

Reception Scheme of Work

Specific DT Projects for Reception

- Make a healthy fruit smoothie for a superhero- link to innocent brand.
- Make a boat for a pirate to sail the seas using recycled materials.
- Make a rain hat/ eyepatch / bag for a specific person or for a specific purpose eg. rainhat/ waterproof bag.

	Opportunities for design and technology	Examples of how to support this	Notes on effective design and technology practice
C&L	<ul style="list-style-type: none"> * Learn new vocabulary. • Ask questions to find out more and to check they understand what has been said to them. • Articulate their ideas and thoughts in well-formed sentences. • Engage in non-fiction books. 	<ul style="list-style-type: none"> • Identify new vocabulary before planning activities, for example, changes in materials: 'dissolving', 'drying', 'evaporating'. • Discuss which category the word is in, for example: "A cabbage is a kind of vegetable. It's a bit like a sprout but much bigger". • Show genuine interest in knowing more: "This looks amazing, I need to know more." <p>Think out loud, ask questions to check your understanding; make sure children can answer who, where and when questions before you move on to why and 'how do you know' questions.</p> <ul style="list-style-type: none"> • Build upon their incidental talk: "Your tower is definitely the tallest I've seen all week. Do you think you'll make it any higher?" Suggestion: ask open questions - "How did you make that? Why does the wheel move so easily? What will happen if you do that?" • Read aloud books to children that will extend their knowledge of the world and illustrate a current topic 	<p>Overview: Through design and technology, 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.</p> <p>Tips on effective practice:</p> <ul style="list-style-type: none"> • Use the correct technical terms specific for tools and materials. • Sort and store materials into different categories based on their properties e.g.opaque, translucent and transparent. This may be changed at different times, so you may then have materials that can bend, be folded etc. • Provide a range of non-fiction books related to machines, vehicles, buildings etc. • Graphical instructions such as building block instructions can be used.
PSED	<ul style="list-style-type: none"> • Show resilience and perseverance in the face of challenge. • Manage their own needs. 	<ul style="list-style-type: none"> • Help them to develop problem-solving skills by talking through how they, you and others resolved a problem or difficulty. Show that mistakes are an important part of learning and going back is trial and error not failure. • Talk about your own decisions about healthy foods, 	<p>Overview: D&T is about people and making things better for people. D&T also provides opportunities for children to develop their self confidence and self awareness, manage their feelings and make relationships.</p> <p>Tips on effective practice:</p> <ul style="list-style-type: none"> • Provide opportunities for children to work collaboratively. • Begin with simple tools that can be used one-handed and allow them to experience a range of tools, including those that require 2 hands too (e.g. twist drill).

		highlighting the importance of eating plenty of fruits and vegetables.	<ul style="list-style-type: none"> • 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. • When designing and/or making things for other people, what they think the user would like/need.
Physical	<ul style="list-style-type: none"> • Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons. 	<ul style="list-style-type: none"> • Offer children activities to develop and further refine their small motor skills. Suggestions: <ul style="list-style-type: none"> o threading and sewing, o pouring, o stirring, o making models with junk materials, construction kits and malleable materials like clay. 	<p>Overview: Design and technology activities can significantly help with fine and gross motor experiences in children.</p> <p>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.</p> <p>Tips on effective practice:</p> <ul style="list-style-type: none"> • 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	<p>Select, rotate and manipulate shapes in order to develop spatial reasoning skills.</p> <ul style="list-style-type: none"> • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. • Continue, copy and create repeating patterns. • Compare length, weight and capacity 	<ul style="list-style-type: none"> • Provide high-quality pattern and building sets, including pattern blocks, tangrams, building blocks and magnetic construction tiles, as well as found materials. • Challenge children to copy increasingly complex 2D pictures and patterns with these 3D resources, Extend thinking by posing problems -“I bet you can’t add an arch to that,” or “Maybe tomorrow someone will build a staircase.” • Investigate how shapes can be combined to make new shapes: for example, two triangles can be put together to make a square. Encourage children to predict what shapes they will make when paper is folded. Wonder aloud how many different ways there are to make a hexagon with pattern blocks. • Find 2D shapes within 3D shapes, including through printing or shadow play. • Make patterns with varying rules (including AB, ABB and ABBC) and objects and invite children to continue the pattern. • Model comparative language using ‘than’ and encourage children to use this vocabulary. For 	<p>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.</p> <p>Tips on effective practice:</p> <ul style="list-style-type: none"> • 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.

		example: "This is heavier than that."	
Literacy	Write short sentences with words with known sound-letter correspondences using a capital letter and full stop. Know that information can be found in books	<ul style="list-style-type: none"> Motivate children to write by providing opportunities in a wide range of ways. Suggestions: clipboards outdoors, chinks for paving stones, boards and notepads in the home corner. Children enjoy having a range of pencils, crayons, chinks and pens to choose from. 	<p>Overview: Communication is a key aspect in design and technology. Ensure there are numerous opportunities for children to discuss their creations and those made by other people.</p> <p>Tips on effective practice:</p> <ul style="list-style-type: none"> 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. Label design and technology resources in the classroom.
The World	Explore the natural world around them.	<ul style="list-style-type: none"> Create opportunities to discuss how we care for the natural world around us. Observe and interact with natural processes, such as ice melting, a sound causing a vibration, light travelling through transparent material, an object casting a shadow, a magnet attracting an object and a boat floating on water. 	<p>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 of everyday and less familiar 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.</p> <p>Tips on effective practice:</p> <ul style="list-style-type: none"> Children need frequent opportunities to explore existing products. Ensure they explore products designed for different users and purposes. Having a product handling collection is useful. <ul style="list-style-type: none"> Make sure that existing product collections include those made from textiles, food and construction materials. They can feature everyday (but unusual) 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	<ul style="list-style-type: none"> • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills. 	<p>Teach children different techniques for joining materials, such as how to use adhesive tape and different sorts of glue. • Provide a range of materials and tools and teach children to use them with care and precision. Promote independence, taking care not to introduce too many new things at once.</p>	<p>Tips on effective practice:</p> <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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.
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