



		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Skills	Design	- Use pictures and words to convey what they want to design/make. - Propose more than one idea for their product. - Use kits/reclaimed materials to develop more than one idea. - Model ideas / make mock-ups with kits, reclaimed materials. - Select appropriate technique explaining: First... Next... Last.... - Explore ideas by rearranging materials/ingredients. - Select pictures to help develop ideas. - Use drawings to record ideas as they are developed. - Add notes to drawings to help explanations. - Use ICT to communicate their ideas. - Describe their models and drawings of ideas and intentions.		- Develop more than one design or adaptation of an initial design. - Plan a sequence of actions to make a product. - Record the plan by drawing using annotated sketches. - Begin to use cross-sectional and exploded diagrams. - Use prototypes to develop and share ideas. - Think ahead about the order of their work and decide upon tools and materials/ingredients. - Propose realistic suggestions as to how they can achieve their design ideas. - Consider aesthetic qualities of materials /ingredients chosen.		- List tools needed before starting the activity. - Plan the sequence of work e.g. using a storyboard. - Record ideas using annotated diagrams. - Use models, kits and drawings to help formulate design ideas. - Combine modelling and drawing to refine ideas. - Devise step by step plans which can be read / followed by someone else. - Use exploded diagrams and cross-sectional diagrams to communicate ideas. - Sketch and model alternative ideas. - Decide which design idea to develop.	
	Make	- Discuss their work as it progresses. - Select materials/ingredients from a limited range that will meet the design criteria. - Select and name the tools needed to work the materials/ingredients. - Explain what they are making. - Explain which materials/ingredients they are using and why. - Name the tools they are using. - Describe what they need to do next.		- Prepare pattern pieces as templates for their design. - Cut slots. - Cut internal shapes. - Select from a range of tools for cutting shaping joining and finishing. - Use tools with accuracy. - Select from techniques for different parts of the process. - Select from materials according to their functional properties. - Plan the stages of the making process. - Use appropriate finishing techniques.		- Make prototypes. - Develop one idea in depth. - Use researched information to inform decisions. - Produce detailed lists of ingredients / components / materials and tools. - Use a computer to model ideas. - Select from and use a wide range of tools. - Cut accurately and safely to a marked line. - Select from and use a wide range of materials. - Use appropriate finishing techniques for the project. - Refine their product – review and rework/improve.	
	Evaluate	- Explore existing products and investigate how they have been made. - Decide how existing products do/do not achieve their purpose. - Talk about their design as they develop and identify good and bad points. - Note changes made during the making process as annotation to plans/drawings. - Say what they like and do not like about items they have made and attempt to say why. - Discuss how closely their finished product meets their design criteria and how well it meets the needs of the user.		- Investigate similar products to the one to be made to give starting points for a design. - Draw/sketch products to help analyse and understand how products are made. - Research needs of user. - Identify the strengths and weaknesses of their design ideas in relation to purpose/user. - Decide which design idea to develop. - Consider and explain how the finished product could be improved. - Discuss how well the finished product meets the design criteria of the user. - Investigate key events and individuals in Design and Technology.		- Research and evaluate existing products. - Consider user and purpose. - Identify the strengths and weaknesses of their design ideas. - Give a report using correct technical vocabulary. - Consider and explain how the finished product could be improved related to design criteria. - Discuss how well the finished product meets the design criteria of the user. - Test on the user. - Understand how key people have influenced design	
Knowledge	Food	- Develop a food vocabulary using taste, smell, texture and feel. - Group familiar food products e.g. fruit and vegetables. - Explain where food comes from. - Cut, peel, grate and chop a range of ingredients. - Work safely and hygienically. - Understand the need for a variety of foods in a diet. - Measure and weigh food items, non-statutory measures e.g. spoons, cups.		- Develop sensory vocabulary/knowledge using, smell, taste, texture and feel. - Analyse the taste, texture, smell and appearance of a range of foods. - Follow instructions/recipes. - Make healthy eating choices – use the Eatwell plate. - Join and combine a range of ingredients. - Prepare and cook using a range of cooking techniques. - Explore seasonality of vegetables and fruit. - Find out which fruit and vegetables are grown in countries/continents studied in Geography. - Develop understanding of how meat/fish are reared/caught.		- Prepare mostly savoury dishes using their own selection of ingredients, taking into account their nutritional properties and sensory characteristics. - Weigh and measure using scales. - Select and prepare foods for a particular purpose. - Work safely and hygienically. - Develop understanding of a healthy diet and apply in their ingredient choices. - Use a range of cooking techniques. Join and combine a widening range of ingredients. - Know where and how ingredients are grown and processed.	
	Textiles	- Start to use the appropriate vocabulary to refer to fabrics and tools. - Cut out shapes which have been created by drawing round a template onto the fabric. - Join fabrics by using e.g. running stitch, glue, staples, over sewing, tape. - Decorate fabrics with attached items e.g. buttons, beads, sequins, braids, ribbons. - Colour fabrics using a range of techniques e.g. fabric paints, printing, painting.		- Develop vocabulary for tools materials and their properties. - Understand seam allowance. - Join fabrics using running stitch, over sewing, blanket stitch. - Use prototype to make pattern. - Explore strengthening and stiffening of fabrics. - Explore fastenings and recreate some. - Sew on buttons and make loops. - Use appropriate decoration techniques.		- Use the correct vocabulary appropriate to the project. - Create 3D products using patterns pieces and seam allowance. - Understand pattern layout. - Decorate textiles appropriately (often before joining components). - Pin and tack fabric pieces together. - Join fabrics using over sewing, back stitch, blanket stitch or machine stitching (closer supervision). - Combine fabrics to create more useful properties. - Make quality products	
	Structure	- Refer to materials tools and techniques using appropriate vocabulary. - Explore how to make structures stronger. - Investigate different techniques for stiffening a variety of materials. - Test different methods of enabling structures to remain stable. - Join appropriately for different materials and situations e.g. glue, tape. - Mark out materials to be cut using a template. - Use a glue gun with close supervision.		- Develop vocabulary related to the project. - Create shell or frame structures. - Strengthen frames with diagonal struts. - Make structures more stable by giving them a wide base. - Measure and mark square section, strip and dowel accurately to 1cm	- Develop vocabulary related to the project. - Explain how the shape of a structure affects its stability. - Know that the weight of the structure needs to be evenly spread on the base to make it secure. - Investigate ways of making a structure more stable. - Select and use appropriate tools and materials.	- Use the correct terminology for tools materials and processes. - Select appropriate materials and tools to create an instrument. - Join materials using appropriate methods. - Build frameworks to support mechanisms. - Investigate and analyse a range of African instruments. - Use different methods to strengthen or reinforce their designs. - Predict and test the strength of different beam shapes using paper and card. - Explain what a truss is and how they make bridges stronger. - Can make an arch frame. - Explain how suspension bridges use tension forces to work.	
	Mechanical & Electrical	- Make a sliding mechanism out of card. - Understand and use a pivot and lever mechanism using card and a split pin. - Make a wheel mechanism using card and a split pin. - Match a mechanism to the type of movement it makes.	- Use technical vocabulary when describing mechanisms, tools and materials they use. - Join appropriately for different materials and situations e.g. glue, tape. - Try out different axle fixings and their strengths and weaknesses. - Make vehicles with construction kits which contain free running wheels. - Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels. - Cut dowel using hacksaw and bench hook. - Attach wheels to a chassis using an axle. - Use a hole punch and insert paper fasteners for card.	- Develop vocabulary related to the project. - Explain how simple pneumatic systems work using appropriate vocabulary. - Recognise familiar objects that use air to make them work. - Describe how objects use air to make them work. - Create simple effective pneumatic systems. - Investigate ways of using pneumatic systems with other materials to control movement. - Recognise the uses to which alarm systems can be put. - Understand that switches work in different ways. - Understand the dangers of main electricity. - Explain how a simple circuit works. - Investigate different ways of creating switches and circuits.		- Develop a technical vocabulary appropriate to the project. - Explore how different transmissions create different movements. - Use a crank to change the motion on a transmission from circular to linear. - Explain how computers and computer programs are used in different products. - Explain how modern memory chips work to store information. - Know what a computer engineer is and what they do.	



EYFS	Physical Development		• Progress towards a more fluent style of moving, with developing control and grace. • Develop their small motor skills so that they can use a range of tools competently, safely and confidently. • Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
	Expressive Arts and Design		• Explore, use and refine a variety of artistic effects to express their ideas and feelings. • 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	Physical Development	Fine Motor Skills	• Use a range of small tools, including scissors, paintbrushes and cutlery.
	Expressive Arts and Design	Creating with Materials	• 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.