HOLLINS GRUNDY PRIMARY SCHOOL

Happiness, Health and Respect for Confident, Creative Learners

Curriculum Intent Grid - Design & Technology

MONTH BANDS	
3 and 4 year olds	• 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. • Join different materials and explore different textures.
Reception	• Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively sharing ideas, resources and skills.
Early Learning Goals	• 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; • Make use of props and materials when role playing characters in narratives and stories.

Year 1

Unit	Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
	• Can they think of some ideas of their own? • Can they explain what they want to do? • Can they make simple plans before making objects, e.g. drawings, arranging pieces of construction before building?	• Can they make a product which moves? • Can they select appropriate resources and tools for their building projects? • Can they make a structure/model using different materials? • Can they make their model stronger if it needs to be?	• Can they talk about their own work and things that other people have done? • Can they describe how different textiles feel? • Can they talk with others about how they want to construct their product?	• Can they explain what they are making? • Can they describe how something works?	• Do they wash their hands and make sure that surfaces are clean? • Can they cut food safely? • Can they describe the texture of foods? • Can they think of interesting ways of decorating food they have made, eg, cakes?

Step	b	w	s	s+
Total no. of statements = 16	20%	60%	90%	95%
No. of statements required	**3**	**9**	**14**	**15**

Year 2

Unit	Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
	• Can they think of ideas and plan what to do next? • Can they choose the best tools and materials and give a reason why these are best? • Can they describe their design by using pictures, diagrams, models and words? • Can they incorporate some type of movement into models?	• Can they join things (materials/ components) together in different ways? • Can they join materials together as part of a moving product? • Can they measure materials to use in a model or structure? • Can they use mechanisms [for example, levers, sliders, wheels and axles], in their products. • Can they add some kind of design to their product? • Can they make sensible choices as to which material to use for their constructions?	• Can they explain how to improve their design or construction?	• Can they explain what they are making? • Can they describe how something works?	• Can they describe the properties of the ingredients they are using? • Can they explain what it means to be hygienic?
End of Key Stage Statements	design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology	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	explore and evaluate a range of existing products evaluate their ideas and products against design criteria	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.	▪ use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from.

Step	b	w	s	s+
Total no. of statements = 15	20%	60%	90%	95%
No. of statements required	**3**	**9**	**14**	**15**

Year 3

Unit	Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
	• Can they show that their design meets a range of requirements?	• Can they use equipment and tools accurately?	• What did they change which made their design even better?	**Stiff & flexible sheet materials** •Can they work accurately to make cuts and holes? •Can they join materials?	**Cooking and nutrition** •Can they choose the right ingredients for a product? •Can they use equipment safely? •Can they make sure that their product looks attractive? •Can they describe how their combined ingredients come together? •Can they set out to grow plants such as cress and herbs from seed with the intention of using them for their food product?
	• Can they put together a step-by-step plan which shows the order and also what equipment and tools they need?			**Mouldable** •Can they use a range of techniques to shape and mould? •Do they use finishing techniques?	
	• Can they describe their design using an accurately labelled sketch and words?			**Electrical and mechanical components** •Can they make a product which uses both electrical and mechanical components? •Can they use a simple circuit?	
				Textiles •Can they join textiles of different types in different ways? •Can they choose textiles both for their appearance and also qualities?	

Step	b	w	s	s+
Total no. of statements = 18	20%	60%	90%	95%
No. of statements required	**4**	**12**	**16**	**17**

Year 4

Unit	Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
	• Can they produce a plan and explain it to others?	• Can they tell if their finished product is going to be good quality?	• Have they thought of how they will check if their design is successful?	**Mouldable materials** • Do they take time to consider how they could have made their idea better? • Do they work at their product even though their original idea might not have worked?	**Cooking and nutrition** • Do they know what to do to be hygienic and safe? • Have they thought what they can do to present their product in an interesting way?
	• Do they take account of the ideas of others when designing?	• Are they conscious of the need to produce something that will be liked by others?	• Can they begin to explain how they can improve their original design?	**Electrical and mechanical components** • Can they add things to their circuits? • How have they altered their product after checking it?	**Stiff and flexible sheet materials** • Can they measure carefully so as to make sure they have not made mistakes?
	• Can they suggest some improvements and say what was good and not so good about their original design?	• Can they show a good level of expertise when using a range of tools and equipment?	• Can they evaluate their product, thinking of both appearance and the way it works?	**Textiles** • Do they think what the user would want when choosing textiles? • Can they explore how to join things in a different way?	

Step	b	w	s	s+
Total no. of statements = 18	20%	60%	90%	95%
No. of statements required	**4**	**12**	**16**	**17**

Year 5

Unit	Design	Make	Evaluate	Technical Knowledge	Cooking &` Nutrition
	• Can they come up with a range of ideas after they have collected information?	• Can they explain why their finished product is going to be of good quality?	• Can they evaluate appearance and function against the original criteria?	<u>Mouldable materials</u> • Are they motivated enough to refine and improve their product? • Do they persevere through different stages of the making process?	<u>Cooking and nutrition</u> • Can they describe what they do to be both hygienic and safe? • How have they presented their product well?
	• Do they take a user's view into account when designing?	• Can they explain how their product will appeal to the audience?	• Do they check whether anything could be improved?	<u>Electrical and mechanical components</u> • Can they incorporate a switch into their product? • Can they refine their product after testing it?	<u>Stiff and flexible sheet materials</u> • Are their measurements accurate enough to ensure that everything is precise? • How have they ensured that their product is strong and fit for purpose?
	• Can they produce a detailed step-by-step plan?	• Can they use a range of tools and equipment expertly?		<u>Textiles</u> • Can they make up a prototype first? • Can they use a range of joining techniques?	

Step	b	w	s	s+
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No. of statements required	**4**	**12**	**16**	**17**

Year 6

Unit	Design	Make	Evaluate	Technical Knowledge	Cooking & Nutrition
	• Can they use a range of information to inform their design? e.g. use market research	• Can they use tools and materials precisely?	• How well do they test and evaluate their final product? • Is it fit for purpose? What would improve it?	<u>Mouldable materials</u> • Did they consider the use of the product when selecting materials? • Does their product meet all design criteria?	<u>Cooking and nutrition</u> • Can they explain how their product should be stored with reasons? • Can they set out to grow their own products with a view to making a salad, taking account of time required to grow different foods?
	• Can they work within constraints? • Can they follow and refine their plan if necessary?	• Do they change the way they are working if needed?	• Would different resources have improved their product?	<u>Electrical and mechanical components</u> • Can they use different kinds of circuit in their product? • Can they think of ways in which adding a circuit would improve their product? • Can they incorporate hydraulics and pneumatics?	<u>Stiff and flexible sheet materials</u> • Can they justify why they selected specific materials? • How have they ensured that their work is precise and accurate? • Can they hide joints so as to improve the look of their product?
	• Can they justify their plan to someone else? • Do they consider culture and society in their designs?		• Would they need more or different information to make it even better?		

End of Key Stage Statements	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 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	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 understand how key events and individuals in design and technology have helped shape the world	apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] apply their understanding of computing to program, monitor and control their products.	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, reared, caught and processed.

Step	b	w	s	s+
Total no. of statements = 20	20%	60%	90%	95%
No. of statements required	**4**	**12**	**18**	**19**