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|   | **Irby Primary School Progression 2022****Subject area: Design and Technology****Curriculum leader: Elliott Snow** |
| **Research** |
| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Adult lead research (listening to ideas)
 | * Research a product, with guidance from an adult, to gain a technical knowledge of materials and mechanisms.
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* Discuss how structures can be made stronger, stiffer and more stable.
 | * Investigate and analyse a range of existing products.
* to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
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* to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
* Find out which mechanical system would be most suitable for the product.
* Research how an electrical system could improve a product.
 | * Investigate and analyse a range of existing products.
* to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
* Find out which mechanical system would be most suitable for the product.
* Research how an electrical system could improve a product.
* Research how an computer program could monitor or control their product.
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| **Design and Plan**  |
| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Designing does not necessarily entail drawing
* Designing can mean using hand gestures, arranging and re-arranging materials and components, talking and listening.
* Designing is usually intuitive.
* The designing and making process is fluid
* Safely explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (ELG)
* Share their creations, explaining the process they have used (ELG)
 | * Draw on their own experience to help generate ideas.
* Suggest ideas and explain what they are going to do.
* Identify a target group for what they intend to design and make.
* Model their ideas in card and paper.
* Develop their design ideas applying findings from their earlier research.
 | * Generate ideas by drawing on their own and other people's experiences.
* Develop their design ideas through discussion, observation , drawing and modelling.#
* Identify a purpose for what they intend to design and make.
* Identify simple design criteria.
* Make simple drawings and label parts
 | * Generate ideas for an item, considering its purpose and the user/s.
* Identify a purpose and establish criteria for a successful product.
* Plan the order of their work before starting.
* Explore, develop and communicate design proposals by modelling ideas.
* Make drawings with labels when designing.
 | * Generate ideas, considering the purposes for which they are designing.
* Make labelled drawings from different views showing specific features.
* Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.
* Evaluate products and identify criteria that can be used for their own designs
 | * Generate ideas through brainstorming and identify a purpose for their product.
* Draw up a specification for their design.
* Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail.
* Use results of investigations, information sources, including ICT when developing design ideas.
 | * Communicate their ideas through detailed labelled drawings.
* Develop a design specification.
* Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways.
* Plan the order of their work, choosing appropriate materials, tools and techniques.
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| **Selecting and using appropriate tools and materials to make a product** |
| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Use simple tools and techniques competently and appropriately.
* Select the tools and techniques they need to shape, assemble and join materials they are using.
* Build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary.
* Construct with a purpose in mind, using a variety of resources.
* Work collaboratively with others.
* Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (ELG).
* Share their creations, explaining the process they have used (ELG)
 | * Make their design using appropriate techniques.
* With help measure, mark out, cut and shape a range of materials.
* Use tools *eg scissors and a hole punch* safely.
* Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape.
* Select and use appropriate fruit and vegetables, processes and tools.
* Use basic food handling, hygienic practices and personal hygiene.
* Use simple finishing techniques to improve the appearance of their product.
 | * Begin to select tools and materials; use vocab' to name and describe them.
* Measure, cut and score with some accuracy.
* Use hand tools safely and appropriately.
* Assemble, join and combine materials in order to make a product.
* Cut, shape and join fabric to make a simple garment. Use basic sewing techniques.
* Follow safe procedures for food safety and hygiene.
* Choose and use appropriate finishing techniques
 | * Select tools and techniques for making their product
* Measure, mark out, cut, score and assemble components with more accuracy.
* Work safely and accurately with a range of simple tools.
* Think about their ideas as they make progress and be willing change things if this helps them improve their work.
* Measure, tape or pin, cut and join fabric with some accuracy.
* Demonstrate hygienic food preparation and storage.
* Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT.
 | * Select appropriate tools and techniques for making their product.
* Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.
* Join and combine materials and components accurately in temporary and permanent ways.
* Sew using a range of different stitches, weave and knit.
* Measure, tape or pin, cut and join fabric with some accuracy.
* Use simple graphical communication techniques.
 | * Select appropriate materials, tools and techniques.
* Measure and mark out accurately.
* Use skills in using different tools and equipment safely and accurately.
* Weigh and measure accurately (time, dry ingredients, liquids).
* Apply the rules for basic food hygiene and other safe practices *e.g. hazards relating to the use of ovens.*
* Cut and join with accuracy to ensure a good-quality finish to the product
 | * Select appropriate tools, materials, components and techniques.
* Assemble components make working models.
* Use tools safely and accurately.
* Construct products using permanent joining techniques.
* Make modifications as they go along.
* Pin, sew and stitch materials together create a product.
* Achieve a quality product
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| **Evaluations** |
| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Discuss the product and how successful it is.
* Share their creations, explaining the process they have used (ELG)
 | * Evaluate their product by discussing how well it works in relation to the purpose
* Evaluate their products as they are developed, identifying strengths and possible changes they might make.
* Evaluate their product by asking questions about what they have made and how they have gone about it.
* Suggest a way to improve a product.
 | * Evaluate against their design criteria.
* Evaluate their products as they are developed, identifying strengths and possible changes they might make.
* Talk about their ideas, saying what they like and dislike about them.
 | * Evaluate their product against original design criteria *e.g. how well it meets its intended purpose.*
* Disassemble and evaluate familiar products.
 | * Evaluate their work both during and at the end of the assignment.
* Evaluate their products carrying out appropriate tests.
 | * Evaluate their work both during and at the end of the assignment against original spec.
* Evaluate their products carrying out appropriate tests.
* Evaluate personally and seek evaluation from others.
 | * Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests.
* Record their evaluations using drawings with labels.
* Evaluate against their original criteria and suggest ways that their product could be improved.
* Seek evaluation from others.
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| **Food and Nutrition** |
| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| * Practise stirring, mixing, pouring and blending ingredients during cookery activities (adult supervision).
* Begin to understand that all food comes from plants or animals.
* Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught.
* Explore the use of whisks and different cutlery.
* Use of foil.
* Safely use and explore a variety of materials, tools and techniques, experimenting with texture (ELG)
* Share their creations, explaining the process they have used (ELG).
 | * Begin to understand that all food comes from plants or animals.
* Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught.
* Start to understand how to name and sort foods into the five groups in ‘The Eat well plate’.
* Begin to understand that everyone should eat at least five portions of fruit and vegetables every day.
* Know how to prepare simple dishes safely and hygienically, without using a heat source.
* Know how to use techniques such as cutting, peeling and grating.
 | * Understand that all food comes from plants or animals.
* Know that food has to be farmed, grown elsewhere (e.g. home) or caught.
* Understand how to name and sort foods into the five groups in ‘The Eat well plate’.
* Know that everyone should eat at least five portions of fruit and vegetables every day.
* Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source.
* Demonstrate how to use techniques such as cutting, peeling and grating.
 | * Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.
* Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.
* Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
* Start to understand that a healthy diet is made up from a variety and balance of different food and drink.
* Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.
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* Understand that a healthy diet is made up from a variety and balance of different food and drink.
* Know that to be active and healthy, food and drink are needed to provide energy for the body.
 | * Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.
* Begin to understand that seasons may affect the food available.
* Understand how food is processed into ingredients that can be eaten or used in cooking.
* Start to understand how to use a range of techniques such as peeling, chopping, grating, slicing, mixing, spreading and baking.
* Begin to understand that different food and drink contains different substances – nutrients, water and fibre –that are needed for health.
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