	Year 1	Year 2	Year 3	Year 4/5	Year 6
Developing, planning and communicating ideas. **The Design Phase**	• Have own ideas • Explain what I want to do • Explain what my product is for, and how it will work • Use pictures and words to plan, begin to use models • Design a product for myself following design criteria • Begin to research similar existing products	• Have own ideas and plan what to do next • Explain what I want to do and describe how I may do it • Explain purpose of product, how it will work and how it will be suitable for the user • Describe design using pictures, words, models, diagrams • Design products for myself and others following design criteria • Choose best tools and materials, textiles, and explain choices • Use knowledge of existing products to produce ideas • Research similar existing products. • Begin to use ICT to design a product.	• Use research for design ideas • Show design meets a range of requirements and is fit for purpose • Begin to create own design criteria • Have at least one idea about how to create product and suggest improvements for design. • Produce a plan and explain it to others • Say how realistic a plan is • Include an annotated sketch • Make and explain design decisions considering availability of resources • Explain how product will work • Make a prototype • Use ICT to design a product.	• Use internet for research and design ideas • Take a user's view into account when designing • Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose • Create own design criteria • Have a range of ideas • Produce a logical, realistic plan and explain it to others. • Make design decisions considering time and resources. • Clearly explain how parts of product will work. • Use cross-sectional planning and annotated sketches.	• Draw on research to inform design • Identify features of design that will appeal to the intended user • Create own design criteria and specification • Follow and refine a logical plan. • Make design decisions, considering, resources • Clearly explain how parts of design will work, and how they are fit for purpose • Independently model and refine design ideas by making prototypes and using pattern pieces • Use research of a user's individual needs, wants and requirements for a design. • Come up with innovative design ideas. • Use annotated sketches, cross-sectional planning and exploded diagrams. • Use computer-aided designs.
Working with tools, equipment, materials and components to make quality products. **The 'Make' Phase**	• Explain what I'm making and why • Consider what I need to do next • Select tools/equipment to cut, shape, join, finish and explain choices • Measure, mark out, cut and shape, with support • Choose suitable materials, textiles and explain choices • Try to use finishing techniques to make product look good	• Explain what I am making and why it fits the purpose • Make suggestions as to what I need to do next. • Join materials/components together in different ways • Measure, mark out, cut and shape materials and components, with support. • Describe which tools I'm using and why • Choose suitable materials and explain choices depending on characteristics. • Use finishing techniques to make product look good	• Select suitable tools and equipment, explain choices in relation to required techniques and use accurately • Select appropriate materials, fit for purpose; explain choices • Work through plan in order. • Realise if product is going to be good quality • Measure, mark out, cut and shape materials/components with some accuracy • Assemble, join and combine materials and components with some accuracy • Apply a range of finishing techniques with some accuracy	• Use selected tools/equipment with good level of precision • Produce suitable lists of tools, equipment/materials needed • Select appropriate materials, fit for purpose; explain choices, considering functionality • Create and follow detailed step by-step plan • Explain how product will appeal to an audience • Mainly accurately measure, mark out, cut and shape materials/components • Mainly accurately assemble, join and combine materials/components • Mainly accurately apply a range of finishing techniques • Use techniques that involve a small number of steps • Begin to be resourceful with practical problems	• Use selected tools and equipment precisely • Produce suitable lists of tools, equipment, materials needed, considering constraints • Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics • Create, follow, and adapt detailed step-by-step plans • Explain how product will appeal to audience; make changes to improve quality • Accurately measure, mark out, cut and shape materials • Accurately assemble, join and combine materials • Accurately apply a range of finishing techniques • Use techniques that involve a number of steps • Be resourceful with practical problems.

Evaluating processes and products. **The Evaluate Phase**	• Talk about my work, linking it to what I was asked to do • Talk about existing products considering use, materials, how they work, audience, where they might be used • Talk about existing products, and say what is and isn't good • Begin to talk about what could make product better • Begin to talk about what other people have made.	• Describe what went well, thinking about design criteria • Talk about existing products considering use, materials, how they work, audience, where they might be used; express personal opinion • Evaluate how good existing products are • Talk about what I would do differently if I were to do it again and why	• Refer to design criteria while designing and making • Use criteria to evaluate product • Begin to explain how i could improve original design • Evaluate existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose • Discuss by whom, when and where products were designed • Research whether products can be recycled or reused • Know about some inventors'/designers'/ engineers/chefs/manufacturers of similar products	• Evaluate quality of design while designing and making • Evaluate ideas and finished product against specification, considering purpose and appearance. • Test and evaluate final product • Evaluate and discuss existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose • Begin to evaluate how much products cost to make and how innovative they are • Research how sustainable materials are • Talk about some key inventors'/designers'/ engineers/ chefs/manufacturers of ground-breaking products	• Evaluate quality of design while designing and making; is it fit for purpose? • Keep checking design is best it can be. • Evaluate ideas and finished product against specification, stating if it's fit for purpose • Test and evaluate final product; explain what would improve it and the effect different resources may have had • Do thorough evaluations of existing products considering how well they've been made, materials, whether they work, how they've been made, fit for purpose • Consider the impact of products beyond their intended purpose • Discuss some key designers/ engineers/ /manufacturers of a product • Research and discuss how sustainable materials are. • Evaluate existing products considering how they have been made, the materials they have used, whether they work, how they've been made and if they are fit for purpose.
Technical knowledge	• Know about the simple working characteristics of materials and components • Know about the movement of simple mechanisms such as wheels and axles. • Know that a 3-D textiles product can be assembled from two identical fabric shapes • Know that food ingredients should be combined according to their sensory characteristics • Know the correct technical vocabulary for the projects they are undertaking	• Know about the movement of simple mechanisms such as levers and sliders. • Know how freestanding structures can be made stronger, stiffer and more stable • Know that food ingredients should be combined according to their sensory characteristics • Know the correct technical vocabulary for the projects they are undertaking	• Know that mechanical and electrical systems have an input, process and output • Know the correct technical vocabulary for the projects they are undertaking • Know how mechanical systems such as levers and linkages or pneumatic systems create movement • Begin to know how to program a computer to control their products • Know that food ingredients can be fresh and seasonal.	• Know that materials have both functional properties and aesthetic qualities • Know that materials can be combined and mixed to create more useful characteristics • Know the correct technical vocabulary for the projects they are undertaking • Know how to design a product using a computer. • Know that a single fabric shape can be used to make a 3D textiles product or that multiple fabric shapes can be joined together to create a product. • Begin to know that food ingredients can be fresh, pre-cooked and processed In late • Begin to know that a recipe can be adapted by adding or substituting one or more ingredients	• Know that mechanical and electrical systems have an input, process and output • Know the correct technical vocabulary for the projects they are undertaking • Know how simple electrical circuits and components can be used to create functional products • Know how to make strong, stiff shell structures • Know that food ingredients can be fresh, pre-cooked and processed In late • Know how more complex electrical circuits and components can be used to create functional products • Know how to reinforce and strengthen a 3D framework • Know that a recipe can be adapted by adding or

					substituting one or more ingredients
Food	• Begin to understand some food preparation tools, techniques and processes • Practise stirring, mixing, pouring, blending • Discuss how to make an activity safe and hygienic • Discuss use of senses (Science curriculum) • Understand need for variety in food • Begin to understand that eating well contributes to good health • wash hands & clean surfaces (PSHE curriculum) • say where some foods come from, (i.e. plant or animal) • Describe differences between some food groups (i.e. sweet, vegetable etc.) • discuss how fruit and vegetables are healthy • cut, peel and grate safely, with support	Year 1 + • Explain hygiene and keep a hygienic kitchen • Describe properties of ingredients and importance of varied diet • Describe how food is farmed, home-grown, caught • Cut, peel and grate with increasing confidence • Describe textures • think of interesting ways to decorate food	• Carefully select ingredients • Use equipment safely • Make product look attractive • Begin to understand food comes from UK and wider world • Describe how healthy diet= variety/balance of food/drinks • Explain how food and drink are needed for active/healthy bodies. • Prepare and cook some dishes safely and hygienically • Grow in confidence using some of the following techniques: mixing, spreading, kneading and baking • Begin to understand seasonality of foods • Further develop cutting, peeling and grating skills with an increased level of accuracy and confidence.	• Explain how to be safe / hygienic and follow own guidelines • Present product well - interesting, attractive, fit for purpose • Understand seasonality of foods • Understand food can be grown, reared or caught in the UK and the wider world • Describe how recipes can be adapted to change appearance, taste, texture, aroma • Explain how there are different substances in food / drink needed for health • Prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source • Use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. • Think about how to grow plants to use in cooking	• Understand a recipe can be adapted by adding / substituting ingredients • Explain seasonality of foods • Learn about food processing methods • Name some types of food that are grown, reared or caught in the uk or wider world • Adapt recipes to change appearance, taste, texture or aroma. • Describe some of the different substances in food and drink, and how they can affect health • Prepare a dish using a variety of ingredients safely and hygienically • Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
Vocabulary	Plan, Prepare, Design, Materials, Ideas, Use, Model, Development, Research, Make Fast, Slow, Faster, Slower, Up, Down, Turn, Lever, Input, Output, Slider, Stable, Structure, Windmill axle, Blades, Pivot Design, Draw, Sketch, Tools, Fix, Glue. Attach, Features, Cut, Stick, Decorate, Measure, Technique, Healthy, Unhealthy, Source, Fruit, Vegetables, Clean, Safe, Dirty, Unsafe, Amount, Ingredients, Recipe, Weight, Nutrients, Vegetarian, Dietary requirements, Balanced, Diet, Stir, Mix, Hygiene, Change, Improve, Prefer, Useful, Unsuccessful, Future, Adapt, Original, Evaluate		Plan, Organise, Prototype, Initial ideas, Criteria, Diagrams, Labels, Annotate, Brief, Product, Consumer, Customer, Target audience, Purpose, Application, Constraints, Client, Materials, Design, Make, Research, Form, Shape, Adhesive, Mass-produce, Hand-made, Packaging, Presentation, Machine made, Dimensions, Durable, Chassis, Kinetic energy, Template, Air resistance, Sturdy, Eye-Catching, Net, Sewing, Needle, Bookmark, Running stitch, Back stitch, Blanket stitch, Cross stitch, Over stitch, Thread, Series circuit, Incomplete electrical circuit, Component. Healthy, Unhealthy, Balanced, Vitamins, Nutrition, Healthy eating, Hygiene, Diet, Cross contamination, Grams, Storage, Taste, Texture, Flavour, Disinfect, Bacteria, Seasonality, Food Miles, Organic, Reared, Seasonal, Nutritional value Assess, Edit, Improve, Alter, Outcome, Develop, Test, Analyse, Effective, fit for purpose, Design criteria, Alternatives, Models, Quality, Function, Functionality, Evaluate, Modify		