



Art and Design						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Make your mark	Map it out	A growing artist	Ancient Egyptian	I need space /Make my voice heard	
Drawing	<p>Hold and use drawing tools in different ways to create different lines and marks.</p> <p>Create marks by responding to different stimulus such as music as a group.</p> <p>Overlap shapes to create new ones.</p> <p>Use mark making to replicate texture.</p> <p>Look carefully to make an observational drawing.</p> <p>Complete a continuous line drawing.</p>	<p>Create marks by using a map as a stimulus for drawing (draw a familiar journey)</p> <p>Overlap shapes to create new ones.</p>	<p>Use shapes identified within in objects as a method to draw.</p> <p>Create tone by shading. Achieve even tones when shading.</p> <p>Make texture rubbings.</p> <p>Create art from textured paper.</p> <p>Hold and use a pencil to shade.</p> <p>Tear and shape paper.</p> <p>Use paper shapes to create a drawing.</p> <p>Use drawing tools to take a rubbing.</p> <p>Make careful observations to accurately draw an object.</p> <p>Create abstract compositions to draw more expressively.</p> <p>PP</p> <p>Use pencils of different grades to shade and add tone.</p> <p>Hold a pencil with varying pressure to create different marks.</p>	xx	<p>Analyse an image that considers impact, audience and purpose.</p> <p>Draw the same image in different ways with different materials and techniques.</p> <p>Make a collagraph plate.</p> <p>Make a collagraph print.</p> <p>Develop drawn ideas for a print.</p> <p>Combine techniques to create a final composition.</p> <p>Decide what materials and tools to use based on experience and knowledge.</p> <p>MMVH</p> <p>Use symbolism as a way to create imagery.</p> <p>Combine imagery into unique compositions.</p> <p>Achieve the tonal technique called chiaroscuro.</p> <p>Make handmade tools to draw with.</p> <p>Use charcoal to create chiaroscuro effects</p>	xx



			<p>Use observation and sketch objects quickly.</p> <p>Draw objects in proportion to each other.</p> <p>Use charcoal and a rubber to draw tone.</p> <p>Use scissors and paper as a method to 'draw'.</p> <p>Make choices about arranging cut elements to create a composition.</p> <p>Create a wax resist background.</p> <p>Use different tools to scratch into a painted surface to add contrast and pattern.</p> <p>Choose a section of a drawing to recreate as a print.</p> <p>Create a monoprint.</p>			
		Colour splash/Life in colour		Light and dark	Portraits	
Painting and mixed media	xx	<p>Combine primary coloured materials to make secondary colours.</p> <p>Mix secondary colours in paint.</p> <p>Choose suitable sized paint brushes.</p> <p>Clean a paintbrush to change colours.</p> <p>Print with objects, applying a suitable layer of paint to</p>	xx	<p>Mix a tint and a shade by adding black or white.</p> <p>Use tints and shades of a colour to create a 3D effect when painting.</p> <p>Apply paint using different techniques eg. stippling, dabbing, washing.</p> <p>Choose suitable painting tools.</p>	<p>Develop a drawing into a painting.</p> <p>Create a drawing using text as lines and tone.</p> <p>Experiment with materials and create different backgrounds to draw onto.</p> <p>Use a photograph as a starting point for a mixed-media artwork.</p>	xx



		<p>the printing surface. Overlap paint to mix new colours.</p> <p>Use blowing to create a paint effect.</p> <p>Make a paint colour darker or lighter (creating shades) in different ways eg. adding water, adding a lighter colour.</p> <p>LIC Mix a variety of shades of a secondary colour.</p> <p>Make choices about amounts of paint to use when mixing a particular colour.</p> <p>Match colours seen around them.</p> <p>Create texture using different painting tools.</p> <p>Make textured paper to use in a collage.</p> <p>Choose and shape collage materials eg cutting, tearing.</p> <p>Compose a collage, arranging and overlapping pieces for contrast and effect.</p> <p>Add painted detail to a collage to enhance/improve it</p>		<p>Arrange objects to create a still life composition.</p> <p>Plan a painting by drawing first.</p> <p>Organise painting equipment independently, making choices about tools and materials.</p>	<p>Take an interesting portrait photograph, exploring different angles.</p> <p>Adapt an image to create a new one.</p> <p>Combine materials to create an effect.</p> <p>Choose colours to represent an idea or atmosphere.</p> <p>Develop a final composition from sketchbook ideas.</p>	
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	Paper play/clay houses		Abstract space and shape			Interactive installation/ Making memories
Sculpture and 3D	<p>Roll and fold paper.</p> <p>Cut shapes from paper and card.</p> <p>Cut and glue paper to make 3D structures.</p> <p>Decide the best way to glue something.</p> <p>Create a variety of shapes in paper, eg spiral, zig-zag.</p> <p>Make larger structures using newspaper rolls.</p> <p>CH Smooth and flatten clay.</p> <p>Roll clay into a cylinder or ball.</p> <p>Make different surface marks in clay.</p> <p>Make a clay pinch pot.</p> <p>Mix clay slip using clay and water.</p> <p>Join two clay pieces using slip.</p> <p>Make a relief clay sculpture.</p> <p>Use hands in different ways as a tool to manipulate clay.</p> <p>Use clay tools to score clay.</p>	xx	<p>Join 2D shapes to make a 3D form.</p> <p>Join larger pieces of materials, exploring what gives 3D shapes stability.</p> <p>Shape card in different ways eg. rolling, folding and choose the best way to recreate a drawn idea.</p> <p>Identify and draw negative spaces.</p> <p>Plan a sculpture by drawing.</p> <p>Choose materials to scale up an idea.</p> <p>Create different joins in card eg. slot, tabs, wrapping.</p> <p>Add surface detail to a sculpture using colour or texture.</p> <p>Display sculpture</p>	xx	xx	<p>Make an explosion drawing in the style of Cai Guo-Qiang, exploring the effect of different materials.</p> <p>Try out ideas on a small scale to assess their effect.</p> <p>Use everyday objects to form a sculpture.</p> <p>Transform and manipulate ordinary objects into sculpture by wrapping, colouring, covering and joining them.</p> <p>Try out ideas for making a sculpture interactive.</p> <p>Plan an installation proposal, making choices about light, sound and display.</p> <p>MM Translate a 2D image into a 3D form.</p> <p>Manipulate cardboard to create 3D forms (tearing, cutting, folding, bending, ripping).</p> <p>Manipulate cardboard to create different textures.</p> <p>Make a cardboard relief sculpture.</p> <p>Make visual notes to generate ideas for a final piece.</p>



						Translate ideas into sculptural forms
		Map it out		Ancient Egyptian scrolls/ Fabric of nature		Photo opportunity
Craft and Design	xx	<p>Draw a map to illustrate a journey.</p> <p>Separate wool fibres ready to make felt.</p> <p>Lay wool fibres in opposite directions to make felt.</p> <p>Roll and squeeze the felt to make the fibres stick together.</p> <p>Add details to felt by twisting small amounts of wool.</p> <p>Choose which parts of their drawn map to represent in their 'stained glass'.</p> <p>Overlap cellophane/tissue to create new colours.</p> <p>Draw a design onto a printing polystyrene tile without pushing the pencil right through the surface.</p> <p>Apply paint or ink using a printing roller.</p> <p>Smooth a printing tile evenly to transfer an image.</p> <p>Try out a variety of ideas for adapting prints into 2D or 3D artworks.</p>	xx	<p>Use a sketchbook to research a subject using different techniques and materials to present ideas.</p> <p>Construct a new paper material using paper, water and glue</p> <p>Use symbols to reflect both literal and figurative ideas.</p> <p>Produce and select an effective final design.</p> <p>Make a scroll.</p> <p>Make a zine.</p> <p>Use a zine to present information.</p> <p>FN Select imagery and use as inspiration for a design project.</p> <p>To know how to make a mood board.</p> <p>Recognise a theme and develop colour palettes using selected imagery and drawings.</p> <p>Draw small sections of one image to focus on colours and texture.</p>	xx	<p>Create a photomontage.</p> <p>Create artwork for a design brief. Use a camera or tablet for photography.</p> <p>Identify the parts of a camera.</p> <p>Take a macro photo, choosing an interesting composition.</p> <p>Manipulate a photograph using photo editing tools.</p> <p>Use drama and props to recreate imagery.</p> <p>Take a portrait photograph.</p> <p>Use a grid method to copy a photograph into a drawing.</p>



				<p>Develop observational drawings into shapes and pattern for design.</p> <p>Transfer a design using a tracing method.</p> <p>Make a repeating pattern tile using cut and torn paper shapes.</p> <p>Use glue as an alternative batik technique to create patterns on fabric.</p> <p>Use materials, like glue, in different ways depending on the desired effect.</p> <p>Paint on fabric.</p> <p>Wash fabric to remove glue to finish a decorative fabric piece</p>		
Knowledge of artists	<p>Throughout Art and Design children will learn that;</p> <p>Some artists are influenced by things happening around them.</p> <p>Some artists create art to make people aware of good and bad things happening in the world around them.</p> <p>Sometimes artists concentrate on how they are making something rather than what they make.</p> <p>Artists living in different places at different times can be inspired by similar ideas or stories.</p> <p>Art can be figurative or abstract.</p>	<p>Throughout Art and Design children will learn that;</p> <p>Some artists are influenced by things happening around them.</p> <p>Some artists create art to make people aware of good and bad things happening in the world around them.</p> <p>Sometimes artists concentrate on how they are making something rather than what they make.</p> <p>Artists living in different places at different times</p>	<p>Art from the past can give us clues about what it was like to live at that time.</p> <p>The meanings we take from art made in the past are influenced by our own ideas.</p> <p>Designers can make beautiful things to try and improve people's everyday lives.</p> <p>How and where art is displayed has an effect on how people interpret it.</p> <p>Artists have different materials available to them</p>	<p>Art from the past can give us clues about what it was like to live at that time.</p> <p>The meanings we take from art made in the past are influenced by our own ideas.</p> <p>Designers can make beautiful things to try and improve people's everyday lives.</p> <p>How and where art is displayed has an effect on how people interpret it.</p> <p>Artists have different materials available to them</p>	<p>Artists are influenced by what is going on around them; for example culture, politics and technology.</p> <p>Artists 'borrow' ideas and imagery from other times and cultures to create new artworks.</p> <p>How an artwork is interpreted will depend on the life experiences of the person looking at it.</p> <p>Artists can use symbols in their artwork to convey meaning.</p> <p>Sometimes artists add extra meaning to what</p>	<p>Artists are influenced by what is going on around them; for example culture, politics and technology.</p> <p>Artists 'borrow' ideas and imagery from other times and cultures to create new artworks.</p> <p>How an artwork is interpreted will depend on the life experiences of the person looking at it.</p> <p>Artists can use symbols in their artwork to convey meaning.</p> <p>Sometimes artists add extra meaning to what</p>



<p>Artists choose materials that suit what they want to make.</p> <p>Illustrators use drawn lines to show how characters feel.</p> <p>Artists try out different combinations of collage materials to create the effect they want.</p> <p>Artists can use the same material (felt) to make 2D or 3D artworks.</p> <p>Artists and designers can create work to match a set of requirements; a 'brief' or 'commission'.</p>	<p>can be inspired by similar ideas or stories.</p> <p>Art can be figurative or abstract.</p> <p>Artists choose materials that suit what they want to make.</p> <p>Illustrators use drawn lines to show how characters feel.</p> <p>Artists try out different combinations of collage materials to create the effect they want.</p> <p>Artists can use the same material (felt) to make 2D or 3D artworks.</p> <p>Artists and designers can create work to match a set of requirements; a 'brief' or 'commission'.</p>	<p>depending on when they live in history.</p> <p>Artists can make their own tools.</p> <p>Artists experiment with different tools and materials to create texture.</p> <p>Artists can work in more than one medium.</p> <p>Artist make decisions about how their work will be displayed.</p> <p>Artists choose what to include in a composition, considering both what looks good together and any message they want to communicate.</p> <p>Designers collect visual ideas from a wide range of sources, sometimes collecting these as a mood board.</p> <p>Artists and designers sometimes choose techniques based on the time and money available to them.</p> <p>Artists use drawing to plan ideas for work in different media.</p>	<p>depending on when they live in history.</p> <p>Artists can make their own tools.</p> <p>Artists experiment with different tools and materials to create texture.</p> <p>Artists can work in more than one medium.</p> <p>Artist make decisions about how their work will be displayed.</p> <p>Artists choose what to include in a composition, considering both what looks good together and any message they want to communicate.</p> <p>Designers collect visual ideas from a wide range of sources, sometimes collecting these as a mood board.</p> <p>Artists and designers sometimes choose techniques based on the time and money available to them.</p> <p>Artists use drawing to plan ideas for work in different media.</p>	<p>they create by working in places where they don't have permission to work.</p> <p>Artists use self-portraits to represent important things about themselves.</p> <p>Artists create works that make us question our beliefs.</p> <p>Artists find inspiration in other artist's work, adapting and interpreting ideas and techniques to create something new.</p> <p>Art can be a form of protest.</p> <p>Artists use art to tell stories about things that are important to them; looking at artworks from the past can reveal thoughts and opinions from that time.</p> <p>Art sometimes creates difficult feelings when we look at it</p> <p>Artists can choose their medium to create a particular effect on the viewer.</p> <p>Artists can combine materials; for example digital imagery with paint or print.</p> <p>Art can be interactive; the viewer becomes part of it, experiencing the artwork</p>	<p>they create by working in places where they don't have permission to work.</p> <p>Artists use self-portraits to represent important things about themselves.</p> <p>Artists create works that make us question our beliefs.</p> <p>Artists find inspiration in other artist's work, adapting and interpreting ideas and techniques to create something new.</p> <p>Art can be a form of protest.</p> <p>Artists use art to tell stories about things that are important to them; looking at artworks from the past can reveal thoughts and opinions from that time.</p> <p>Art sometimes creates difficult feelings when we look at it</p> <p>Artists can choose their medium to create a particular effect on the viewer.</p> <p>Artists can combine materials; for example digital imagery with paint or print.</p> <p>Art can be interactive; the viewer becomes part of it, experiencing the artwork</p>
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					<p>with more than one of the senses.</p> <p>Artists use techniques like chiaroscuro to create dramatic light and shade when drawing or painting.</p> <p>Artists can use materials to respond to a feeling or idea in an abstract way.</p> <p>Artists take risks to try out ideas; this can lead to new techniques being developed.</p> <p>Artists can make work by collecting and combining ready-made objects to create 'assemblage'.</p> <p>Artforms are always evolving as materials and techniques change over time.</p>	<p>with more than one of the senses.</p> <p>Artists use techniques like chiaroscuro to create dramatic light and shade when drawing or painting.</p> <p>Artists can use materials to respond to a feeling or idea in an abstract way.</p> <p>Artists take risks to try out ideas; this can lead to new techniques being developed.</p> <p>Artists can make work by collecting and combining ready-made objects to create 'assemblage'.</p> <p>Artforms are always evolving as materials and techniques change over time.</p>
Evaluating and analysing	<p>Describe and compare features of their own and others' artwork.</p> <p>Evaluate art with an understanding of how art can be varied and made in different ways and by different people.</p> <p>Explain their ideas and opinions about their own and others' artwork, beginning to recognise the stories and messages within and showing an understanding of why they may have made it.</p> <p>Begin to talk about how they could improve their own work. Talk about how art is made.</p>	<p>Describe and compare features of their own and others' artwork.</p> <p>Evaluate art with an understanding of how art can be varied and made in different ways and by different people.</p> <p>Explain their ideas and opinions about their own and others' artwork, beginning to recognise the stories and messages within and showing an understanding of why they may have made it.</p>	<p>Confidently explain their ideas and opinions about their own and others' artwork, with an understanding of the breadth of what art can be and that there are many ways to make art.</p> <p>Discuss and begin to interpret meaning and purpose of artwork, understanding how artists can use art to communicate.</p> <p>Begin to carry out a problem-solving process</p>	<p>Confidently explain their ideas and opinions about their own and others' artwork, with an understanding of the breadth of what art can be and that there are many ways to make art.</p> <p>Discuss and begin to interpret meaning and purpose of artwork, understanding how artists can use art to communicate.</p> <p>Begin to carry out a problem-solving process</p>	<p>Discuss the processes used by themselves and by other artists, and describe the particular outcome achieved.</p> <p>Consider how effectively pieces of art express emotion and encourage the viewer to question their own ideas</p> <p>Explain how art can be created to cause reaction and impact and be able to consider why an artist chooses to use art in this way.</p>	<p>Discuss the processes used by themselves and by other artists, and describe the particular outcome achieved.</p> <p>Consider how effectively pieces of art express emotion and encourage the viewer to question their own ideas</p> <p>Explain how art can be created to cause reaction and impact and be able to consider why an artist chooses to use art in this way.</p>



		<p>Begin to talk about how they could improve their own work. Talk about how art is made.</p>	<p>and make changes to improve their work. Use more complex vocabulary when discussing their own and others' art.</p> <p>Discuss art considering how it can affect the lives of the viewers or users of the piece.</p> <p>Evaluate their work more regularly and independently during the planning and making process.</p>	<p>and make changes to improve their work. Use more complex vocabulary when discussing their own and others' art.</p> <p>Discuss art considering how it can affect the lives of the viewers or users of the piece.</p> <p>Evaluate their work more regularly and independently during the planning and making process.</p>	<p>Independently use their knowledge of tools, materials and processes to try alternative solutions and make improvements to their work which takes account of context and intention.</p>	<p>Independently use their knowledge of tools, materials and processes to try alternative solutions and make improvements to their work which takes account of context and intention.</p>
Generating ideas	<p>Explore their own ideas using a range of media.</p> <p>Generate ideas from a range of stimuli, using research and evaluation of techniques to develop their ideas and plan more purposefully for an outcome.</p>	<p>Explore their own ideas using a range of media.</p> <p>Generate ideas from a range of stimuli, using research and evaluation of techniques to develop their ideas and plan more purposefully for an outcome.</p>	<p>Generate ideas from a range of stimuli, using research and evaluation of techniques to develop their ideas and plan more purposefully for an outcome</p>	<p>Generate ideas from a range of stimuli, using research and evaluation of techniques to develop their ideas and plan more purposefully for an outcome</p>	<p>Develop ideas more independently from their own research. Explore and record their plans, ideas and evaluations to develop their ideas towards an outcome.</p> <p>Draw upon their experience of creative work and their research to develop their own starting points for creative outcomes.</p>	<p>Develop ideas more independently from their own research. Explore and record their plans, ideas and evaluations to develop their ideas towards an outcome.</p> <p>Draw upon their experience of creative work and their research to develop their own starting points for creative outcomes.</p>
Sketch books	<p>Use sketchbooks to explore ideas.</p> <p>Experiment in sketchbooks, using drawing to record ideas.</p> <p>Use sketchbooks to help make decisions about what to try out next.</p>	<p>Use sketchbooks to explore ideas.</p> <p>Experiment in sketchbooks, using drawing to record ideas.</p> <p>Use sketchbooks to help make decisions about what to try out next.</p>	<p>Use sketchbooks purposefully to improve understanding, develop ideas and plan for an outcome</p>	<p>Use sketchbooks purposefully to improve understanding, develop ideas and plan for an outcome</p>	<p>Using a systematic and independent approach, research, test and develop ideas and plans using sketchbooks</p>	<p>Using a systematic and independent approach, research, test and develop ideas and plans using sketchbooks</p>



Design and Technology

Structures						
	Constructing a windmill	Baby bear's chair	Constructing a castle	Pavilions		Playgrounds
Design	Learning the importance of a clear design criteria. Including individual preferences and requirements in a design.	Generate and communicate ideas using sketching and modelling. Learning about different types of structures, found in natural world and in everyday objects.	Designing a castle with key features to appeal to a specific person/purpose. Drawing and labelling a castle design using 2D shapes, labelling: -the 3D shapes that will create the features - materials needed and colours. Designing and/or decorating a castle tower on CAD software.	Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect. Building frame structures designed to support weight.	xx	Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs
Make	Making stable structures from card, tape and glue. Learning how to turn 2D nets into 3D structures. Following instructions to cut and assemble the supporting structure of a windmill. Making functioning turbines and axles which are assembled into a main supporting structure.	Making a structure according to design criteria. Creating joints and structures from paper/card and tape. Building a strong and stiff structure by folding paper.	Constructing a range of 3D geometric shapes using nets. Creating special features for individual designs. Making facades from a range of recycled materials.	Creating a range of different shaped frame structures. Making a variety of free standing frame structures of different shapes and sizes. Selecting appropriate materials to build a strong structure and cladding. Reinforcing corners to strengthen a structure. Creating a design in accordance with a plan. Learning to create different textural effects with materials.	xx	Building a range of play apparatus structures drawing upon new and prior knowledge of structures. Measuring, marking and cutting wood to create a range of structures. Using a range of materials to reinforce and add decoration to structures.
Evaluate	Evaluating a windmill according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't. Suggest points for improvements	Exploring the features of structures. Comparing the stability of different shapes.	Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison to the original design.	Evaluating structures made by the class. Describing what characteristics of a design and construction made it the most effective.	xx	Improving a design plan based on peer evaluation. Testing and adapting a design to improve it as it is developed.



		<p>Testing the strength of own structures.</p> <p>Identifying the weakest part of a structure.</p> <p>Evaluating the strength, stiffness and stability of own structure.</p>	<p>Suggesting points for modification of the individual designs.</p>	<p>Considering effective and ineffective designs</p>		<p>Identifying what makes a successful structure.</p>
Technical Knowledge	<p>To understand that the shape of materials can be changed to improve the strength and stiffness of structures.</p> <p>To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses).</p> <p>To understand that axles are used in structures and mechanisms to make parts turn in a circle.</p> <p>To begin to understand that different structures are used for different purposes.</p> <p>To know that a structure is something that has been made and put together.</p>	<p>To know that shapes and structures with wide, flat bases or legs are the most stable.</p> <p>To understand that the shape of a structure affects its strength.</p> <p>To know that materials can be manipulated to improve strength and stiffness.</p> <p>To know that a structure is something which has been formed or made from parts.</p> <p>To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move.</p> <p>To know that a 'strong' structure is one which does not break easily.</p> <p>To know that a 'stiff' structure or material is one which does not bend easily</p>	<p>To understand that wide and flat based objects are more stable.</p> <p>To understand the importance of strength and stiffness in structures</p>	<p>To understand what a frame structure is.</p> <p>To know that a 'free-standing' structure is one which can stand on its own.</p>	xx	<p>To know that structures can be strengthened by manipulating materials and shapes.</p>
Mechanisms						
		Fairground Wheel/Making a moving monster		Making a slingshot car	Making a pop up book	
Design	xx	FGW- Selecting a suitable linkage system to produce the desired motion.	xx	Designing a shape that reduces air resistance.	Designing a pop-up book which uses a mixture of structures and mechanisms.	xx



		<p>Designing a wheel.</p> <p>MM- Creating a class design criteria for a moving monster.</p> <p>Designing a moving monster for a specific audience in accordance with a design criteria.</p>		<p>Drawing a net to create a structure from.</p> <p>Choosing shapes that increase or decrease speed as a result of air resistance.</p> <p>Personalising a design.</p>	<p>Naming each mechanism, input and output accurately.</p> <p>Storyboarding ideas for a book.</p>	
Make	xx	<p>FGW- Selecting materials according to their characteristics.</p> <p>Following a design brief.</p> <p>MM- Making linkages using card for levers and split pins for pivots.</p> <p>Experimenting with linkages adjusting the widths, lengths and thicknesses of card used.</p> <p>Cutting and assembling components neatly.</p>	xx	<p>Measuring, marking, cutting and assembling with increasing accuracy.</p> <p>Making a model based on a chosen design.</p>	<p>Following a design brief to make a pop up book, neatly and with focus on accuracy.</p> <p>Making mechanisms and/or structures using sliders, pivots and folds to produce movement.</p> <p>Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result.</p>	xx
Evaluate	xx	<p>FGW- Evaluating different designs.</p> <p>Testing and adapting a design</p> <p>MM- Evaluating own designs against design criteria.</p> <p>Using peer feedback to modify a final design.</p>	xx	<p>Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance.</p>	<p>Evaluating the work of others and receiving feedback on own work.</p> <p>Suggesting points for improvement.</p>	xx
Technical knowledge	xx	<p>FGW- To know that different materials have different properties and are therefore suitable for different uses.</p>	xx	<p>To understand that all moving things have kinetic energy.</p>	<p>To know that mechanisms control movement. To understand that mechanisms can be used</p>	xx



		<p>MM- To know that mechanisms are a collection of moving parts that work together as a machine to produce movement.</p> <p>To know that there is always an input and output in a mechanism.</p> <p>To know that an input is the energy that is used to start something working.</p> <p>To know that an output is the movement that happens as a result of the input.</p> <p>To know that a lever is something that turns on a pivot.</p> <p>To know that a linkage mechanism is made up of a series of levers.</p>		<p>To understand that kinetic energy is the energy that something (object/person) has by being in motion.</p> <p>To know that air resistance is the level of drag on an object as it is forced through the air.</p> <p>To understand that the shape of a moving object will affect how it moves due to air resistance.</p>	<p>to change one kind of motion into another.</p> <p>To understand how to use sliders, pivots and folds to create paper-based mechanisms.</p>	
Cooking and Nutrition						
	Smoothies		Eating Seasonally		Developing a recipe	
Design	Designing smoothie carton packaging by-hand.	xx	Designing a recipe for a savoury tart.	xx	<p>Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients.</p> <p>Writing an amended method for a recipe to incorporate the relevant changes to ingredients.</p> <p>Designing appealing packaging to reflect a recipe. Researching</p>	xx



					existing recipes to inform ingredient choices.	
Make	Chopping fruit and vegetables safely to make a smoothie. Juicing fruits safely to make a smoothie.	xx	Following the instructions within a recipe. Tasting seasonal ingredients. Selecting seasonal ingredients. Peeling ingredients safely. Cutting safely with a vegetable knife.	xx	Cutting and preparing vegetables safely. Using equipment safely, including knives, hot pans and hobs. Knowing how to avoid cross-contamination. Following a step by step method carefully to make a recipe.	xx
Evaluate	Tasting and evaluating different food combinations. Describing appearance, smell and taste. Suggesting information to be included on packaging. Comparing their own smoothie with someone else's.	xx	Establishing and using design criteria to help test and review dishes. Describing the benefits of seasonal fruits and vegetables and the impact on the environment. Suggesting points for improvement when making a seasonal tart.	xx	Identifying the nutritional differences between different products and recipes. Identifying and describing healthy benefits of food groups	Xx
Textiles						
Design	Using a template to create a design for a puppet.	xx	xx	xx	xx	Designing a waistcoat in accordance to a specification linked to set of design criteria. Annotating designs, to explain their decisions.
Make	Cutting fabric neatly with scissors. Using joining methods to decorate a puppet. Sequencing the steps taken during construction.	xx	xx	xx	xx	Using a template when cutting fabric to ensure they achieve the correct shape. Using pins effectively to secure a template to fabric without creases or bulges.



						<p>Marking and cutting fabric accurately, in accordance with their design.</p> <p>Sewing a strong running stitch, making small, neat stitches and following the edge.</p> <p>Tying strong knots.</p> <p>Decorating a waistcoat, attaching features (such as appliqué) using thread.</p> <p>Finishing the waistcoat with a secure fastening (such as buttons).</p> <p>Learning different decorative stitches.</p> <p>Sewing accurately with evenly spaced, neat stitches.</p>
Evaluate	Reflecting on a finished product, explaining likes and dislikes.	xx	xx	xx	xx	Reflecting on their work continually throughout the design, make and evaluate process.
Electrical Systems (KS2 only)						
				Torches	Doodlers	
Design	xx	xx	xx	<p>Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas.</p>	<p>Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product.</p> <p>Developing design criteria based on findings from investigating existing products.</p>	xx



					Developing design criteria that clarifies the target user.	
Make	xx	xx	xx	<p>Making a torch with a working electrical circuit and switch.</p> <p>Using appropriate equipment to cut and attach materials.</p> <p>Assembling a torch according to the design and success criteria.</p>	<p>Altering a product's form and function by tinkering with its configuration.</p> <p>Making a functional series circuit, incorporating a motor.</p> <p>Constructing a product with consideration for the design criteria. Breaking down the construction process into steps so that others can make the product.</p>	xx
Evaluate	xx	xx	xx	<p>Evaluating electrical products.</p> <p>Testing and evaluating the success of a final product.</p>	<p>Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses.</p> <p>Determining which parts of a product affect its function and which parts affect its form.</p> <p>Analysing whether changes in configuration positively or negatively affect an existing product.</p> <p>Peer evaluating a set of instructions to build a product</p>	xx
Technical knowledge	xx	xx	xx	<p>To understand that electrical conductors are materials which electricity can pass through.</p> <p>To understand that electrical insulators are</p>	<p>To know that series circuits only have one direction for the electricity to flow.</p> <p>To know when there is a break in a series circuit, all components turn off.</p>	xx



				<p>materials which electricity cannot pass through.</p> <p>To know that a battery contains stored electricity that can be used to power products.</p> <p>To know that an electrical circuit must be complete for electricity to flow.</p> <p>To know that a switch can be used to complete and break an electrical circuit.</p>	<p>To know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin.</p> <p>To know a motorised product is one which uses a motor to function.</p>	
Digital World (KS2)						
			Wearable Technology			Navigating the world
Design	xx	xx	<p>Problem solving by suggesting which features on a micro:bit might be useful and justifying my ideas.</p> <p>Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge.</p> <p>Developing design ideas through annotated sketches to create a product concept.</p> <p>Developing design criteria to respond to a design brief.</p>	xx	xx	<p>Writing a design brief from information submitted by a client.</p> <p>Developing design criteria to fulfil the client's request</p> <p>Considering and suggesting additional functions for my navigation tool</p> <p>Developing a product idea through annotated sketches</p> <p>Placing and manoeuvring 3D objects, using CAD</p> <p>Changing the properties of, or combine one or more 3D objects, using CAD</p>
Make	xx	xx	<p>Following a list of design requirements.</p> <p>Writing a program to control (button press) and/or monitor (sense</p>	xx	xx	<p>Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo).</p>



			light) that will initiate a flashing LED algorithm.			Explaining material choices and why they were chosen as part of a product concept. Programming an N,E, S,W cardinal compass
Evaluate	xx	xx	Analysing and evaluating wearable technology. Using feedback from peers to improve design	xx	xx	Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. Developing an awareness of sustainable design. Identifying key industries that utilise 3D CAD modelling and explain why. Describing how the product concept fits the client's request and how it will benefit the customers. Explaining the key functions in my program, including any additions. Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch. Demonstrating a functional program as part of a product concept.



Technical knowledge	xx	xx	<p>To understand that, in programming, a 'loop' is code that repeats something again and again until stopped.</p> <p>To know that a micro:bit is a pocket-sized, codeable computer.</p> <p>To know that a simulator is able to replicate the functions of an existing piece of technology.</p>	xx	xx	<p>To know that accelerometers can detect movement.</p> <p>To understand that sensors can be useful in products as they mean the product can function without human input.</p>
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