

Great Binfields DT Progression of Skills.

<p>EYFS Design</p>	<p>Make</p>	<p>Evaluate</p>	<p>Food & Nutrition</p>
<p>Select appropriate resources. Use gestures, talking and arrangements of materials and components to show design. Use contexts set by the teacher and myself. Use language of designing and making (join, build, shape, longer, shorter, heavier etc.)</p>	<p>Construct with a purpose, using a variety of resources. Use simple tools and techniques. Build / construct with a wide range of objects. Select tools & techniques to shape, assemble and join. Replicate structures with materials / components. Discuss how to make an activity safe and hygienic. Record experiences by drawing, writing, voice recording. Understand different media can be combined for a purpose.</p>	<p>Adapt work if necessary. Dismantle, examine, talk about existing objects/structures. Consider and manage some risks. Practise some appropriate safety measures independently. Talk about how things work. Look at similarities and differences between existing objects / materials / tools. Show an interest in technological toys. Describe textures.</p>	<p>Begin to understand some food preparation tools, techniques and processes. Practise stirring, mixing, pouring, blending. Discuss how to make an activity safe and hygienic. Discuss use of senses. Understand need for variety in food. Begin to understand that eating well contributes to good health.</p>

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Year 1 Design	Make	Evaluate	Materials/ Structures	Mechanism	Textiles	Food & Nutrition
<p><u>Plan Bee</u></p> <p>To be able to design a picture with a moving mechanism. To be able to design a piece of playground equipment.</p> <p>Have own ideas. Explain what I want to do. Explain what my product is for, and how it will work. Use pictures and words to plan, begin to use models. Design a product for myself following design criteria. Research similar existing products.</p>	<p><u>Plan Bee</u></p> <p>To be able to make a simple Carp Kite. To be able to construct a kite by following a design. To be able to make a moving picture based on a design. To be able to make a piece of playground equipment according to a design.</p> <p>Explain what I'm making and why. Consider what I need to do next. Select tools/equipment to cut, shape, join, finish and explain choices. Measure, mark out, cut and shape, with support. Choose suitable materials and explain choices. Try to use finishing techniques to make product look good. Work in a safe and hygienic manner.</p>	<p><u>Plan Bee</u></p> <p>To explore the history of different kites and what they look like. To be able to evaluate your finished kite. To be able to evaluate a moving picture. To be able to evaluate a finished product.</p> <p>Talk about my work, linking it to what I was asked to do. Talk about existing products considering: use, materials, how they work, audience, where they might be used. Talk about existing products, and say what is and isn't good. Talk about things that other people have made. Begin to talk about what could make product better.</p>	<p><u>Plan Bee</u></p> <p>To explore materials used to make simple kites. To explore designs of diamond kites. To explore the components, materials and features of playground equipment. To be able to explore different ways of joining and strengthening materials to create pieces of playground equipment</p> <p>Begin to measure and join materials, with some support. Describe differences in materials. Suggest ways to make material/product stronger .</p>	<p><u>Plan Bee</u></p> <p>To be able to create a sliding mechanism. To be able to use levers to create a moving mechanism. To investigate and create wheel mechanisms.</p> <p>Begin to use levers or slides.</p>	<p><u>Plan Bee</u></p> <p>Measure, cut and join textiles to make a product, with some support. Choose suitable textiles.</p>	<p><u>Plan Bee</u></p> <p>Describe textures. Wash hands & clean surfaces. Think of interesting ways to decorate food. Say where some foods come from, (i.e. plant or animal). Describe differences between some food groups (i.e. sweet, vegetable etc.) Discuss how fruit and vegetables are healthy. Cut, peel and grate safely, with support.</p>

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Year 2 Design	Make	Evaluate	Materials/ Structures	Mechanism	Textiles	Food & Nutrition
<p><u>Plan Bee</u></p> <p>To be able to design a fire engine. To be able to design a glove puppet. To design a seaside picnic</p> <p>Have own ideas and plan what to do next explain what I want to do and describe how I may do it. Explain purpose of product, how it will work and how it will be suitable for the user describe design using pictures, words, models, diagrams, begin to use ICT. Design products for myself and others following design criteria. Choose best tools and materials, and explain choices. Use knowledge of existing products to produce ideas.</p>	<p><u>Plan Bee</u></p> <p>To be able to make a fire engine based on a design. To be able to follow a design to make a puppet To follow instructions to make savoury snacks.</p> <p>Explain what I am making and why it fits the purpose. Make suggestions as to what I need to do next. Join materials/ components together in different ways. Measure, mark out, cut and shape materials and components, with support. Describe which tools I'm using and why. Choose suitable materials and explain choices depending on characteristics. Use finishing techniques to make product look good. Work safely and hygienically.</p>	<p><u>Plan Bee</u></p> <p>To explore modern fire engines. To be able to investigate ways of creating and decorating the body of a fire engine. To be able to evaluate a finished product. To investigate a range of puppets and their features.</p> <p>Describe what went well, thinking about design criteria. Talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion. Evaluate how good existing products are. Talk about what I would do differently if I were to do it again and why.</p>	<p><u>Plan Bee</u></p> <p>Measure materials. Describe some different characteristics of materials. Join materials in different ways. Use joining, rolling or folding to make it stronger. Use own ideas to try to make product stronger.</p>	<p><u>Plan Bee</u></p> <p>To investigate wheels, axles and chassis.</p> <p>Use levers or slides. Begin to understand how to use wheels and axles.</p>	<p><u>Plan Bee</u></p> <p>To develop and practise sewing skills. To be able to work with fabric to create a finger puppet.</p> <p>Measure textiles. Join textiles together to make a product, and explain how I did it. Carefully cut textiles to produce accurate pieces. Explain choices of textile. Understand that a 3D textile structure can be made from two identical fabric shapes.</p>	<p><u>Plan Bee</u></p> <p>To make edible boats To make fruit sculptures. To make edible cake decorations. To create frozen seaside snacks</p> <p>Explain hygiene and keep a hygienic kitchen. Describe properties of ingredients and importance of varied diet. Say where food comes from (animal, underground etc.) Describe how food is farmed, home-grown, caught. Draw eat well plate; explain there are groups of food. Describe "five a day." Cut, peel and grate with increasing confidence .</p>

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Year 3 Design	Make	Evaluate	Materials/ Structures	Mechanism	Textiles	Food & Nutrition
<p><u>Plan Bee</u></p> <p>To be able to gather ideas for creating moving monsters.</p> <p>To be able to design a monster including a moving pneumatic system.</p> <p>To be able to design a photograph frame for a particular purpose.</p> <p>Begin to research others' needs.</p> <p>Show design meets a range of requirements.</p> <p>Describe purpose of product follow a given design criteria.</p> <p>Have at least one idea about how to create a product.</p> <p>Describe design using an accurately labelled sketch and words.</p> <p>Make design decisions.</p> <p>Explain how product will work.</p> <p>Begin to use computers to show design.</p>	<p><u>Plan Bee</u></p> <p>To be able to make a monster with a moving pneumatic part.</p> <p>To be able to make a stable photograph frame from a design.</p> <p>Select suitable tools/ equipment, explain choices; begin to use them accurately, select appropriate materials fit for purpose.</p> <p>Work through plan in order.</p> <p>Consider how good a product will be.</p> <p>Begin to measure, mark out, cut and shape materials/ components with some accuracy.</p> <p>Begin to assemble, join and combine materials and components with some accuracy.</p> <p>Begin to apply a range of finishing techniques with some accuracy.</p>	<p><u>Plan Bee</u></p> <p>To investigate a variety of familiar objects that use air to make them work</p> <p>To be able to evaluate a finished product.</p> <p>To investigate free-standing structures and how they are made stable</p> <p>Look at design criteria while designing and making.</p> <p>Use design criteria to evaluate finished product.</p> <p>Say what I would change to make design better.</p> <p>Begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, whether or not they are fit for purpose.</p> <p>Begin to understand by whom, when and where products were designed.</p> <p>Learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products.</p>	<p><u>Plan Bee</u></p> <p>To find different ways of strengthening and joining paper and card.</p> <p>To investigate ways of making stable free-standing structures.</p> <p>Use appropriate materials.</p> <p>Work accurately to make cuts and holes.</p> <p>Join materials.</p> <p>Begin to make strong structures.</p>	<p><u>Plan Bee</u></p> <p>To investigate a variety of familiar objects that use air to make them work.</p> <p>Select appropriate tools / techniques.</p> <p>Alter product after checking, to make it better.</p> <p>Begin to try new/different ideas.</p> <p>Use simple lever and linkages to create movement.</p>	<p><u>Plan Bee</u></p> <p>Join different textiles in different ways.</p> <p>Choose textiles considering appearance and functionality.</p> <p>Begin to understand that a simple fabric shape can be used to make a 3D textiles project.</p>	<p><u>Plan Bee</u></p> <p>To cook using British ingredients available all year round.</p> <p>To know how seasonal fruits in Britain are grown and processed.</p> <p>To understand why vegetables form an important part of a healthy and varied diet.</p> <p>To find out about how seasonally produced meat can form part of a healthy diet.</p> <p>To show what you have learned about eating seasonal food as part of a healthy, varied diet.</p> <p>Carefully select ingredients.</p> <p>Use equipment safely.</p> <p>Make product look attractive.</p> <p>Think about how to grow plants to use in cooking.</p> <p>Begin to understand food comes from UK and wider world.</p> <p>Describe how healthy diet variety/balance of food/drinks.</p> <p>Explain how food and drink are needed for active/healthy bodies.</p> <p>Prepare and cook some dishes safely and hygienically.</p> <p>Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>

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Year 4 Design	Make	Evaluate	Materials/ Structures	Mechanism	Textiles	Food & Nutrition
<p><u>Plan Bee</u></p> <p>To investigate a range of packaging. To be able to design a packaging box for a particular purpose.</p> <p>To explore and experiment with a range of different fonts and graphic techniques. To be able to plan and design a storybook. To be able to design a torch for a particular purpose.</p> <p>Use research for design ideas. Show design meets a range of requirements and is fit for purpose. Begin to create own design criteria. Have at least one idea about how to create product and suggest improvements for design. Produce a plan and explain it to others. Say how realistic plan is. Include an annotated sketch. Make and explain design decisions. Explain how product will work. Make a prototype.</p>	<p><u>Plan Bee</u></p> <p>To be able to construct nets for 3-D shaped packages. To be able to make a packaging box by following a design. To be able to make a storybook with moving mechanisms using a design. To be able to make a torch.</p> <p>Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. Select appropriate materials, fit for purpose; explain choices. Work through plan in order. realise if product is going to be good quality. Measure, mark out, cut and shape materials/components with some accuracy. Assemble, join and combine materials and components with some accuracy. Apply a range of finishing techniques with some accuracy.</p>	<p><u>Plan Bee</u></p> <p>To explore the use of graphics on packaging. To be able to evaluate a finished product. To be able to evaluate a finished product. To identify the features of torches and investigate their uses. To investigate casings for a torch To be able to evaluate a finished product.</p> <p>Refer to design criteria while designing and making. Use criteria to evaluate product.</p> <p>Begin to explain how I could improve original design. Evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose. Discuss by whom, when and where products were designed. Research whether products can be recycled or reused.</p> <p>Know about some inventors/ designers/ engineers/chefs/ manufacturers of ground-breaking products</p>	<p>Measure carefully to avoid mistakes. Attempt to make product strong. Continue working on product even if original didn't work. Make a strong, stiff structure.</p>	<p><u>Plan Bee</u></p> <p>To investigate and evaluate products with lever and l linkage systems. To experiment with a range of techniques to create moving mechanisms. To be able to create a simple circuit and investigate different types of switches.</p> <p>Select most appropriate tools / techniques. Explain alterations to product after checking it. Grow in confidence about trying new / different ideas. Use levers and linkages to create movement.</p>	<p>Think about user when choosing textiles. Think about how to make product strong. Begin to devise a template. Explain how to join things in a different way. Understand that a simple fabric shape can be used to make a 3D textiles project.</p>	<p>Explain how to be safe/hygienic. Think about presenting product in interesting/ attractive ways. Understand ingredients can be fresh, pre-cooked or processed. Begin to understand about food being grown, reared or caught in the UK or wider world. Describe eat well plate and how a healthy diet variety / balance of food and drinks. Explain importance of food and drink for active, healthy bodies. Prepare and cook some dishes safely and hygienically. Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>

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Year 5 Design	Make	Evaluate	Materials/ Structures	Mechanism	Textiles	Food & Nutrition
<p><u>Plan Bee</u></p> <p>To find out which different ingredients are needed to make bread and how ingredients can be altered and mixed to create different effects. To be able to design a new bread product for a particular person or event. To develop criteria and design a prototype bridge for a purpose.</p> <p>To investigate and analyse items made using textiles: the materials used and how they are made.</p> <p>Use internet and questionnaires for research and design ideas. Take a user's view into account when designing. Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose. Create own design criteria. Have a range of ideas. Produce a logical, realistic plan and explain it to others. Use cross-sectional planning and annotated sketches make design decisions considering time and resources. Clearly explain how parts of product will work. Model and refine design ideas by making prototypes and using pattern pieces. Use computer-aided designs.</p>	<p><u>Plan Bee</u></p> <p>To be able to make bread based on a plan and design. To use pattern pieces to measure, mark and cut fabric; to sew design elements according to a design. To sew hems on an item made using textiles; to add design details.</p> <p>Use selected tools/equipment with good level of precision. Produce suitable lists of tools, equipment/materials needed. Select appropriate materials, fit for purpose; explain choices, considering functionality. Create and follow detailed step - by-step plan. Explain how product will appeal to an audience. Mainly accurately measure, mark out, cut and shape materials/components. Mainly accurately assemble, join and combine materials/components. Mainly accurately apply a range of finishing techniques use techniques that involve a small number of steps. Begin to be resourceful with practical problems.</p>	<p><u>Plan Bee</u></p> <p>To investigate and evaluate bread products according to their characteristics. To be able to evaluate a finished product. To analyse and evaluate products according to design criteria.</p> <p>Evaluate quality of design while designing and making. Evaluate ideas and finished product against specification, considering purpose and appearance. Test and evaluate final product evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose. Begin to evaluate how much products cost to make and how innovative they are. Research how sustainable materials are. Talk about some key inventors/designers/engineers/ chefs/manufacturers of ground- breaking products.</p>	<p><u>Plan Bee</u></p> <p>To explore ways in which pillars and beams are used to span gaps. To explore ways in which trusses can be used to strengthen bridges To explore ways in which arches are used to strengthen bridges. To understand how suspension bridges are able to span long distances.</p> <p>Select materials carefully, considering intended use of product and appearance. Explain how product meets design criteria. Measure accurately enough to ensure precision. Ensure product is strong and fit for purpose.</p>	<p><u>Plan Bee</u></p> <p>Refine product after testing. Grow in confidence about trying new / different ideas. Begin to use cams, pulleys or gears to create movement.</p>	<p><u>Plan Bee</u></p> <p>To explore some ways in which textiles are joined and decorated. To design an item made using textiles, and draw pattern pieces. To use pattern pieces to measure, mark and cut fabric; to sew design elements according to a design.</p> <p>Think about user and aesthetics when choosing textiles. Use own template. Think about how to make a product strong and look better. Think of a range of ways to join things. Begin to understand that a single 3D textiles project can be made from a combination of fabric shapes.</p>	<p><u>Plan Bee</u></p> <p>To learn how bread products are an important part of a balanced diet and can be eaten in different.</p> <p>Explain how to be safe / hygienic and follow own guidelines. Present product well - interesting, attractive, fit for purpose. Begin to understand seasonality of foods. Understand food can be grown, reared or caught in the UK and the wider world. Describe how recipes can be adapted to change appearance, taste, texture, aroma. Explain how there are different substances in food / drink needed for health. Prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source. Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>

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Year 6 Design	Make	Evaluate	Materials/ Structures	Mechanism	Textiles	Food & Nutrition
<p><u>Plan Bee</u></p> <p>To investigate edible houses to inspire a design. To use a computer to design a pattern template. To develop ideas for a decorative illuminated sign. To investigate ways in which computers can be used to program and control lights in a product. To learn about the roles and purposes of artists, craftsmen and designers working in different cultures and times. To learn about different tactile and visual elements and how these can be combined and organised for different purposes To be able to design a head-dress for a particular character or event.</p> <p>Draw on market research to inform design. Use research of user's individual needs, wants, requirements for design. Identify features of design that will appeal to the intended user. Create own design criteria and specification. Come up with innovative design ideas. Follow and refine a logical plan. Use annotated sketches, cross-sectional planning and exploded diagrams. Make design decisions, considering resources and cost. Clearly explain how parts of design will work, and how they are fit for purpose. Independently model and refine design ideas by making prototypes and using pattern pieces. Use computer-aided designs.</p>	<p><u>Plan Bee</u></p> <p>To construct a house out of edible resources. To construct and decorate a house out of edible resources using a variety of tools. To select and use tools, equipment, materials and components to make the enclosure of a decorative illuminated sign.</p> <p>Use selected tools and equipment precisely. Produce suitable lists of tools, equipment, materials needed, considering constraints. Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. Create, follow, and adapt detailed step-by-step plans. Explain how product will appeal to audience; make changes to improve quality. Accurately measure, mark out, cut and shape materials/components. Accurately assemble, join and combine materials/components. Accurately apply a range of finishing techniques. Use techniques that involve a number of steps. Be resourceful with practical problems.</p>	<p><u>Plan Bee</u></p> <p>To evaluate their plan against a design criteria. To compare ideas, methods and approaches in your own and others' work and say what you think and feel about them.</p> <p>Evaluate quality of design while designing and making; is it fit for purpose? Keep checking design is best it can be. Evaluate ideas and finished product against specification, stating if its fit for purpose. Test and evaluate final product; explain what would improve it and the effect different resources may have had. Do thorough evaluations of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose. Evaluate how much products cost to make and how innovative they are. Research and discuss how sustainable materials are consider the impact of products beyond their intended purpose. Discuss some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products.</p>	<p><u>Plan Bee</u></p> <p>To understand how LEDs may be used instead of traditional incandescent bulbs in series circuits. To construct a working circuit with one or more lights, and fit it in a decorative illuminated sign To be able to explore and use decorative techniques</p> <p>Select materials carefully, considering intended use of the product, the aesthetics and functionality. Explain how product meets design criteria. Reinforce and strengthen a 3D frame.</p>	<p><u>Plan Bee</u></p> <p>To test and improve a design. To investigate and analyse illuminated signs</p> <p>Refine product after testing, considering aesthetics, functionality and purpose. Be confident to try new / different ideas.</p>	<p><u>Plan Bee</u></p> <p>To apply your experience of materials and techniques to create a head-dress.</p> <p>Think about user's wants/ needs and aesthetics when choosing textiles. Make product attractive and strong. Make a prototype. Use a range of joining techniques. Think about how product might be sold. Think carefully about what would improve product. Understand that a single 3D textiles project can be made from a combination of fabric shapes.</p>	<p>Understand a recipe can be adapted by adding / substituting ingredients. Explain seasonality of foods. Learn about food processing methods. Name some types of food that are grown, reared or caught in the UK or wider world. Adapt recipes to change appearance, taste, texture or aroma. Describe some of the different substances in food and drink, and how they can affect health. Prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>