RECEPTION	**Reception D&T** **(Linked Early Learning Goals)**			
	Physical development: *Moving and handling: children show good control and co-ordination in large and small movements. They move confidently in a range of ways, safely negotiating space. They handle equipment and tools effectively, including pencils for writing.* **Understanding the world:** *Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.* **Technology: children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.** Expressive Arts and Design *Exploring and using media and materials: children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.*	**PD** **30 -50 months** • Draws lines and circles using gross motor movements. • Uses one-handed tools and equipment, e.g. makes snips in paper with child scissors. **40-60 months** • Uses simple tools to effect changes to materials. • Handles tools, objects, construction and malleable materials safely and with increasing control. • HEALTH & SELF CARE- C&N link : Eats a healthy range of foodstuffs and understands need for variety in food **UW** **30-50 months** • Talks about why things happen and how things work. • Developing an understanding of growth, decay and changes over time. • Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. • Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. **40-60 months** • Looks closely at similarities, differences, patterns and change. **EAD** **30-50 months** • Beginning to be interested in and describe the texture of things. • Uses various construction materials. • Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. • Joins construction pieces together to build and balance. • Realises tools can be used for a purpose. **40-60 months** - • 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. • Selects tools and techniques needed to shape, assemble and join materials they are using.		

	D&T Content:	DT Skills			Vocabulary
		Developing, planning and communicating ideas	**Working with tools, equipment, materials and components to make quality products**	**Evaluating processes and products**	
YEAR ONE	**Design** • design purposeful, functional, appealing products for themselves and other users based on design criteria *D1.1 (Explorers)* • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology *D1.2 (Explorers)* **Make** • select from and use a range of tools and equipment to perform practical tasks, (or example, cutting, shaping, joining and finishing) *M1.1 (Circus)* • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics *M1.2 (Explorers, Be Healthy)* **Evaluate** • explore and evaluate a range of existing products *E1.1 (Explorers)* • evaluate their ideas and products against design criteria *E1.2 (Explorers)* **Technical knowledge** • build structures, exploring how they can be made stronger, stiffer and more stable *TK1.1 (Explorers)* • explore and use mechanisms, (for example levers, sliders, wheels and axles), in their products. *TK1.2 (Expl)* **Cooking & Nutrition (Food Tech)** • use the basic principles of a healthy and varied diet to prepare dishes *CN1.1 (ML links PASTA Be Healthy)* • understand where food comes from. *CN1.2 (Be Healthy)*	1. Can I think of some ideas of my own? +Food Tech 2. Can I explain what I want to do? +Food Tech *(talk with others about how they want to construct their product)* 3. Can I use pictures and words to plan? *(make simple plans before making objects, e.g. drawings, arranging pieces of construction before building)* *Food Tech additional:* 4. Can I describe the texture of foods? 5. Can I think of interesting ways of decorating the food I have made?	6. Can I explain what I am making? +Food Tech 7. Can I explain which tools I am using? + Food Tech *(describe how different textiles feel; describe the materials using different words; select appropriate resources and tools for their building projects)* 8. Can I make a product from textile by gluing? 9. Can I make a product which moves? 10. Can I cut materials using scissors? 11. Can I make a structure/model using different materials? 12. Can I work tidily? +Food Tech 13. Can they make their model stronger if it needs to be? *Food Tech additional:* 14. Can I cut food safely? 15. Can I wash my hands and make sure surfaces are clean?	16. Can I describe how something works? *(explain why they have chosen moving parts)* 17. Can I talk about my own work and things that other people have done? + Food Tech 18. Can they make their model stronger if it needs to be?	Plan Design Material Tools Product

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YEAR TWO	**Design** • design purposeful, functional, appealing products for themselves and other users based on design criteria D1.1 **(Transport, Dressing Up)** • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology D1.2 **(Transport, Dressing Up)** **Make** • select from and use a range of tools and equipment to perform practical tasks, (or example, cutting, shaping, joining and finishing) M1.1 **(Transport, +Dressing Up)** • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics M1.2 **(Transport, Be Healthy)** **Evaluate** • explore and evaluate a range of existing products E1.1 **(Celebrations Dressing up)** • evaluate their ideas and products against design criteria E1.2 **(Transport, Celebrations Dressing Up)** **Technical knowledge** • build structures, exploring how they can be made stronger, stiffer and more stable TK1.1 **(Transport)** • explore and use mechanisms, (for example levers, sliders, **wheels and axles**), in their products. **(Transport)** TK1.2 **Cooking and Nutrition (Food Tech)** • use the basic principles of a healthy and varied diet to prepare dishes CN1.1 • understand where food comes from. CN1.2 **(Be Healthy, Celebrations)**	1. Can I think of ideas and plan what to do next? + Food Tech *(develop their own ideas from initial starting points)* 2. Can I choose the best tools and materials? + Food Tech 3. Can I give a reason why my materials are best? *(explain why they chose a certain textile)* 4. Can I describe my design by using pictures, diagrams, models and words? + Food Tech Food Tech additional: 5. Can I describe the properties of the ingredients I am using? 6. Can I explain what 'hygienic' means?	7. Can I join things (materials/ components) together in different ways? *(using textiles; as part of a moving product; to make a product stronger)* 8. Can I measure textiles? 9. Can I cut textiles? (+ celebrations in collage?) 10. Can I add some kind of design to my product? + Food Tech 11. Can I measure materials to use in a model or structure? 12. Can I use joining, folding or rolling to make my product stronger? 13. Can I include some type of movement into models?	14. Can I say what went well with my work? + Food Tech 15. Can I say what I would want to improve if I did it again? + Food Tech 7. Can I work hygienically when working with food?	Design Diagrams Models Joining Textile Product Structure Folding Rolling Improve

	Content:	DT Skills			Vocabulary
		Developing, planning and communicating ideas	**Working with tools, equipment, materials and components to make quality products**	**Evaluating processes and products**	
YEAR THREE	**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 *D2.1 (Puppets)* • generate, develop, model and communicate their ideas through discussion, **annotated sketches**, cross-sectional and exploded diagrams, **prototypes**, **pattern pieces and computer-aided design** *D2.2 (Puppets, Dinosaurs, Chocolate)* **Make** • select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately *M2.1 (Puppets, Dinosaurs, Chocolate)* • 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 *M2.2 (Puppets)* **Evaluate** • investigate and analyse a range of existing products *E2.1 (+ Chocolate)* • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work *E2.2 (Puppets, + Chocolate?)* • understand how key events and individuals in design and technology have helped shape the world *E2.3 (Chocolate)* **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures *TK2.1 (Puppets)* • understand and use mechanical systems in their products, (for example as gears, pulleys, cams, levers and linkages) *TK2.2 (covered extensively in Y4)* • understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors) *TK2.3 (covered in Y4)* • apply their understanding of computing to programme, monitor and control their products. *TK2.4 (covered in Y4)* Cooking & Nutrition (Food Tech) • understand and apply the principles of a healthy and varied diet CN2.1(Food technology) • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques CN2.2 (Food technology) •understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. CN2.3	1. Can I show that my design meets a range of requirements? +Food Tech 2. Can I put together a step-by-step plan which shows the order and also what equipment and tools I need? + Food Tech 3. Can I describe my design using an accurately labelled sketch and words? + Food Tech 4. Can I be sure if my plan will actually work? (*How realistic is their plan?*) + Food tech *Food Tech additional:* 5. Can I choose the right ingredients for a product? 6. Can I describe how my combined ingredients come together? 7. Can I grow plants such as cress and herbs and use them in my product?	5. Can I use equipment and tools accurately? + Food Tech 6. Can I choose materials, tools and techniques appropriately for the task? 7. Can I join materials in a variety of ways? *(stiff and flexible sheet materials and textiles)* 8. Can I choose textiles for their appearance and their qualities? 9. Can I use electrical and mechanical component in my design? (covered in year 4) 10. Can I use a simple circuit? (covered in year 4) 11. Can I use more than one component? 12. Can I make accurate cuts and holes in stiff materials i.e. wood? 13. Can I use a range of techniques to shape and mould? Can I use finishing techniques when working with mouldable materials? *Food Tech additional:* 14. Can I use equipment and tools accurately? 15. Can I use equipment and tools safely? 16. Can I make my product look attractive?	17. Can I explain what I changed which made my design even better? + Food Tech 18. Can I say what went well with my work? + Food Tech 19. Can I say what I would want to improve if I did it again? + Food Tech	Requirements Step-by-step Plan Equipment Tools Label Sketch Accurately Techniques Joining Textiles Appearance Quality Component Mechanical Electrical Circuit Stiff Shape Mould Finishing Mouldable

		DT Skills			Vocabulary
	Content:	Developing, planning and communicating ideas	Working with tools, equipment, materials and components to make quality products	Evaluating processes and products	
YEAR FOUR	**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 D2.1 *(Rainforests, Lighthouses)* • generate, develop, model and communicate their ideas through discussion, **annotated sketches**, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design D2.2 *(Lighthouses, Rainforest)* **Make** • select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately M2.1 *(Rainforests)* • 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 M2.2 *(Monarchs, Rainforest)* **Evaluate** • investigate and analyse a range of existing products E2.1 *(Lighthouse, Rainforest)* • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (covered extensively in Y3) E2.2 • understand how key events and individuals in design and technology have helped shape the world E2.3 *(+Lighthouse)* **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures TK2.1 *(covered extensively in Y5)* • understand and use mechanical systems in their products, (for example as gears, pulleys, cams, levers and linkages) TK2.2 *(Rainforests)* • understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors) TK2.3 *(Lighthouse)* • apply their understanding of computing to programme, monitor and control their products. TK2.4 *(ICT)* <u>YEAR 4 FOOD TECH:</u> • understand and apply the principles of a healthy and varied diet CN2.1(Food technology) Cooking & Nutrition •prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques CN2.2 (Food technology) •understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. CN2.3	1. Can I decide how I will check if my design is successful? + Food Tech 2. Can I begin to explain how I can improve my original design? + Food Tech 3. Can I devise a template? 4. Can I explain the best way to join textiles?	5. Can I tell if my finished product is going to be good quality? 6. Can I show that I have thought about my product's audience? + Food Tech *(the need to produce something that will be liked by others; do they use finishing techniques when using mouldable materials?) (+ Rainforest)* 7. Can I use a range of tools and equipment with increasing accuracy? 8. Can I continue to work at and improve my product even if my original idea might not have worked? *(how have they altered their product after checking it; how have they attempted to make their product strong?)* 9. Can I measure materials and check my measurements to make sure I have not made any mistakes? 10. Can I use a range of advanced techniques to shape and mould? **Food Tech additional:** 11 . Can I tell if my finished product is going to be good quality? 12. Can I use a range of tools and equipment with increasing accuracy? 13. Can I continue to work at and improve my product even if my original idea might not have worked? 14. Can I work safely and in a hygienic way	12. Can I evaluate my product, thinking of both appearance and the way it works? 13. Can I take time to consider how I could have made my idea better? (how have they altered their product after checking it; are they confident trying out new ideas?) 14. Can I continue to check, adapt and refine my design to make sure it is the best it can be? + Food Tech (when using all materials, especially mouldable materials) 15. Can I evaluate appearance and function against the original criteria? + Food Tech *Food Tech additional*: 16. Can I present my product in an interesting way and explain why it was an effective presentation?	Template Devise Audience Accuracy Techniques Evaluate improve

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YEAR FIVE	**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 *D2.1 (Settlements)* • generate, develop, model and communicate their ideas through discussion, **annotated sketches,** cross-sectional and exploded diagrams, prototypes**,** pattern pieces and computer-aided design *D2.2 (Settlements)* **Make** • select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately *M2.1 (Settlements)* • 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 *M2.2 (Settlements– decoration of house)* **Evaluate** • investigate and analyse a range of existing products *E2.1 (Settlements)* • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work *E2.2 (Settlements)* • understand how key events and individuals in design and technology have helped shape the world *E2.3 (Settlements)* **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures *TK2.1 (Settlements)* • understand and use mechanical systems in their products, (for example as gears, pulleys, cams, levers and linkages) *TK2.2 (Discrete in science)* • understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors) *TK2.3 (Covered extensively in Y4)* apply their understanding of computing to programme, monitor and control their products. *TK2.4 (ICT)* **Cooking & Nutrition:** **• understand and apply the principles of a healthy and varied diet CN2.1** **• prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques CN2.2** **• understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. CN2.3**	1. Can I come up with a range of ideas after I have collected information? + Food Tech 2. Can I show how I consider the views of my audience when designing? + Food Tech *(do they think what the user would want when choosing textiles)* 3. Can I produce a detailed step-by-step plan? (covered in Y6)+ Food Tech 4. Can I suggest some alternative plans and say what the good points and drawbacks are about each? + Food Tech 5. Can I design a product to specific criteria? *(how have they made their product strong, attractive etc)* **Food Tech additional:** 7. Can I make up a prototype?	8. Can I explain why my finished product is going to be of good quality? *(How have they ensured their product is strong and fit for purpose?)* 9. Can I explain how my product will appeal to the audience? ✓✓✓ + Food Tech 10. Can I use a range of tools and equipment expertly? ✓✓✓ + Food Tech 11. Can I use a range of joining techniques when working with textiles? (with wood) 12. Can I persevere through different stages of the making process, even when I find things tricky? + Food Tech 13. Can I incorporate a switch into my product? (covered in Y6 Science) 14. Can I incorporate hydraulics and pneumatics? 15. Can I use accurate measurements to ensure my final product is precise? **Food Tech additional:** 16. Can I work safely and in a hygienic way and explain how I am doing this?	17. Can I continue to check, adapt and refine my design to make sure it is the best it can be? + Food Tech *(when using all materials, especially mouldable materials)* 18. Can I evaluate appearance and function against the original criteria? + Food Tech 19. Can I present my product in an interesting way and explain why it was an effective presentation? + Food Tech	Views Audience Design Alternative Drawbacks Criteria Prototype Quality 'fit for purpose' Persevere Switch Hydraulics Pneumatics Precise Adapt Refine function

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YEAR SIX	**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 *D2.1 (Maquettes)* • generate, develop, model and communicate their ideas through discussion, **annotated sketches**, **cross-sectional and exploded diagrams**, prototypes, pattern pieces and **computer-aided design** *D2.2 (Gears, Maquettes)* **Make** • select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately *M2.1 (Maquettes)* • 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 *M2.2 (Gears, Maquettes)* **Evaluate** • investigate and analyse a range of existing products *E2.1 (Maquettes)* • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work *E2.2 (+Maquettes)* • understand how key events and individuals in design and technology have helped shape the world *E2.3 (???)* **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures *TK2.1 (Maquettes, + Gears)* • understand and use mechanical systems in their products, (for example as gears, pulleys, cams, levers and linkages) *TK2.2 (Gears)* • understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors) *TK2.3 (covered extensively in Y4)* apply their understanding of computing to programme, monitor and control their products. *TK2.4 (ICT)* **Cooking & Nutrition (Food Tech)** • **understand and apply the principles of a healthy and varied diet CN2.1(Food technology) Cooking & Nutrition** **• prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques CN2.2 (Food technology)** **• understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. CN2.3**	1. Can I use a range of information to inform my design? + Food Tech 2. Can I use market research to inform plans? (+Maquettes) *(have they thought about how their product could be sold?, particularly when working with textiles)* ✓✓✓+ Food Tech 3. Can I work within constraints? + Food Tech 4. Can I follow and refine my plan if necessary? + Food Tech 5. Can I explain to someone else why my plan is suitable for my selected audience? (+Maquettes) + Food Tech 6. Can I consider culture and society in my designs, when appropriate? + Food Tech Can I justify why my choice of selected materials was the best for the task? **Food Tech additional:** 7. Can I grow my own products to make a salad (taking account of time)? 8. Can I explain how my product should be stored and why?	9. Can I use tools and materials precisely? + Food Tech 10. Can I adapt the way I am working if needed? + Food Tech 11. Can I use different types of circuits to improve my product? *12. Can I hide joints to improve the look of my product?* *(when working with stiff and flexible sheet material)*	13. Can I test and evaluate my final product? (+ Maquettes) + Food Tech 14. Can I test my product to check it is 'fit for purpose'? + Food Tech (+Maquettes) 15. Can I decide what different resources have improved my product? + Food Tech 16. Can I decide whether I would need more or different information to make it even better? + Food Tech 17. Can I evaluate my product against design criteria? +Food Tech 18. Can I show how I considered the use of the product when selecting materials? + Food Tech	Market research Constraints Refine Culture Society Justify Precisely Adapt Joints Test Evaluate Resources Design criteria