A black and white logo

Description automatically generated with medium confidence**Barleyhurst Park Primary School - Design and Technology Progression**

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| **Design**  Create closed shapes with continuous lines, and begin to use these shapes to represent objects.  Choose the right resources to carry out their own plan. | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| 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). | Have their own ideas.  Explain what they want to do.  Explain what their product is for, and how it will work.  Use pictures and words to plan, begin to use models.  Design a product for themselves following design criteria.  Research similar existing products. | Have their own ideas and plan what to do next.  Explain what they want to do and describe how they 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.  Design products for themselves and others following design criteria.  Choose the best tools and materials, and explain choices.  Use knowledge of existing products to produce ideas. | Begin to use research for design ideas.  Show design meets a range of requirements.  Describe purpose of product.  Follow a given design criteria.  Have at least one idea about how to create a product.  Create a plan which shows order, equipment and tools.  Describe design using an accurately labelled sketch and words.  Make design decisions.  Explain how the product will work.  Make a prototype. | Use research for design ideas.  Show design meets a range of requirements and is fit for purpose.  Begin to create their own design criteria.  Have at least one idea about how to create a product and suggest improvements for design.  Produce a plan and explain it to others.  Say how realistic the plan is.  Include an annotated sketch.  Make and explain design decisions considering availability of resources.  Explain how the product will work.  Make a prototype. | Use the internet for research and design ideas.  Take a user’s view into account when designing.  Begin to consider the needs/wants of individuals/groups when designing, and ensure the product is fit for purpose.  Create their 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 the product will work.  Model and refine design ideas by making prototypes and using pattern pieces. | Use research of the user's individual needs, wants, requirements for design.  Identify features of design that will appeal to the intended user.  Create their 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.  Clearly explain how parts of design will work, and how they are fit for purpose.  Independently model and refine design ideas by using pattern pieces. |

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| **Make**  Explore different materials freely, in order to develop their ideas about how to use them and what to make.  Make imaginative and complex ‘small worlds’ with blocks and construction kits, such as a city with different buildings and a park.  Choose the right resources to carry out their own plan.  Use one-handed tools and equipment, for example, making snips in paper with scissors. | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| 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 that different media can be combined for a purpose. | Explain what they’re making and why.  Consider what they 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 the product look good.  Work in a safe and hygienic manner. | Explain what they are making and why it fits the purpose.  Make suggestions as to what they 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 they are using and why.  Choose suitable materials and explain choices depending on characteristics.  Use finishing techniques to make the product look good.  Work safely and hygienically. | Select suitable tools/equipment, explain choices; begin to use them accurately.  Select appropriate materials, fit for purpose.  Work through the plan in order.  Consider how good the product will be.  Begin to measure, mark out, cut and shape materials/  components with some accuracy.  Begin to assemble, join and combine materials and components with some accuracy.  Begin to apply a range of finishing techniques with some accuracy. | 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 the plan in order.  Realise if the 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. | Use selected tools/equipment with a 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 a detailed step-by-step plan.  Explain how the 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. | 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 the product will appeal to the 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. |

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| **Evaluate**  Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them. | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| 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. | Talk about their work, linking it to what they were 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 the product better. | 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 they would do differently if they were to do it again and why. | Look at design criteria while designing and making.  Use design criteria to evaluate the finished product.  Say what they would change to make design better.  Begin to evaluate existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose.  Begin to understand by whom, when and where products were designed.  Learn about some inventors/designers/ engineers/chefs/ manufacturers of products. | Refer to design criteria while designing and making.  Use criteria to evaluate the product.  Begin to explain how they 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.  Know about some inventors/designers/ engineers/chefs/manufacturers of products. | Evaluate quality of design while designing and making.  Evaluate ideas and finished product against specification, considering purpose and appearance.  Test and evaluate the 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.  Research how sustainable materials are.  Talk about some key inventors/designers/ engineers/ chefs/manufacturers of products. | Evaluate quality of design while designing and making; is it fit for purpose? Keep checking design is as best as it can be.  Evaluate ideas and finished product against specification, stating if it is fit for purpose.  Test and evaluate the 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.  Research and discuss how sustainable materials are.  Consider the impact of products beyond their intended purpose.  Discuss some key inventors/designers/ engineers/manufacturers of products. |

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| **Cooking and Nutrition**  Feed themselves food.  Eat with fork and spoon and trying to use a knife.  Pour a drink.  Will try different fruits. | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Eats a healthy range of foodstuffs and understands the need for variety in food.  Practices some appropriate safety measures without direct supervision e.g. washing hands before food.  **Safety:**  Uses one-handed tools and equipment, e.g. makes snips in paper with child scissors.  Uses simple tools to effect changes to materials.  Handles tools, objects, construction and malleable materials safely and with increasing control.  Shows understanding of the need for safety when tackling new challenges, and considers and manages some risks.  Shows understanding of how to transport and store equipment safely. | Describe textures.  Wash hands & clean surfaces.  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.  Weigh using cups.  Cut, peel, slice and blend safely, with support. | 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 ‘five a day’.  Cut, chop, grate and slice with increasing confidence.  Weigh using electronic scales. | Carefully select ingredients.  Use equipment safely.  Prepare and cook some dishes safely and hygienically.  Grow in confidence using the following techniques: sifting, chopping, grating, mixing, stirring, kneading and baking.  Weigh to the nearest gram. | Explain how to be safe/hygienic.  Think about presenting products in interesting/ attractive ways.  Understand that ingredients can be fresh, pre- cooked or processed.  Prepare and cook some dishes safely and hygienically.  Use the following techniques: mixing, stirring, sprinkling,  Kneading, proofing, dividing, shaping and baking. | Explain how to be safe / hygienic and follow the guidelines.  Present product well - interesting, attractive, fit for purpose.  Begin to understand the 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.  Calculate ratios of ingredients to upscale or downscale a recipe.  Create and refine a recipe, including cooking skills.  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. | Understand that a recipe can be adapted by adding / substituting ingredients.  Explain seasonality of foods.  Name some types of food that are grown in the UK.  Adapt recipes to change appearance, taste, texture or aroma.  Prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of a heat source.  Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, kneading, decorating and baking. |

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| **Mechanisms**  Explore how things work. | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Begin to operate simple equipment.  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. | Explore and assemble moving vehicles using construction kits.  Begin to understand how to use axles and wheels. | Create levers and sliders.  Understand how to use wheels and axles. | Select appropriate tools / techniques.  Alter product after checking, to make it better.  Begin to try new/different ideas.  Use pulleys to create movement and lift a weight.  Construct and disassemble examples using construction equipment. | Make simple circuits with switches.  Select the most appropriate tools / techniques.  Explain alterations to the product after checking it.  Grow in confidence about trying new / different ideas.  Use levers and linkages to create movement. | Refine product after testing.  Grow in confidence about trying new/different ideas.  Use a range of cams to create movement. | Refine product after testing, considering aesthetics, functionality and purpose.  Be confident to try new/ different ideas.  Apply understanding of computing to program, monitor and control their products. |

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| **Construction and material**  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. | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Use various materials.  Begin to construct, stacking blocks vertically and horizontally making enclosures and creating spaces.  Join construction pieces together to build and balance.  Realise that tools can be used for a purpose.  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. | Begin to measure and join materials, with some support.  Describe some different characteristics of materials.  Suggest ways to make material/product stronger.  Cut safely using tools provided.  Use scissors and junior hacksaws to cut accurately.  Measure to the nearest cm.  Understand that combining materials can provide additional strength.  Use a range of joining techniques, such as gluing and taping. | Use a range of cutting, folding and shaping techniques.  Cut materials accurately and safely by selecting appropriate materials.  Use appropriate cutting and shaping techniques.  Select appropriate joining techniques, such as glue, small pins and screws. | Use appropriate materials.  Measure and join materials in different ways.  Continue working on a product even if the original didn’t work. | Create and test a prototype.  Use wood, hacksaws and glue guns.  Measure accurately to the nearest millimetre.  Begin to make strong structures using joining, rolling or folding. | Select materials carefully, considering intended use of the product, the aesthetics and functionality.  Explain how the product meets design criteria.  Measure accurately enough to ensure precision.  Ensure the product is strong and fit for purpose.  Begin to reinforce and strengthen a 3D frame.  Finish with appropriate tools, such as sandpaper.  Cut materials with precision.  Create a circuit that has a number of components, including a motor. | Select tools, materials and equipment components accurately, whilst considering the design criteria and intended user.  Design with a user in mind.  Evaluate the design and suggest improvements to the user experience.  Assemble, join and combine materials. |

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| **Textiles** | **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Engages in imaginative role-play based on own first-hand experiences.  Uses available resources to create props to support role-play.  Creates simple representations of objects.  Choose particular colours to use for a purpose. | Shape textiles using a template.  Cut accurately using scissors.  Thread a needle.  Join front and back using a running stitch.  Decorate using a range of features. | Measure, cut and join textiles together to make a product, and explain how they did it.  Carefully cut textiles to produce accurate pieces.  Explain choices of textile.  Decorate textiles to add colour and detail. | Join materials using a running stitch and a backstitch.  Use a fastening (a button), and attach using an appropriate stitch.  Select appropriate tools, materials, equipment and components.  Refine product and techniques as work progresses. |  | Understand that a template is a pattern made from a card, which is traced onto the fabric.  Use a template, and make a prototype.  Join materials using a running stitch, backstitch, overstitch and blanket stitch.  Evaluate the product against their own design criteria. | Think about the user's wants/needs and aesthetics when choosing textiles.  Make the product attractive and strong.  Use your own template.  Use a range of joining techniques.  Think carefully about what would improve the product.  Understand that a single 3D textiles project can be made from a combination of fabric shapes. |