You can begin by showing children how to use one handed tools (scissors and hammers) and then guide them with hand-over-hand help. Gradually reduce the help you are giving and allow the child to use the tool independently. • Encourage children to pick up small objects like individual gravel stones or tiny bits of chalk to draw with.	**Overview:** Design and technology activities can significantly help with fine and gross motor experiences in children. Using small tools, with support from adults, allows children to develop proficiency, control and confidence. Ensure you have a range of tools as they employ muscles in different ways (twisting, pushing and pulling) and can develop gross motor skills such as hammering. **Tips on effective practice:** • Using small tools help to develop precision • Exploring different fastenings such as zips, press-studs, Velcro, toggles, nuts and bolts on product handling collections. • Wooden boards with holes in can accommodate a number of different fixings such as hex nuts, screws and nails. Where possible introduce tools too such as allen keys, stubby screwdrivers and hammers. • Consider soft surfaces for using hammers and nails, for example, polystyrene and cork can make the process easier. Golf tees provide a larger surface area to hit than many nails.
Maths	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. • Combine shapes to make new ones - an arch, a bigger triangle etc. • Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.	• Encourage children to talk informally about shape properties using words like 'sharp corner', 'pointy' or 'curvy'. Talk about shapes as you play with them: "We need a piece with a straight edge." • Provide a variety of construction materials like blocks and interlocking bricks. Provide den-making materials. Allow children to play freely with these materials. When appropriate, talk about the shapes and how their properties suit the purpose. • Provide shapes that combine to make other shapes, such as pattern blocks and interlocking shapes, for children to play freely with. • Occasionally suggest challenges, so that children build increasingly more complex constructions. • Use tidy-up time to match blocks to silhouettes or fit things in containers, describing and naming shapes. Suggestion: "Where does this triangular one /cylinder /cuboid go?" • Provide patterns from different cultures, such as fabrics. • Provide a range of natural and everyday objects and materials, as well as blocks and shapes, for children to play with freely and to make patterns with.	**Overview:** This area of learning enables children to explore and further their understanding of shapes, spatial awareness and measure. Developing a risk-taking approach is also key and should help to embed a growth mindset which is vital for D&T. **Tips on effective practice:** • Ensure construction materials and kits feature a range of different shaped items. • Manipulation of different materials such as plasticine, sheet materials such as card into different shapes. • Use a range of units of measure, both standard and non-standard. • Set challenges that require measures e.g. a bridge that needs to hold 3 cups of sand. • Provide opportunities to use their developing skills in measures when creating products as well as using estimation and comparison. • Show how to weigh ingredients when following a recipe.
Literacy	• Use some of their print and letter knowledge in their early writing.	• Motivate children to write by providing opportunities in a wide range of ways. Suggestions: clipboards outdoors, chalks for paving stones, boards and notepads in the home corner.	**Overview:** Communication is a key aspect in D&T. Ensure there are opportunities for children to discuss their creations and those made by other people. **Tips on effective practice:** • Get children to write about what they have designed and made through captions, labels, simple descriptions and explanations. • Provide non-fiction books relating to machines, buildings, products, factories and more.

The World	• Use all their senses in hands on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary. • Explore how things work. • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice.	• Make collections of natural materials to investigate and talk about. Suggestions: contrasting pieces of bark, different types of leaves and seeds, different types of rocks, different shells and pebbles from the beach • Provide equipment to support these investigations. Suggestions: magnifying glasses or a tablet with a magnifying app. • Provide mechanical equipment for children to play with and investigate. Suggestions: wind-up toys, pulleys, sets of cogs with pegs and boards. • Draw children's attention to forces. Suggestions: - how the water pushes up when they try to push a plastic boat under it, how they can stretch elastic, snap a twig, but can't bend a metal rod,magnetic attraction and repulsion • Explore how different materials sink and float. • Explore how you can shine light through some materials, but not others. Investigate shadows • Plan and introduce new vocabulary related to the exploration, and encourage children to use it.	**Overview:** This area of learning enables children to learn about products and environments that have been designed and made by people. Children think about how a range products are used in places such as schools and homes. They select and use these products for particular purposes and investigate and evaluate them using a range of questioning techniques. They talk about features of their indoor and outdoor environment. To support their learning in design and technology, it is essential that children explore the built or design and made world. **Tips on effective practice:** • Children need frequent opportunities to explore existing products. • Ensure they explore products designed for different users and purposes. • Make sure that existing product collections include those made from textiles, food,construction materials. They can feature everyday items and some with moving parts e.g. hand whisk. • Encourage children to ask questions about who the products are for and what they do. • Ask them to think about the materials that have been used and how the products have been made. • Encourage them to say what they like or dislike about the design of the products. • Ask children to talk about how the products look, feel and smell and explain how they work. • Material handling collections allow for children to handle materials and suggest what they may be useful for, based on their properties. • In handling collections, feature materials with different properties e.g. opaque, translucent and transparent plastics, magnetic and non-magnetic metals, stretchy, rough, smooth and soft fabrics. - Children need frequent opportunities to explore aspects of the designed and made world through the indoor and outdoor environment. • Go on a hunt around the classroom for products of a similar type e.g. those made from textiles or have a strong structure. • Explore the built environment outdoors including play equipment and class visits. • Explore materials and where they come from – wood from trees, sawdust when sanded. • Extend 'important members of society' to other professions such as plumbers /architects
EAD	• Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. • Join different materials and explore different textures.	• Provide lots of flexible and open-ended resources for children's imaginative play. • Offer opportunities to explore scale. Suggestions: - long strips of wallpaper, child size boxes, different surfaces to work on e.g. paving, floor, tabletop or easel • Listen and understand what children want to create before offering suggestions. • Invite artists, musicians and craftspeople into the setting, to widen the range of ideas which children can draw on. • Suggestions: glue and masking tape for sticking pieces of scrap materials onto old cardboard boxes, hammers and nails, glue guns, paperclips and fasteners. • Help children to develop their drawing and modelmaking. Encourage them to develop their own creative ideas. Spend sustained time alongside them. Show interest in the meanings children give to their drawings and models. Talk together about these meanings	**Tips on effective practice:** • Children's learning In D&T should include planned, purposeful play and both child initiated and adult-led activities. • Encourage children to think about what their product is for e.g. fruit smoothie for a superhero. • Ask them to say who their product is for e.g. boat for a pirate • Function – make sure that children have opportunities to create products that have to work in some way in order to be successful e.g. using a construction kit, make a wall strong and stable enough for Humpty Dumpty. • Aesthetics – ask children to think about the appearance, finish and texture of the product e.g. decorative effects used on a simple felt bag to suit the user. • Children should have freedom to select media and materials from an appropriate range. • Using the senses, as appropriate, they should explore the simple working characteristics of materials including food, textiles and construction materials. • They need frequent opportunities to play with and explore a range of large and small construction kits that use different forms of joining e.g. magnetic, slot together, stacking etc. • They should also frequently explore materials that can be used to make things, such as felt, cardboard, softwood, plastics etc

			• Construction kits should enable children to build towers, walls, frameworks and shell structures. • Encourage children to think how they can stop their structures from falling over and how to make them stronger. • Construction materials should sometimes include moving parts such as wheels, levers and hinges. **• Designing should not necessarily entail drawing, but children may retrospectively draw what they have made.** **• Designing includes physically arranging and re-arranging materials and components and orally communicating what they are doing and have done.** **• Designing is typically intuitive i.e. children design as they make.**