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|  | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| National Curriculum  (Design) |  | 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 | | 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 | | | |
| Hilton Lane Specific  (Design) |  | Smoothies  -design a smoothie  Making a moving storybook  -design a storybook using a familiar story that they know  Constructing a windmill  -include individual preferences and requirements | Baby bear’s chair  -explore the concept and features of structures and the stability of different shapes  Wheels and axles  -design a moving vehicle | Cushions  -design a cushion and its template  Make a moving monster  -explore different design options  Eating seasonally  -create a recipe that is healthy and nutritious using seasonal vegetables | Torches  -design a torch  Pavilions  -design a frame structure  Adapting a recipe  -design a biscuit to a given budget | Steady hand game  -research and analyse a range of children’s toys  -design a steady hand game  Stuffed toys  -design a stuffed toy  What could be healthier?  -adapt a traditional recipe | Programming pioneers  -develop ideas for a product with an embedded computer system that controls it  -develop, model and communicate ideas for an embedded system which monitors and controls a door, a room or both  -develop ideas for a product and start to write programs to monitor and control them  Come dine with me  -research and design a three-course meal  -write a recipe  Automata toys  -explore cams and make appropriate choices |
| Vocabulary |  | Design, healthy, smoothie, windmill | Stability, fabric, model, vehicle | Template, design (Y1), hygiene, flavour, balanced diet, seasonal | Engineer, housing structure, | Ingredients, adapt, product, stable | Program, prototype, recipe. |
| National Curriculum  (Make) |  | Select from and use range of tools and equipment to perform practical tasks (e.g. 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 | | Select from and use a wider range of tools and equipment to perform practical tasks (e.g. 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 | | | |
| Hilton Lane Specific  (Make) |  | Making a moving storybook  -construct a moving storybook | Pouches  -to sew a running stitch  -to cut fabric using a template  -decorate a pouch using fabric, glue or stitching  Baby bear’s chair  -make a chair following design criteria  Wheels and axles  -make a moving vehicle | Cushions  -decorate fabric using applique and cross stitch  -assemble the parts of the cushion  Make a moving monster  -make a moving monster following the design  Eating seasonally | Torches  -make a torch using electrical components  Pavilions  -create a range of different shapes frame structures  -build a frame structure  -add cladding to a frame structure  Adapting a recipe  -make and test a prototype  -make a biscuit that meets the design brief | Steady hand game  -make electromagnetic motors and understand how they work  -construct a stable base  -assemble electronics and complete their electronic game  Stuffed toys  -to create and add decorations to fabric  -use a blanket stitch to assemble the components of a stuffed toy  What could be healthier?  -adapt a recipe and make a complete product | Programming pioneers  -start to write programs to monitor and control a product  -model and communicate ideas, using either prototype models or computer-aided design  Come dine with me  -prepare a meal using a recipe  Automata toys  -to assemble a window display  -to assemble components to make a frame |
| Vocabulary |  | Model, tool, equipment, materials, shaping, stiff, test, | running stitch, sewing, thread, knot, fabric, needle, Man-made, natural, joining, axles, axle holder, wheels. | Make, pivots, cutting, shaping, joining, finishing | Assemble, attach, bake, mix, stable, strong, frame, properties, | Stuffing, sew, applique, gluing, cut | Control, cook, cross-contamination, cut, rotate, motion |
| National Curriculum  (Evaluate) |  | Explore and evaluate a range of existing products  Evaluate their ideas and products against design criteria | | Investigate and analyse a range of existing products,  Evaluate their ideas and products against their own design criteria and consider the views of other to improve their work  Understand how key events and individuals in design and technology have helped shape the world | | | |
| Hilton Lane Specific  (Evaluate) |  | Making a moving storybook  -evaluate their finished product  Construct a windmill  -evaluate my project and adapt design | Baby bear’s chair  -evaluate the strength, stiffness and stability of their structure | Cushions  -evaluate their cushion against their design criteria  Make a moving monster  -evaluate the movement of their product | Torches  -analyse and evaluate electrical products  Pavilions  -evaluate the different shaped frame structures | Steady hand game  -evaluate their own and others’ designs / games  Stuffed toys  -evaluate their stuffed toy against design criteria | Programming pioneers  -evaluate the design for a computer-controlled system and consider the views of others to improve your work  Come dine with me  -evaluate their meal against design criteria  Automata toys |
| Vocabulary |  | Evaluate, | Evaluate, stable | Evaluate, finishing | Analyse, evaluate, structures | Evaluate, criteria | Program, input, output, algorithm, automatic |
| National Curriculum  (Technical Knowledge) |  | Build structures, exploring how they can be made stronger, stiffer and more stable.  Explore and use mechanisms (e.g. levers, sliders, wheels and axels) in their products | | Apply their understanding of how to strengthen , stiffen and reinforce more complex structures  Understand and use mechanical systems in their products (e.g. gears, pulleys, cams , levers and linkages)  Understand and use electrical systems in their products (e.g. series circuits incorporating switches, bulbs, buzzers and motors)  Apply their understanding of computing to program, monitor and control their products | | | |
| Hilton Lane Specific  (Technical knowledge) |  | Making a moving storybook  -use levers and sliders  Construct a windmill  -make a stable structure –assemble components of my structure | Baby bear’s chair  -explore strength in different structures  -understand the shape of the structure affects its strength  Wheels and axles  -understand how wheels move  -identify what stops wheels from turning | Cushions  -know how to sew, cross stitch and applique  Make a moving monster  -study objects and understand how they move  Eating seasonally  -know that climate affects food growth  -know that importing food impacts the environment and is one of the reasons why we should eat seasonal foods grown in the UK | Torches  -learn about electrical items and how they work  Pavilions  -understand why we need to add cladding to our structure | Stuffed toys  -sew a blanket stitch  What could be healthier?  -to understand the term ‘healthy’  -to understand where food comes from | Programming pioneers  -explain how computers and computer programs are used in a variety of products  Come dine with me  -understand where food comes from  -research a three-course meal  Automata toys  -to use woodworking tools |
| Vocabulary |  | Mechanism, sliders, finishing, lever, turbine, axle, | Strength, move, structure | Cross stitch, applique, thread, knot, sew, secure, running stitch, attach, axle, gears, sliders, input, output | Circuit, switch, bulb, buzzer, motor, electricity, light, battery, conductor, insulator, housing, reflector, cladding, pavilion, properties | Electromagnetic motor, symmetrical, buzzer, wire, circuit, net, sew, pattern, blanket stitch, proportion, vegetables, substitute, reduce, nutrients | Cam, mechanism, rotary motion, linear motion, axle, linkage, algorithm, control, automatic, program |
| National Curriculum  (Cooking and Nutrition) |  | Use basic principles of a healthy and varied diet to prepare dishes.  Understand where food comes from | | 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. | | | |
|  |  | Smoothies  -Identify if a food is a fruit or a vegetable  -Identify where plants grow and which parts we eat  -Taste and compare fruit and vegetables  -Make a fruit and vegetable smoothie |  | Eating seasonally  -create a recipe that is healthy and nutritious using seasonal vegetables  -safely follow a recipe when cooking | Adapting a recipe  -follow a baking recipe  -make and test a prototype  -make a biscuit that meets a given design brief | What could be healthier?  -adapt a traditional recipe  -to make a complete product | Come dine with me  -to understand where food comes from  -prepare a meal using a recipe |
| Vocabulary |  | Mix, peel, cut, fruit, vegetable, seed |  | Slice, reared processed, seasonal, nutrition, fruit, vegetables, | Cut, bake, prepare, mix, mould, recipe, quantity | Recipe, nutrients, adapt, reduce | Cook, savoury, techniques, starter, main, dessert, recipe, cross-contamination |

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|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Year 1 |  | Food - Smoothies |  | Constructing a windmill |  | Making a moving storybook |
| Year 2 |  | Textiles – pouches | Baby bear’s chair |  |  | Wheels and axles |
| Year 3 |  | Eating seasonally |  | Textiles – cushions |  | Making a moving monster |
| Year 4 |  | Structure – pavilions |  | Food – adapting a recipe |  | Electrical systems – torches |
| Year 5 |  | Food – what could be healthier? |  | Textiles – stuffed toys |  | Electrical systems – steady hand game |
| Year 6 |  | PlanBee – programming pioneers |  | Food – come dine with me |  | Mechanical systems – automata toys |