



Avenue Primary School - Progression in Design and Technology Skills



	EYFS	KS1	3/4	5/6
skills	Evaluating: To talk about their work and explain how they have made it and why they have used different materials/tools To talk about how their product/model works and its features To explain how they could change or improve it.	To explore and evaluate a range of existing products. To talk about their own designs/products as they develop and identify good and bad points. To explain how their product works Talk about own and others' work (features, design, opinion)	To investigate and analyse a range of existing products and use it to inform planning To identify what is working well and what can be improved in relation to the design brief (this is during the make as well as at the end) To talk about own and others' work and explain why they have chosen certain materials, techniques and tools	To research and evaluate existing products giving reasons for the decisions of the designers (materials, design, tools, techniques) and use to inform their design To reflect on their own designs and develop them bearing in mind the way they will be used (during the process) To explain why they have chosen certain materials, techniques and tools To reflect on their work using design brief stating how well the design fits the needs of the user.
skills	Design: Developing planning and communicating ideas To plan a design/picture for a model. To talk about their plan.	To use pictures and words for a design To explore ideas by rearranging materials.	To investigate existing products/images to collect ideas and to help influence my design To use a design brief effectively To plan and communicate ideas using labelled sketches (including choices of materials, tools or techniques giving reasons for choices) To practice new skills and experiment with new techniques to inform design To design functional, appealing products that are fit for purpose	To investigate and evaluate existing products/images to collect ideas and to help influence my design Understand that products are designed for a purpose (e.g. a problem, an audience, an event) Use a design brief as a basis for their design Practice new skills and experiment with new techniques to inform design, creating prototypes where possible Start to produce step by step plans eg. storyboards Use computer aided design Take part in technical discussions about my ideas

				Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups. Come up with solutions to problems as they happen
skills	Construction: Working with tools, equipment, materials and components to make quality products. To explore a variety of construction toys to make models. To talk about how to fix construction toys together. To use construction toys to build and balance. To explore using tools such as scissors. To explore different materials to build and make.	To know what materials can be used for my structure To know what a join is and use one To measure and mark out materials with care and increasing accuracy To cut materials safely (scissors, junior hacksaw) To be careful to make work look as neat as possible To find out how to make materials for a structure stronger (folding, rolling and joining, columns and triangles)	To practice new skills and experiment with new techniques to inform design To use appropriate materials and an appropriate join To measure and mark out materials with care and increasing accuracy (cm) To use scoring and folding to shape materials accurately To make cuts accurately (scissors and saws) To make holes accurately (drill, punch) To join materials to make products using both permanent and temporary fastenings To find out how to make materials for a structure stronger (folding, rolling and joining, columns and triangles) To use methods of working which are increasingly precise aiming for a high quality finish	To select from a variety of materials best suited to a design To measure using mm and then use scoring, and folding, to shape materials accurately To make cuts accurately and reject pieces that are not accurate and improve on technique To make joins that are strong and stable, giving extra strength to products To make some joins that are flexible to allow for dismantling or folding To use methods of working are precise so that products have a high-quality finish To use computer programming when creating a product
skills	Textiles: Look at different textiles and talk about how they feel. Explore using different media to make a product.	Know that textiles have different properties: touch, insulation, texture and waterproof Describe textiles by the way they feel Colour fabrics using a range of techniques e.g. fabric paints Join fabrics by using running stitch, glue, staples, tape.	Join fabrics using running stitch, back stitch. Decorate fabrics with buttons, beads, braids, ribbons – some stitched. Know that the texture and other properties of materials affect their fit for purpose. Combine materials to add strength or visual appeal	Products show an awareness of commercial appeal Create a simple pattern. Mark out using a simple pattern or template Join fabrics using over sewing, back stitch, blanket stitch.

		Cut out shapes which have been created by drawing round a template onto the fabric. Decorate fabrics with buttons, beads, sequins, braids, ribbons.		Decorate fabrics by stitching buttons, beads, braids, ribbons. Textile products include structural changes, such as plaiting or weaving to create new products such as rope, belts, bracelets etc
skills	Electronics and Mechanics Explore through play objects that move e.g. with wheels. Talks about why things happen and how things work.	Explore how moving objects work Look at wheels, axels, turning mechanisms, hinges and simple levers. Make a product that moves using a turning mechanism (e.g. wheels, winding) or a lever or a hinge (to make a movement)	Know the application of mechanisms to create movement Combine a number of components well in a product Use simple circuits to either illuminate or create motion Make a product that uses either electrical or mechanical components Products have a good finish so that a user will find it both useful and attractive	Choose components that can be controlled by switches or by computing equipment Understand and use mechanical systems in a products (for example, gears, pulleys, cams, levers and linkages) Understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors) Use precise electrical connections Product is improved after testing Products are well finished in a way that would appeal to users
skills	Food: Explore tasting fruit and vegetables and talk about them. Learn how to wash hands and know that you must wash hands before eating and preparing food. Make a food product linked to the learning. Introduce ways of preparing food safely. Use simple tools to help prepare food.	Develop a food vocabulary using taste, smell, texture and feel. Group familiar food products e.g. fruit and vegetables. Work safely and hygienically. Understand the need for a variety of foods in a diet. Understand where food comes from. Work with an adult to make food following a simple recipe using some cooking techniques. Measure and weight food items, non-statutory measures e.g. spoons, cups. Learn how to best store a product for long-life and safety.	Analyse the taste, texture, smell and appearance of a range of foods. Make healthy eating choices from and understanding of a balanced diet. Join and combine a range of ingredients e.g. snack foods Measure and weigh ingredients appropriately. Prepare and cook a range of predominately savoury dishes using a range of cooking techniques (see separate skills ladder) Prepare food safely and hygienically and describe what this means. Learn how to best store my product for long-life and hygiene.	Prepare food products taking into account the properties of ingredients and sensory characteristics. Show an awareness of a healthy diet from an understanding of a balanced diet. Work safely and hygienically. Weigh and measure using scales. Join and combine food ingredients appropriately e.g. beating, rubbing in. Understand how to feed themselves and others affordably now and in the future. Prepare food safely and hygienically and describe what this means.

				Learn how to best store my product for long-life and hygiene.
Knowledge	Growing Understand that plants need light, water and soil/nutrients to grow. To grow plants and explore how they change over time	Understand that different plants need different conditions to grow eg. Some need more sunlight and a warmer temperature whereas others need more water Understand that different plants grow at different times of the year Be able to name and taste different edible crops grown in the UK in different seasons Understand that plants grow from seeds, bulbs etc. Grow edible plants from seeds eg. cress. Name the different parts of a plant	Understand that edible plants come from different countries depending on their preferred growing conditions To understand that you eat different parts of edible plants eg. the root of a carrot or the leaf of a lettuce. Taste different parts of plants eg. Taste the stalk or leaves of celery. To understand some plants can be eaten raw whereas some need to be cooked	Understand the benefits of organic, local, seasonal edible plants and their effect on the environment Understand some plants can be eaten raw whereas some need to be cooked To grow and maintain a herb garden and to select different herbs for different seasons To plan the growing calendar to grow vegetables for the theme lunch and maintain the growing areas. To know the different parts of a plant (link to science)
Knowledge	Knowledge of Designers To know what a designer is and what they do (architect day)	To know what a designer does To say what they like and dislike about the product and the designer	To know some designers from history To talk about some of the tools, techniques and design used by the designer	To know how key events and individuals have influenced the world (in terms of products) To compare and contrast the work of different designers (e.g. historical and modern) To give reasons for the decisions made by the designer