Together we enjoy, create and achieve

Caversham Park Primary School

Knowledge Progression Map

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	RECEPTION	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**YEAR 6**
Designing	Decide on an appropriate material for a task before starting to build. Begin to generate ideas by building on their own experiences. Discuss how they could join, shape and assemble their creations during their making.	Work confidently within a range of contexts, such as imaginary, or real, State what products they are designing and making Say whether their products are for themselves or other users 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 by making templates and mockups	Work confidently within a range of contexts, such as local community, industry and the wider environment 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 Develop and communicate ideas by talking and drawing Model ideas by exploring materials, components and by making templates and mockups	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, Describe the purpose of their products Model their ideas using prototypes and pattern pieces Use information and communication technology	Work confidently, within a range of contexts, such as the home, school, leisure, culture. Enterprise, industry and the wider environment Indicate the design features of their products that will appeal to intended users Explain how particular parts of their products work Make design decisions that take account of the availability of resources Generate realistic ideas, focusing on the needs of the user	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 Use annotated sketches, cross sectional drawings and exploded diagrams to develop and communicate their ideas	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 Generate innovative ideas, drawing on research Make design decisions, taking account of constraints such as time, resources and cost

Making	Begin to select from a range of appropriate tools and explain why they are using it. Begin to understand safety implications and keeping clean when making. Begin to mark out what they want to cut by drawing or tracing	Plan by suggesting what to do next Select from a range of tools and equipment, explaining their choices Measure, mark out, cut and shape materials and components assemble, join, and combine materials and components <u>Food:</u> Follow procedures for safety and hygiene	Select from a range of materials and components according to their characteristics Use a range of materials and components, including construction materials textiles, food ingredients and mechanical components Use finishing techniques, including those from art and design	Order the main stages of making Explain their choice of tools and equipment in relation to the skills and techniques they will be using 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	Select materials and components suitable for the task Explain their choice of tools and equipment in relation to the skills and techniques they will be using 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	Explain their choice of materials and components according to functional properties and aesthetic qualities Accurately measure, mark out, cut and shape materials and components Accurately assemble, join and combine materials and components <u>Food:</u> Cook savoury dishes using a heat source	Produce appropriate lists of tools, equipment and materials that they need Formulate step-by-step plans as a guide to making 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 <u>Food:</u> Use knowledge to plan and make their own dish
Evaluating	Talk about what they have made and whether it has ended up like they have initially planned. Make improvements/changes during the construction process as necessary. Begin to suggest what they could have done differently to improve the items they make.	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	what products are, who products are for, what products are for, how products work, how products are used and where products might be used what materials products are made from what they like and dislike about Products	refer to their design criteria as they design and make use their design criteria to evaluate their completed products Children should consider: who designed and made the products, where products were designed and made.	Identify the strengths and areas for development in their ideas and products Consider the views of others, including intended users, to improve their work Children should consider: how well products have been designed, and how well products have been	Children should consider: how much products cost to make and how innovative products are Learn about inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products	Children should consider: how sustainable the materials in products are What impact products have beyond their intended purpose Learn about inventors, designers, engineers, chefs and manufacturers who have developed

				When products were designed and made whether products can be recycled or reused how well products achieve their purposes how well products meet user needs and wants Learn about inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products (e.g. Jamie Oliver, Delia Smith.)	made Why materials have been chosen What methods of construction have been used How well products work Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products		ground-breaking products
Technical Knowledge	Begin to think about how to make things work and move e.g. pin puppets Begin to understand where food comes from and the growing process.	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 • Know all food comes from plants/animals <u>Food:</u> Name and sort foods in The eat well plate. Know the 5 portions per day rule.	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 <u>Food:</u> Know that food has to be farmed, grown elsewhere or caught.	How to make strong, stiff shell structures That a single fabric shape can be used to make a 3D textiles product <u>Food:</u> That food ingredients can be fresh, pre-cooked and processed Healthy & Varied Diet. Explore grown food(tomatoes, potatoes) and caught (fish) in different countries. Build on eatwell plate, including drinks.	How simple electrical circuits and components can be used to create functional products How to program a computer to control their products <u>Food:</u> Healthy & Varied Diet. Explore grown food(wheat.) and reared (pigs, chickens) Cook savoury dishes using a heat source Know that food and drink are need for the body to be active/ healthy. • Peeling, chopping, slicing,	How mechanical systems such as cams or pulleys or gears create movement How to reinforce and strengthen a 3D framework <u>Food:</u> Know that a recipe can be adapted by adding or substituting one or more ingredients. Know that recipes can be adapted to change the appearance, taste, texture & aroma.	That a 3D textiles product can be made from a combination of fabric shapes How to reinforce and strengthen a 3D framework <u>Food:</u> Know that different food and drink contain different substances (nutrients, water and fibre) that we need for health

			How to prepare simple dishes safely & hygienically (without heat) How to cut, peel & grate.	Cook savoury dishes using a heat source Peeling, chopping, grating, mixing, spreading.	kneading, baking.		