



EYFS	<p>Early Learning Goals</p> <p>Physical Development - Fine Motor Skills-</p> <ul style="list-style-type: none"> • Use a range of small tools, including scissors, paintbrushes and cutlery. <p>Expressive Arts and Design - Creating with Materials</p> <ul style="list-style-type: none"> • 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. <p>Personal, Social and Emotional Development – Managing Self</p> <ul style="list-style-type: none"> • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.
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Key learning	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Designing	<p>Mechanisms</p> <ul style="list-style-type: none"> - Generate ideas based on simple design criteria and their own experiences, explaining what they could make. - Develop, model and communicate their ideas through drawings and mock-ups with card and paper. <p>Structures</p> <ul style="list-style-type: none"> - Generate ideas based on simple design criteria and their own experiences, explaining what they could make. - Develop, model and communicate their ideas through talking, mock-ups and drawings. <p>Food</p> <ul style="list-style-type: none"> - Design appealing products for a particular user based on simple design criteria. - Generate initial ideas and design criteria through 	<p>Textiles</p> <ul style="list-style-type: none"> - Design a functional and appealing product for a chosen user and purpose based on simple design criteria. - Generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology. <p>Mechanisms</p> <ul style="list-style-type: none"> - Generate initial ideas and simple design criteria through talking and using own experiences. - Develop and communicate ideas through drawings and mock-ups. <p>Food</p> <ul style="list-style-type: none"> - Design appealing products for a particular user based on simple design criteria. 	<p>Textiles</p> <ul style="list-style-type: none"> - Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. - Produce annotated sketches, prototypes, final product sketches and pattern pieces. <p>Mechanical systems</p> <ul style="list-style-type: none"> - Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. - Use annotated sketches and prototypes to develop, model and communicate ideas. <p>Food</p> <ul style="list-style-type: none"> - Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an 	<p>Structures</p> <ul style="list-style-type: none"> - Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the product. - Develop ideas through the analysis of existing shell structures and use computer-aided design to model and communicate ideas. <p>Food</p> <ul style="list-style-type: none"> - Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. - Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to 	<p>Textiles</p> <ul style="list-style-type: none"> - Generate innovative ideas through research including surveys, interviews and questionnaires. - Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes including using computer-aided design. - Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. <p>Mechanical systems</p> <ul style="list-style-type: none"> - Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. 	<p>Food</p> <ul style="list-style-type: none"> - Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. - Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. - Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. <p>Structures</p> <ul style="list-style-type: none"> - Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources.

	<p>investigating a variety of fruit and vegetables.</p> <ul style="list-style-type: none"> - Communicate ideas through talk and drawings. 	<ul style="list-style-type: none"> - Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. - Communicate ideas through talk and drawings. 	<p>appealing product for a particular user and purpose.</p> <ul style="list-style-type: none"> - Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. 	<p>develop and communicate ideas.</p> <p>Electrical systems</p> <ul style="list-style-type: none"> - Gather information about users' needs and wants, and develop design criteria to inform the design of products that are fit for purpose. - Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. 	<ul style="list-style-type: none"> - Develop a simple design specification to guide their thinking. - Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. <p>Food</p> <ul style="list-style-type: none"> - Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification. - Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. - Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. 	<ul style="list-style-type: none"> - Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. - Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. <p>Electrical systems</p> <ul style="list-style-type: none"> - Develop a design specification for a functional product that responds automatically to changes in the environment. - Generate, develop and communicate ideas through discussion, annotated sketches and pictorial representations of electrical circuits or circuit diagrams.
Making	<p>Mechanisms</p> <ul style="list-style-type: none"> - Plan by suggesting what to do next. - Select and use tools, explaining their choices to cut, shape and join paper and card. - Use simple finishing techniques suitable for the product they are creating. <p>Structures</p> <ul style="list-style-type: none"> - Plan by suggesting what to do next. - Select and use tools, skills and techniques, explain their choices. 	<p>Textiles</p> <ul style="list-style-type: none"> - Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. - Select from and use textiles according to their characteristics. <p>Mechanisms</p> <ul style="list-style-type: none"> - Select from and use a range of tools and equipment to perform practical tasks such as 	<p>Textiles</p> <ul style="list-style-type: none"> - Plan the main stages of making. - Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. - Select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern. <p>Mechanical systems</p>	<p>Food</p> <ul style="list-style-type: none"> - Plan the main stages of a recipe, listing ingredients, utensils and equipment. - Select and use appropriate utensils and equipment to prepare and combine ingredients. - Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. <p>Structures</p>	<p>Mechanical systems</p> <ul style="list-style-type: none"> - Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. - Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost. <p>Textiles</p>	<p>Food</p> <ul style="list-style-type: none"> - Write a step-by-step recipe, including a list of ingredients, equipment and utensils - Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. - Make, decorate and present the food product appropriately for the intended user and purpose. <p>Structures</p>

	<ul style="list-style-type: none"> - Select new and reclaimed materials and construction kits to build their structures. - Use simple finishing techniques suitable for the product they are creating. <p>Food</p> <ul style="list-style-type: none"> - Use simple utensils and equipment to e.g peel, cut, slice, squeeze, grate and cop safely. - Select from a range of fruit and vegetables according to their characteristics e.g colour, texture and taste to create a chosen product. 	<p>cutting and joining to allow movement and finishing.</p> <ul style="list-style-type: none"> - Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics. <p>Food</p> <ul style="list-style-type: none"> - Use simple utensils and equipment to e.g peel, cut, slice, squeeze, grate and cop safely. - Select from a range of fruit and vegetables according to their characteristics e.g colour, texture and taste to create a chosen product. 	<ul style="list-style-type: none"> - Order the main stages of making. - Select from and use appropriate tools with some accuracy to cut, shape and join paper and card. - Select from and use finishing techniques suitable for the product they are creating. <p>Food</p> <ul style="list-style-type: none"> - Plan the main stages of a recipe, listing ingredients, utensils and equipment. - Select and use appropriate utensils and equipment to prepare and combine ingredients. - Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. 	<ul style="list-style-type: none"> - Plan the order of the main stages of making. - Select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with some accuracy. - Explain their choice of materials according to functional properties and aesthetic qualities. - Use computer-generated finishing techniques suitable for the product they are creating. <p>Electrical systems</p> <ul style="list-style-type: none"> -Order the main stages of making. -Select from and use tools and equipment to cut, shape, join and finish with some accuracy. -Connect simple electrical components and a battery in a series circuit to achieve a functional outcome. -Program a standalone control box, microcontroller or interface box to enhance the way the product works. 	<ul style="list-style-type: none"> - Produce detailed lists of equipment and fabrics relevant to their tasks. - Formulate step-by-step plans and, if appropriate, allocate tasks within a team. - Select from and use a range of tools and equipment, including CAD, to make products that are accurately assembled and well finished. <p>Work within the constraints of time, resources and cost.</p> <p>Food</p> <ul style="list-style-type: none"> - Write a step-by-step recipe, including a list of ingredients, equipment and utensils - Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. - Make, decorate and present the food product appropriately for the intended user and purpose. 	<ul style="list-style-type: none"> - Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. - Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. - Use finishing and decorative techniques suitable for the product they are designing and making. <p>Electrical systems</p> <ul style="list-style-type: none"> - Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. - Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product. - Create and modify a computer control program to enable their electrical product to respond to changes in the environment.
Evaluating	<p>Mechanisms</p> <ul style="list-style-type: none"> - Explore a range of existing books and everyday products that use simple sliders and levers. - Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria. <p>Structures</p>	<p>Textiles</p> <ul style="list-style-type: none"> - Explore and evaluate a range of existing textile products relevant to the project being undertaken. - Evaluate their ideas throughout and their final products against original design criteria. <p>Mechanisms</p>	<p>Textiles</p> <ul style="list-style-type: none"> - Investigate a range of 3-D textile products relevant to the project. - Test their product against the original design criteria and with the intended user. - Consider others' views. - Understand how a key event/individual has influenced the development of the chosen product and/or fabric. 	<p>Food</p> <ul style="list-style-type: none"> - Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. - Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. <p>Structures</p>	<p>Mechanical systems</p> <ul style="list-style-type: none"> - Compare the final product to the original design specification. - Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. - Consider the views of others to improve their work. - Investigate famous 	<p>Food</p> <ul style="list-style-type: none"> - Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. - Evaluate the final product with reference back to the design brief and design specification, taking into

	<ul style="list-style-type: none"> - Explore a range of existing freestanding products in the school and local environment. - Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria. <p>Food</p> <ul style="list-style-type: none"> - Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. - Evaluate ideas and finished products against design criteria, including intended user and purpose. 	<ul style="list-style-type: none"> - Explore and evaluate a range of products with wheels and axles. - Evaluate their ideas throughout and their products against original criteria. <p>Food</p> <ul style="list-style-type: none"> - Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. - Evaluate ideas and finished products against design criteria, including intended user and purpose. 	<p>Mechanical systems</p> <ul style="list-style-type: none"> - Investigate and analyse books and, where available, other products with lever and linkage mechanisms. - Evaluate their own products and ideas against criteria and user needs, as they design and make. <p>Food</p> <ul style="list-style-type: none"> - Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. - Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. 	<ul style="list-style-type: none"> - Investigate and evaluate a range of shell structures including the materials, components and techniques that have been used. - Test and evaluate their own products against design criteria and the intended user and purpose. <p>Electrical systems</p> <ul style="list-style-type: none"> - Investigate and analyse a range of existing battery-powered products, including pre-programmed and programmable products. - Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. 	<p>manufacturing and engineering companies relevant to the project.</p> <p>Textiles</p> <ul style="list-style-type: none"> - Investigate and analyse textile products linked to their final product. - Compare the final product to the original design specification. - Test products with intended user, where safe and practical, and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. - Consider the views of others to improve their work. <p>Food</p> <ul style="list-style-type: none"> - Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. - Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. - Understand how key chefs have influenced eating habits to promote varied and healthy diets. 	<p>account the views of others when identifying improvements.</p> <ul style="list-style-type: none"> - Understand how key chefs have influenced eating habits to promote varied and healthy diets. <p>Structures</p> <ul style="list-style-type: none"> - Investigate and evaluate a range of existing frame structures. - Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. - Research key events and individuals relevant to frame structures. <p>Electrical systems</p> <ul style="list-style-type: none"> - Continually evaluate and modify the working features of the product to match the initial design specification. - Test the system to demonstrate its effectiveness for the intended user and purpose.
Technical Knowledge	<p>Mechanisms</p> <ul style="list-style-type: none"> - Explore and use sliders and levers. 	<p>Textiles</p> <ul style="list-style-type: none"> - Understand how simple 3-D textile products are made, 	<p>Textiles</p> <ul style="list-style-type: none"> - Know how to strengthen, stiffen and reinforce existing fabrics. 	<p>Food</p> <ul style="list-style-type: none"> - Know how to use appropriate equipment and utensils to prepare and combine food. 	<p>Mechanical systems</p> <ul style="list-style-type: none"> - Understand that mechanical and electrical systems have an input, process and an output. = 	<p>Food</p> <ul style="list-style-type: none"> - Know how to use utensils and equipment including heat

<p>- Understand that different mechanisms produce different types of movement.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Structures</p> <p>- Know how to make freestanding structures stronger, stiffer and more stable.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Food</p> <p>- Understand where a range of fruit and vegetables come from e.g farmed or grown at home.</p> <p>- Understand and use basic principle of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell Plate.</p> <p>- Know and use technical and sensory vocabulary relevant to the project.</p>	<p>using a template to create two identical shapes.</p> <p>- Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling.</p> <p>- Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Mechanisms</p> <p>- Explore and use wheels, axles and axle holders.</p> <p>- Distinguish between fixed and freely moving axles.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Food</p> <p>- Understand where a range of fruit and vegetables come from e.g farmed or grown at home.</p> <p>- Understand and use basic principle of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell Plate.</p> <p>- Know and use technical and sensory vocabulary relevant to the project.</p>	<p>- Understand how to securely join two pieces of fabric together.</p> <p>- Understand the need for patterns and seam allowances.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Mechanical systems</p> <p>- Understand and use lever and linkage mechanisms.</p> <p>- Distinguish between fixed and loose pivots.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Food</p> <p>- Know how to use appropriate equipment and utensils to prepare and combine food.</p> <p>- Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</p> <p>- Know and use relevant technical and sensory vocabulary appropriately.</p>	<p>- Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</p> <p>- Know and use relevant technical and sensory vocabulary appropriately.</p> <p>Structures</p> <p>- Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.</p> <p>- Develop and use knowledge of how to construct strong, stiff shell structures.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Electrical systems</p> <p>- Understand and use computing to program and control products containing electrical systems, such as series circuits incorporating switches, bulbs and buzzers.</p> <p>- Know and use technical vocabulary relevant to the project.</p>	<p>Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Textiles</p> <p>- A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics.</p> <p>- Fabrics can be strengthened, stiffened and reinforced where appropriate.</p> <p>Food</p> <p>- Know how to use utensils and equipment including heat sources to prepare and cook food.</p> <p>- Understand about seasonality in relation to food products and the source of different food products.</p> <p>- Know and use relevant technical and sensory vocabulary.</p>	<p>sources to prepare and cook food.</p> <p>- Understand about seasonality in relation to food products and the source of different food products.</p> <p>- Know and use relevant technical and sensory vocabulary.</p> <p>Structures</p> <p>- Understand how to strengthen, stiffen and reinforce 3-D frameworks.</p> <p>- Know and use technical vocabulary relevant to the project.</p> <p>Electrical systems</p> <p>- Understand and use electrical systems in their products.</p> <p>- Understand the use of computer control systems in products.</p> <p>- Apply their understanding of computing to program, monitor and control their products.</p> <p>- Know and use technical vocabulary relevant to the project.</p>
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