Areas	EYFS	Year 1	Year 2	KS1 National Curriculum	Year 3	Year 4	Year 5	Year 6	KS2 National Curriculum
Design	**Expressive Art & Design** I can develop my own ideas and then decide which materials to use to express them. I can develop my ideas about how to use materials and what to make. I can confidently plan using my own ideas or with provided stimulus. I can safely explore a variety of materials, tools and techniques, experimentin g with colour, design, texture, form and function.	I can draw and design a product for a particular person or purpose I can identify features of my design and say what I think and feel about then. I can explain how my design will work. I can describe which materials and tools I will need. I can generate ideas by drawing on my own experiences. I can explore existing products to help come up with ideas. I can gather and develop ideas for how to decorate (using ICT if appropriate)	I can draw and design a product for a particular person or purpose. I can draw simple labelled diagrams to communicate my ideas. I can discuss my designs, how the product will work and say what I think and feel about it. I can design a toy that include suitable moving mechanisms I can describe which materials and tools I will need to make my product. I can use knowledge of existing products to help come up with ideas. I can create mock-ups to explore different mechanisms I can choose suitable moving mechanisms for my design. I can model ideas by exploring materials, components and construction kits and by making templates and mockups I can make decisions about colour and texture that relate to the overall effect.	**Design purposeful, functional, appealing products for themselves and other users based on design criteria** **Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology**	I can design a product for a particular person or purpose. I can gather information about the needs and wants of particular individuals and groups I can use labels and some annotations in my designs to communicate my ideas. I can make design decisions that take into account the availability of resources I can use prototypes to explore my design ideas. I can develop their own design criteria and use these to inform my idea I can generate realistic ideas, focusing on the needs of the user I can work within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment I can indicate the design features of their products that will appeal to intended users I can explain how particular parts of my products work I can share and clarify ideas through discussion	I can design a product for a particular person or purpose. I can gather information about the needs and wants of particular individuals and groups and use it to inform my ideas. I can use labels, annotations and some cross sectional drawings in my designs to communicate my ideas. I can create my own design criteria to meet the needs of the user. I can show that my design meets a range of requirements. I can use prototypes to explore my design ideas and make necessary changes. I can develop their own design criteria and use these to inform my idea I can generate realistic ideas, focusing on the needs of the user I can work within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment I can indicate the design features of their products that will appeal to intended users I can explain how particular parts of my products work I can share and clarify ideas through discussion	I can design a product for a particular person and purpose. I can carry out research, using surveys, interviews, questionnaires and web-based resources I can develop a simple design specification to guide my thinking I can identify the needs, wants, preferences and values of particular individuals and groups and use these I can use annotated sketches, cross-sectional drawings and some exploded diagrams to develop and communicate my ideas. I can explore and use some computer-aided design to begin to develop and communicate my ideas. I can make prototypes to aid in the design of my product. I can create and continue to develop my own design criteria to meet the needs of the user. I can show that my design meets a range of requirements. I can develop a simple design specification to guide my thinking	I can design a product for a particular person and purpose. I can carry out research, using surveys, interviews, questionnaires and web-based resources and use these to inform my design decisions I can identify the needs, wants, preferences and values of particular individuals and groups and use these **to inform my design criteria.** I can use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate my ideas. I can use computer-aided design to communicate my ideas. I can make prototypes to aid and refine the design of my product. I can share and clarify ideas through discussion I can explain how particular parts of my products work I can indicate the design features of their products that will appeal to intended users	**Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups** **Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.**
Make	**Expressive Art & Design** I can safely use a variety of materials, tools and techniques, experimentin g with colour, design, texture, form and function. I can create using my own ideas or with provided stimulus.	I can say what I need to do next. I can select from a range of tools and equipment provided. I can explain how to be safe and hygienic. I can assemble, join and combine different materials. I can use a range of materials including construction, textiles, food,ingredients and mechanical components. I can cut and shape materials.	I can plan by suggesting what to do next I can select from a range of tools and equipment, according to their characteristics and explaining my choices I can follow procedures for safety and hygiene I can use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components I can measure, mark out, cut and shape materials and components I can explore different ways of combining materials, identify the most effective technique for my product. I can use finishing techniques, including those from art and design	**Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]** PMA 1 - plan by suggesting what to do next PMA 2 - select from a range of tools and equipment, explaining their choices PMA 3 - select from a range of materials and components according to their characteristics **Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics** PMB 1 - follow procedures for safety and hygiene PMB 2 - use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components PMB 3 - measure, mark out, cut and shape materials and components PMB 4 - assemble, join and combine materials and components PMB 5 - use finishing techniques, including those from art and design	I can select tools and equipment suitable for the task I can select and explain their choice of tools and equipment in relation to the skills and techniques they will be using I can select materials and components suitable for the task I can explain their choice of materials and components according to functional properties and aesthetic qualities I can follow procedures for safety and hygiene I can use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components I can order the main stages of making I can measure, mark out, cut and shape materials and components with some accuracy I can assemble, join and combine materials and components with some accuracy I can apply a range of finishing techniques, including those from art and design, with some accuracy	I can select tools and equipment suitable for the task I can select and explain their choice of tools and equipment in relation to the skills and techniques they will be using I can select materials and components suitable for the task I can explain their choice of materials and components according to functional properties and aesthetic qualities I can follow procedures for safety and hygiene I can use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components I can produce appropriate lists of tools, equipment and materials that I need I can formulate step-by-step plans as a guide to making I can accurately measure, mark out, cut and shape materials and components I can accurately assemble, join and combine materials and components I can accurately apply a range of finishing techniques, including those from art and design I can use techniques that involve a number of steps I can demonstrate resourcefulness when tackling practical problem	I can select tools and equipment suitable for the task I can select and explain their choice of tools and equipment in relation to the skills and techniques they will be using I can select materials and components suitable for the task I can explain their choice of materials and components according to functional properties and aesthetic qualities I can follow procedures for safety and hygiene I can use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components I can produce appropriate lists of tools, equipment and materials that I need I can formulate step-by-step plans as a guide to making I can accurately measure, mark out, cut and shape materials and components I can accurately assemble, join and combine materials and components I can accurately apply a range of finishing techniques, including those from art and design I can use techniques that involve a number of steps I can demonstrate resourcefulness when tackling practical problem	**Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately** **Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities**

Evaluate	**Expressive Art and Design** I can share my creations, explain the process I have used and talk about what I have made.	I can recognise some different types of products and constructions and their features. I can identify and name shapes within my products. I can say what I think and feel about finished products. I can evaluate the work of others and give my opinions in a constructive way. I can evaluate a finished product by identifying what I did well and what needs to be improved. I can make a prediction and test it. I can evaluate a piece of work I have designed and created from scratch. I understand what evaluation means.	I understand what evaluation means. in relation to my own and others' work I can explore and evaluate a range of existing products. I can identify ways in which I could improve my own product and amend accordingly. I can evaluate my product and identify what I did well. I can identify ways in which I could improve my work in the future. I can compare existing products with my own product. I can evaluate the final product against the design specification and find ways to improve it. I can build structures, exploring how they can be made stronger, stiffer and more stable.	**Explore and evaluate a range of existing products** **Evaluate their ideas and products against design criteria**	I can refer to my design criteria as I design and make I can use my design criteria to evaluate my completed products I can consider the views of others, including intended users, to improve my work I can identify a strengths and an areas for development in my ideas and products I can evaluate existing products in terms of who designed and made the products I can evaluate existing products in terms of where and when the products were designed and made I can evaluate existing products in terms of whether products can be recycled or reused **I know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products**	I can refer to my design criteria as I design and make I can use my design criteria to evaluate my completed products I can consider the views of others, including intended users, to improve my work I can identify the strengths and areas for development in my ideas and products I can evaluate existing products in terms of who designed and made the products I can evaluate existing products in terms of where and when the products were designed and made I can evaluate existing products in terms of whether products can be recycled or reused **I know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products**	I can evaluate the quality of the design, manufacture and fitness for purpose of my products as I design and make I can evaluate my ideas and products against my original design specification I can consider the views of others, including intended users, to improve my work I can identify the strengths and areas for development in my ideas and products and begin to think about how I could adapt my designs I consider how much existing products cost to make when evaluating them I can consider how innovative existing products are I can identify how sustainable the materials used in existing products are I know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products	I can critically evaluate the quality of the design, manufacture and fitness for purpose of my products as I design and make I can evaluate my ideas and products against my original design specification I can consider the views of others, including intended users, to improve my work I can identify the strengths and areas for development in my ideas and products and use this to adapt my designs I work out how much existing products cost to make when evaluating them I can evaluate how innovative existing products are I can evaluate existing products in terms of how sustainable the materials used are I know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products and **recognise the impact they have had on the world**	**Investigate and analyse a range of existing products** **Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work** **Understand how key events and individuals in design and technology have helped shape the world**
Technical Knowledge: Structures		I can suggest ways of improving my structures or making them stronger. I can use finishing techniques to improve the overall quality of my product.	I can name the features of a structure. I can name the similarities and differences between 2 different structures in the past and present. I can talk about how and why the design has changed over the years. I can name and label the functions of the different parts of a structure. I can build structures, exploring how they can be made stronger, stiffer and more stable	**Build structures, exploring how they can be made stronger, stiffer and more stable**	I can make strong, stiff shell structures I recognise that materials can be combined and mixed I can use my learning from science and mathematics to help design and make products that work		I can make strong, stiff shell structures I recognise that materials can be combined and mixed to create more useful characteristics I can use my learning from science and mathematics to help design and make products that work		**Apply their understanding of how to strengthen, stiffen and reinforce more complex structures**
Technical Knowledge: Mechanisms		I can identify the features and parts of a working mechanism.	I know that there is more than one way to create a working mechanism. I can experiment with a range of materials and techniques. I can understand and explain how a mechanism works. I can describe what the different parts of a mechanism is. I can combine and join materials to create a working mechanism.	**Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products**	I can understand how mechanical systems such as levers and linkages create movement I can identify that mechanical systems have an input, process and output		I know mechanical systems such as cams or pulleys or gears and pneumatic systems create movement I can identify the input, process and output of the mechanical systems in my product I can program a computer to control my products	I can recognise that mechanical and electrical systems have an input, process and output I can use my learning from science to help design and make products that work I know that mechanical systems such as cams or pulleys or gears create movement and how these can be changed to adapt the movement I can identify that mechanical and electrical systems have an input, process and output	**Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]**
Technical Knowledge: Textiles			I know that different fabrics are used for different purposes and have different properties. I can measure a paper template accurately that uses seam allowance. I can choose a suitable fabric for my design. I know that some joining techniques are stronger/weaker than others. I know that fabric can be joined in temporary and permanent ways.			I can use a single fabric shape to make a 3D textiles product I can recognise that materials have both functional properties and aesthetic qualities		I can make a 3D textiles product from a combination of fabric shapes I can select materials for both the functional properties and aesthetic qualities	
Technical Knowledge: Electrical Systems						I can understand how simple electrical circuits and components can be used to create functional products I know that mechanical and electrical systems have an input, process and output I can use my learning from science and mathematics to help design and make products that work		I know that mechanical and electrical systems have an input, process and output I can use more complex electrical circuits and components to create functional products I can program a computer to monitor changes in the environment and control my products I can use my learning from science and mathematics to help design and make products that work	**Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]** **Apply their understanding of computing to program, monitor and control their products.**

Cooking & Nutrition		I can explain what it means to be hygienic. I know some food comes from different countries. I can say where some food comes from. I know that England grows fruit and vegetables. I can understand seasonality in relation to British fruits. I can prepare food to make a healthy dish. I can mix ingredients.	I can prepare and use food safely and hygienically. I know where a range of food comes from originally and why it grows well in particular countries. I can explore different ingredients. I can choose and use different and varied, healthy ingredients. I can plan and design my own food products and explain my choices. I can prepare food based upon my own plan and design. I can design labels for my homemade produce.	**Use the basic principles of a healthy and varied diet to prepare dishes** **Understand where food comes from**	I can explain that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate I can understand that to be active and healthy, food and drink are needed to provide energy for the body I know that food ingredients can be fresh, pre-cooked and processed I know 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 I can prepare and cook safely and hygienically I can use techniques such as peeling, chopping and slicing and blending	I can explain that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate I can understand that to be active and healthy, food and drink are needed to provide energy for the body I know that food ingredients can be fresh, pre-cooked and processed I know 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 I can prepare and cook a savoury dish safely and hygienically including with the use of a heat source I can use a range of techniques such as peeling, chopping, slicing, grating and mixing	I can explain that different food and drink contain different substances – nutrients, water and fibre – that are needed for health I know that seasons may affect the food available I know 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 I can understand how food is processed into ingredients that can be eaten or used in cooking I can adapt recipes to change the appearance, taste, texture and aroma I can adapt a recipe by adding or substituting one or more ingredients I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	I can explain that different food and drink contain different substances – nutrients, water and fibre – that are needed for health I can explain that seasons may affect the food available I know 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 I can understand how food is processed into ingredients that can be eaten or used in cooking I can adapt recipes to change the appearance, taste, texture and aroma I can adapt a recipe by adding or substituting one or more ingredients I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	**Understand and apply the principles of a healthy and varied diet** **Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques** **Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed**