**Hepp DT - Design Technology Progression Document**

\*\*This document is an amalgamation of information taken from DATA and Hepp DT\*\*

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| EYFS - Key Skills | EYFS Early Learning Goals |
| * Explore different materials freely, 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.
* Join different materials and explore different textures.
* Return to and build on their previous learning, refining ideas and developing their ability to represent them.
* Create collaboratively, sharing ideas, resources and skills.
 | **ELG: Creating with Materials** Children at the expected level of development will: * 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.

**ELG: Fine Motor Skills** Children at the expected level of development will:* Use a range of small tools, including scissors, paint brushes and cutlery;
* Begin to show accuracy and care when drawing
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|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Design** | **Key Stage 1**  | **Lower Key Stage 2** | **Upper Key Stage 2** |
| **Understanding contexts,****users and purposes** | * work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment
* state what products they are designing and making
* say whether their products are for themselves or other users
* describe what their products are for
* say how their products will work
* say how they will make their products suitable for their intended users
* use simple design criteria to help develop their ideas
 | * work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment
* describe the purpose of their products indicate the design features of their products that will appeal to intended users
* explain how particular parts of their products work
* gather information about the needs and wants of particular individuals and groups
* develop their own design criteria and use these to inform their ideas
 | * work confidently within a range of contexts, such as the home, school, leisure, culture,enterprise, industry and the wider environment
* describe the purpose of their products
* indicate the design features of their products that will appeal to intended users
* explain how particular parts of their products work
* carry out research, using surveys, interviews, questionnaires and web-based resources
* identify the needs, wants, preferences and values of particular individuals and groups
* develop a simple design specification to guide their thinking
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| **Generating, developing,****modelling and****communicating ideas** | * generate ideas by drawing on their own experiences
* use knowledge of existing products to help come up with ideas
* develop and communicate ideas by talking and drawing
* model ideas by exploring materials, components and construction kits and by making templates and mock-ups
* use information and communication technology, where appropriate, to develop and communicate their ideas
 | * share and clarify ideas through discussion
* model their ideas using prototypes and pattern pieces
* use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas
* use computer-aided design to develop and communicate their ideas
* generate realistic ideas, focusing on the needs of the user
* make design decisions that take account of the availability of resources
 | * share and clarify ideas through discussion
* model their ideas using prototypes and pattern pieces
* use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas
* use computer-aided design to develop and communicate their ideas
* generate innovative ideas, drawing on research
* make design decisions, taking account of constraints such as time, resources and cost
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| **Make** | **Key Stage 1**  | **Lower Key Stage 2** | **Upper Key Stage 2** |
| **Planning** | * plan by suggesting what to do next
* select from a range of tools and equipment, explaining their choices
* select from a range of materials and components according to their characteristics
 | * select tools and equipment suitable for the task
* explain their choice of tools and equipment in relation to the skills and techniques they will be using
* select materials and components suitable for the task
* explain their choice of materials and components according to functional properties and aesthetic qualities
* order the main stages of making
 | * select tools and equipment suitable for the task
* explain their choice of tools and equipment in relation to the skills and techniques they will be using
* select materials and components suitable for the task
* explain their choice of materials and components according to functional aesthetic qualities
* produce appropriate lists of tools, equipment and materials that they need
* formulate step-by-step plans as a guide to making
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| **Practical****skills and techniques** | * follow procedures for safety and hygiene
* use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components
* measure, mark out, cut and shape materials and components
* assemble, join and combine materials and components
* use finishing techniques, including those from art and design
 | * follow procedures for safety and hygiene
* use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components
* measure, mark out, cut and shape materials and components with some accuracy
* assemble, join and combine materials and components with some accuracy
* apply a range of finishing techniques, including those from art and design, with some accuracy
 | * follow procedures for safety and hygiene
* use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components
* accurately measure, mark out, cut and shape materials and components
* accurately assemble, join and combine materials and components
* accurately apply a range of finishing techniques, including those from art and design
* use techniques that involve a number of steps
* demonstrate resourcefulness when tackling practical problems
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| **Evaluate** | **Key Stage 1**  | **Lower Key Stage 2** | **Upper Key Stage 2** |
| **Own ideas and products** | * talk about their design ideas and what they are making
* make simple judgements
* about their products and ideas against design criteria
* suggest how their products could be improved
 | * identify the strengths and areas for development in their ideas and products
* consider the views of others, including intended users, to improve their work
* refer to their design criteria as they design and make
* use their design criteria to evaluate their completed products
 | * identify the strengths and areas for development in their ideas and products
* consider the views of others, including intended users, to improve their work
* critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make
* evaluate their ideas and products against their original design specification
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| **Existing products** | * what products are
* who products are for
* what products are for
* how products work
* how products are used
* where products might be used
* what materials products are made from
* what they like and dislike about products
 | * how well products have been designed
* how well products have been made
* why materials have been chosen
* what methods of construction have been used
* how well products work
* how well products achieve their purposes
* how well products meet user needs and wants
* who designed and made the products
* where products were designed and made
* when products were designed and made
* whether products can be recycled or reused
 | * how well products have been designed
* how well products have been made
* why materials have been chosen
* what methods of construction have been used
* how well products work
* how well products achieve their purposes
* how well products meet user needs and wants
* how much products cost to make
* how innovative products are
* how sustainable the materials in products are
* what impact products have beyond their intended purpose
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| **Key events and****individuals** | Not a requirement in KS1 | * about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
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| **Technical Knowledge** | **Key Stage 1**  | **Lower Key Stage 2** | **Upper Key Stage 2** |
| **Making products work** | * about the simple working characteristics of materials and components
* about the movement of simple mechanisms such as levers, sliders, wheels and axles
* how freestanding structures can be made stronger, stiffer and more stable
* that a 3-D textiles product can be assembled from two identical fabric shapes
* that food ingredients should be combined according to their sensory characteristics
* the correct technical vocabulary for the projects they are undertaking
 | * how to use learning from science to help design and make products that work
* how to use learning from mathematics to help design and make products that work
* that materials have both functional properties and aesthetic qualities
* that materials can be combined and mixed to create more useful characteristics
* that mechanical and electrical systems have an input, process and output
* the correct technical vocabulary for the projects they are undertaking
* how mechanical systems such as levers and linkages or pneumatic systems create movement
* how simple electrical circuits and components can be used to create functional products
* how to make strong, stiff shell structures
* that a single fabric shape can be used to make a 3D textiles product
* that food ingredients can be fresh, pre-cooked and processed
 | * how to use learning from science to help design and make products that work
* how to use learning from mathematics to help design and make products that work
* that materials have both functional properties and aesthetic qualities
* that materials can be combined and mixed to create more useful characteristics
* that mechanical and electrical systems have an input, process and output
* the correct technical vocabulary for the projects they are undertaking
* how mechanical systems such as cams or pulleys or gears create movement
* how more complex electrical circuits and components can be used to create functional products
* how to program a computer to monitor changes in the environment and control their products
* how to reinforce and strengthen a 3D framework
* that a 3D textiles product can be made from a combination of fabric shapes
* that a recipe can be adapted by adding or substituting one or more ingredients
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| **Cooking and Nutrition** | **Key Stage 1**  | **Lower Key Stage 2** | **Upper Key Stage 2** |
| **Where food comes from** | * that all food comes from plants or animals
* that food has to be farmed, grown elsewhere (e.g. home) or caught
 | * 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
 | * 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
* that seasons may affect the food available
* how food is processed into ingredients that can be eaten or used in cooking
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| **Food preparation,****cooking and nutrition** | * how to name and sort foods into the five groups in the eatwell plate
* that everyone should eat at least five portions of fruit and vegetables every day
* how to prepare simple dishes safely and hygienically, without using a heat source
* how to use techniques such as cutting, peeling and grating
 | * how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source
* how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
* that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate
* that to be active and healthy, food and drink are needed to provide energy for the body
 | * how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source
* how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
* that recipes can be adapted to change the appearance, taste, texture and aroma
* that different food and drink contain different substances – nutrients, water and fibre – that are needed for health
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