Trinity St Mary's CE Primary School
Art & Design Technology Overview Grid

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
2 Year Olds	**Art** Marvellous Marks	**Art** Painting and Mixed Media	**DT** Junk Modelling	**DT** Textiles -Threading	**Art** Sculpture and 3D	**DT** Boats
Nursery (3 and 4 year olds)	**Art** Marvellous Marks	**Art** Painting and Mixed Media	**DT** Junk Modelling	**DT** Textiles -Threading	**Art** Sculpture and 3D	**DT** Boats
Reception	**Art** Marvellous Marks	**Art** Painting and Mixed Media	**DT** Junk Modelling	**DT** Textiles -Threading	**Art** Sculpture and 3D	**DT** Boats
	Art & DT - Seasonal Crafts / Seasonal Projects					
Year 1	**DT** Structures -Windmills (4)	**Art** Art & Design Skills (5)	**DT** Food - Fruit & Vegetables (4)	**Art** Drawing and Sketching (5)	**DT** Textiles - Puppets (4)	**Art** Landscapes Using Different Media (5)
Year 2	**Art** Formal Elements of Art (5)	**DT** Structures - Baby Bear's Chair (4)	**Art** Sculpture & Mixed Media (5)	**DT** Mechanisms - Fairground wheels (4)	**Art** Art & Design Skills (6)	**DT** Moving Mechanisms - Monsters (4)
Year 3	**Art** Formal Elements of Art (5)	**DT** Food - Eating seasonally (4)	**Art** Prehistoric art (5)	**DT** Digital World - Electronic charm (4)	**DT** Structure - Constructing Castles (4)	**Art** Craft (4) Art & Design Skills (2)
Year 4	**Art** Art & Design Skills (6)	**DT** Structures - Pavilions (4)	**Art** Formal Elements of Art (4)	**DT** Mechanical Systems - Slingshot cars (4)	**Art** Every picture tells a story (5)	**DT** Electrical Systems - Torches (4)
Year 5	**DT** Electrical Systems - Doodlers (4)	**Art** Formal Elements of Art - Architecture (5)	**DT** Mechanical Systems - Book (4)	**Art** Every picture tells a story (5)	**DT** Food - What could be healthier? (4)	**Art** Design for a purpose (5)
Year 6	**Art** Photography (4)	**DT** Textiles - Waistcoats (4)	**Art** Make my voice heard (5)	**DT** Structure - Playgrounds (4)	**Art** Still Life (5)	**DT** Digital World - Navigating the World (4)

Year 1 – Art & Design			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Art & Design Skills - Printing with Paint**	**Art & Design Skills - Formal Elements of Art**	**Landscapes Using Different Media**
Learning Objectives	To understand that sketchbooks are for developing ideas and trying things out. To explore colour when printing. Experiment with paint mixing to make a range of secondary colours. To make a print. To draw with different media. Understand that artists can tell stories with their work.	To create abstract art. To know how to create different types of lines. To explore line and mark-making to draw water. To investigate how to mix secondary colours. To apply knowledge of colour mixing when painting.	To identifying the key features of a landscape. To explore different textures. To paint using different tints and shades. To reproduce & apply an artist's colour range to their work. To create details using controlled painting & other materials & objects.
Key Learning Questions	How can you make a clear print? Did you keep the same spacing between the prints? What happens when you overlap colours? How would you describe any patterns you have made? Which primary colours can you mix to make green? What is the special name for the colours green, orange and purple? (Secondary colours.) Which shade of green is the closest match? How do the colours in the circles look different? Which two primary colours have been used to make these different greens? Which green do you think has the 'most blue' mixed into it? Can you identify the wooden support beams the houses were constructed from? How much ink should you put on your block? What colours has the artist used? What shapes can you see? How are the pieces similar/different? Which media can you erase with a rubber? Which of the media are similar? In what ways are they similar? Which ones smudge? Which ones blend? Which ones make your hands messy? Do you have a cat or a dog? How does your cat or dog look different to the animals in these pictures? Do you think the artist liked cats and dogs? Why do you think that? What is different about these pictures? What is similar about these	What shapes can you see? (The artist predominantly uses circles and ovals) Can you come to the board and point them out and name them? Can you see a small shape? Can you see a large shape? Can you point out where shapes overlap? Ask the children what else they notice about the way she has arranged the shapes (the artist's uses shapes within shapes and shapes that overlap). Can you see the primary colours? (red, yellow, blue) Can you see the secondary colours? (orange, purple, green) What words would you use to describe the lines in her work? How are the lines the same? How are they different? How do they make you feel? How could you make these lines? What did we learn about lines in the previous lesson? What lines represent water, in a swimming pool, or a pond, or the sea, or a river? What colours do you think we would see? What sort of lines are they? Does it look like water? Is water an easy thing to draw or paint? How does light change the way water looks? What happens when we mix primary colours together? (They make other colours) What are the colours made by primary colours called? (Secondary colours) What are the secondary colours? (Orange, purple and green) What primary colours mixed	What do people do at the seaside? What would the sand feel like compared to the sea? How would the boat feel compared to the sky? Which colours has Van Gogh used to paint the sand? How do you paint more accurately with a paint brush?

	pictures? Do you think these paintings are modern or from another time period? Why?	together make: green (yellow and blue), orange (red and yellow) purple? (blue and red) What colours can you see? Which two colours make orange? (yellow and red), green? (blue and yellow), purple? (red and blue) (Pointing to a range of colours) – Is this a primary or a secondary colour? Which numbers can you see in Jasper Johns' work? Are the numbers easy to read? Does that matter? Who can spot number …? What is similar about your own artwork and Johns' work? What is different about your own artwork and Johns' work?	
National Curriculum Links	To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination. To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space. To use a range of materials creatively to design and make products. To learn about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.	To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space. To learn about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work. Evaluate and analyse creative works using the language of art, craft and design. To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space. To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination.	To use a range of materials creatively to design and make products. To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination. To learn about the work of a range of artists describing the differences and similarities between different practices and disciplines, and making links to their own work. To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space. To learn about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work. To become proficient in drawing, painting, sculpture and other art, craft and design techniques.
Cross Curricular Links	**English: Spoken Language -** Participate in discussions, presentations, performances, role play, improvisations and debates **Mathematics -** Recognise and name common 2D and 3D shapes [including 2D shapes which just have a length and a width. [for example, rectangles (including squares), circles and triangles]	**Mathematics** - Recognise and name common 2-D and 3-D shapes. To read & write numbers from 1 to 20 in numerals and words **Music -** Listen with concentration and understanding to a range of high-quality live and recorded. **Science: Animal, including humans -** Identify and name, describe and compare the structure	**English: Spoken Language** - Give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings. **Science -** Describe the simple physical properties of a variety of everyday materials.

		of common animals - including fish, amphibians, reptiles, birds & mammals.	
Knowledge & Skills (Success Criteria)	I can use a variety of materials to try out ideas. I can identify which of my ideas I like best and why. I can use the right amount of paint. I can use a variety of colours in my printing. I can create new colours by overlapping prints. I can work carefully and accurately when making my patterns. I can mix two primary colours to make shades of a secondary colour. I can mix at least five different shades of my chosen secondary colour. I can use my five mixed colours to create patterns. I can make a print of a Tudor house in the Great Fire of London. I can use two different printing techniques to make my print. I can draw around a variety of shapes. I know that my shapes can overlap. I can experiment variety of different media in this piece. I can say which medium I prefer and why. I can compare two images by the same artist and say how they are similar or different. I can look carefully at an image and describe details I notice. I can describe what a picture makes me imagine.	I know what abstract art is. I know that abstract art uses a lot of shapes. I can create an abstract piece using different colours and shapes in an interesting way. I can use circles and ovals in my work to make abstract compositions. I can describe the lines in the work of an artist and in my own work. I can understand that there are different types of lines and can experiment with different resources to create them. I can hold a pencil and chalk in different ways to experiment with the line I create and work in the style of a modern artist. I can use different materials and lines to make different types of marks, reflecting what I can hear in music. I know that there are many different ways of drawing lines, and that they feel different to make, and that they look different. I can add plants and creatures to bring art to life. I can evaluate my art and the work of others using the language I have learnt. I can name the primary colours: red, yellow & blue. I can mix primary colours to make secondary colours. I can say which two primary colours are needed to mix each of the secondary colours. I can use primary colours to paint. I can choose a suitable brush for the marks I want to make.	I can cut complex shapes using scissors safely and carefully. I can draw lines to represent the horizon line and the sea. I can compose a beach scene using shapes provided and my imagination. I can identify different textures in a scene. I can find appropriate materials to create different textures and apply appropriate textures to a well-known painting. I can create different tints & shades. I can use tints & shades and create a tonal representation of the sea & sky. I understand that light colours stand out more and darker colours recede. I can identify colours used in an artist's work. I can mix colours to match those I see. I can apply colours carefully using a paintbrush. I can paint areas of dark & light. I can use a small brush to paint details. I can use other objects & materials to add further details.
Artists	Wassily Kandinsky, Renata Bernal, Ilya Bolotowsky and Louis Wain	Beatriz Milhazes (or Piet Mondrian, Tarsila do Amarol, Henri Matisse), Bridget Riley, Jasper Johns,	Peder Severin Kroyer, Joaquin Sorolla, Pierr-Auguste Renoir, Vicent Van Gogh,
Key vocabulary	Shade, Hue, Primary colour, Secondary colour, Pattern, Shape, Kaleidoscope, Texture, Space Tudor style house, Form, Print & Printing, 2D shape & 3D shape, Abstract, Contemporary, Drawing mediums, Narrative	Abstract art, Composition, Line(s), Vertical, Horizontal, Diagonal, Wavy, Cross-hatch, Optical art, Water, Waves, Primary & Secondary colours, Mix, Blend, Impasto,	Horizon, Landscape, Sea, Beach, Texture, Colour, Tint, Shade, Collage

Year 1 – Design & Technology			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Structures - Constructing Windmills**	**Food - Fruit & Vegetables**	**Textiles - Puppets**
Learning Objectives	To include individual preferences and requirements in my design. To make a stable structure. To assemble the components of my structure. To evaluate my project & adapt my design.	To identify if a food is a fruit or a vegetable. To identify where plants grow and which parts we eat. To taste and compare fruit and vegetables. To make a fruit & vegetable smoothie.	To join fabrics together using different methods. To use a template to create my design. To join two fabrics together accurately. To embellish my design using joining methods.
Key Learning Questions	What is a structure? (Something that has been made/constructed, for example, a building, bridge, chair or table) What are structures for? Can you identify some structures in the room? What is a windmill? (A structure with sails that are moved by wind) What are windmills for? Who might live in a windmill? What are the three main parts of a windmill? Does the windmill stand up on its own? Is it well decorated for the mouse? Does it have three parts? Does the windmill turn in the wind? If the children feel any of the points above are not met, probe for deeper understanding and ask: How could it be improved? What are the three key features of a windmill? What are windmills used for? Why do windmills need turbines? What materials are used? How has it been made? What is an axle? What is it for? What other products use axles (cars, toys, etc)?	Is it a vegetable? Is it shaped like a circle? Is it green? Is it yellow? Is it a banana? What is this called, who has eaten this before? What are its tastes, smell, texture, and appearance? What will it look like if we peel or cut it in half? How might we describe its shape? Which parts do we eat? What might I need to do before eating this? Have you ever drunk a smoothie? What did it taste like? What kind of food goes into smoothies? Are smoothies good for your body? What is a smoothie? Are smoothies good for your body? What might we have to do before taste testing? What parts of these fruits and vegetables do we eat? Why is it important to wash the fruit and vegetables before we eat?	Who are the main characters in the story? What do you know about the appearance of the main characters? What do you need to think about when pinning? What do you need to think about when stapling? What do you need to think about when you use glue? What colour should we use for the material? What colour hair will they have? What kind of eyes, nose, eyebrows, etc? What do the main characters in the story look like? How will you join your two pieces of fabric? Why are you choosing this technique? How will you join the two pieces of fabric? What will you need to decorate your puppet to make it look like your character? How will you attach your decorations to your puppet? What are the possible mistakes you need to think about and avoid? Does your puppet design look like the character in the story? Do you need to make any changes to your design?

			What techniques will you use to attach your decorations to your puppet? Why? Are the two pieces of fabric joined together well? Are there any gaps? Is the puppet finished? Does your/their puppet look like the character? How could you make it better?
National Curriculum Links	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. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, according to their characteristics. Build structures, exploring how they can be made stronger, stiffer and more stable. Evaluate their ideas and products against design criteria. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Understand where food comes from. Explore and evaluate a range of existing products. Use the basic principles of a healthy and varied diet. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Evaluate their ideas and products against the design criteria.	Explore and evaluate a range of existing products. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Design purposeful, functional, appealing products for themselves or 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. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Evaluate their ideas and products against design criteria.
Cross Curricular Links	**Mathematics:** Recognise and name common two-dimensional and three-dimensional shapes.	**Science:** KS1 Programme of Study - Working scientifically - Identifying & classifying. Using their observations and ideas to suggest answers to questions. **RSE:** What constitutes a healthy diet (including understanding calories and other nutritional content). The principles of planning & preparing a range of healthy meals.	**English:** Become familiar with key stories, fairy stories and traditional tales, retelling them and considering their particular characteristics.

Knowledge & Skills (Success Criteria)	I know what a windmill is. I can describe the purpose of structure. I understand the importance of clear design criteria. I understand what a net is. I can follow instructions to cut & assemble the supporting structure of my windmill. I know that the shape of materials can be changed to improve the strength & stiffness of structure. I know that cylinders are a strong type of structure that are often used for windmills & lighthouses. I understand what stable means & can ensure my structure has this property. I can cut and assemble my turbine correctly. I understand that windmill turbines use wind to turn and make the machines inside work. I know that axles are used in structures and mechanisms to make parts turn in a circle. I can attach my turbine to the axle and attach them to the structure of my windmill. I can test that my turbine turns in the structure and alter the parts if it doesn't. I can evaluate my windmill according to the design criteria. I can test whether my structure is strong and stable and reinforce it if necessary. I can test whether my turbine turns in the structure and alter the parts if it doesn't. I can test whether my turbine turns freely in the wind/when blown on.	I can name a number of fruits and vegetables. I know how to determine if something is a fruit. I understand that some foods we call vegetables are actually fruits. I can suggest what fruits and/or vegetables are in a drink. I can taste fruits and vegetables and describe their: appearance/feel, smell, taste. I can make a choice as to what smoothie I will make and why. I can describe how to prepare some fruit and vegetables before they are eaten. I can cut soft fruit safely. I can describe how my smoothie tastes.	I can remember that different techniques may be used to join fabrics for different purposes. I know how to join fabric by pinning, stapling or using glue. I can design a puppet. I can build my design on a template. I can join fabrics together. I can align two pieces of fabric. I know how to use a template. I can fit my hand into my puppet. I can use joining methods to decorate my puppet. I can still put my hand into the puppet after it is decorated. I can evaluate mine and others' work.
Designer			
Key vocabulary	Axle, bridge, design, design criteria, model, net, packaging, structure, template, unstable, stable, strong, weak	Fruit, vegetable, seed, leaf, root, stem, smoothie, healthy, carton, design, flavour, peel, slice	Decorate, design, fabric, glue, model, hand puppet, safety pin, staple, Stencil, template, Equipment, Inspiration, Method, Technique,

Year 2 - Art & Design			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Art & Design Skills - Formal Elements of Art**	**Art & Design Skills - Sculpture & Mixed Media**	**Art & Design Skills**
Learning Objectives	To create repeating patterns. To explore different textures. To create a picture using collage and frottage. To draw using tone to create a 3D effect. To apply an understanding of tone to create a 3D drawing.	To create 3D human forms. To draw faces that express different emotions. To work together to create a large piece of artwork. To work together to create a large scale artwork. To work together to create a large scale artwork.	To use my hands as a tool for making. To learn to weave. To apply my painting skills when working in the style of an artist. To explore the use of tones in shading. To develop painting skills. To experience drawing for pleasure.
Key Learning Questions	Where can you see repeating patterns in this room? Describe the shapes you see. Is there a pattern you particularly like? Why? What are you using to make a rubbing with? How are you holding it? What does the texture look like? What words describe the various textures? What does it feel like under your fingers? What was it like to do a rubbing? What was easy/difficult? Who can find a rough blue rubbing? Who can find a dark bumpy texture? Who can find two similar rubbings? Who can find two very different rubbings of the same colour? Who can find three rubbings that are the three primary colours? Also ask about 'favourite' places they took rubbings from and why. What does this look like to you? What do you think it could be? What is it doing? What is in the background? Is it real or is it imagined? Can you see the different textures? How would you describe them?	How did altering the mouth change the expression on your character's face? How did changing the eyelids change the expression? Has your artwork used the space well? Have you tried to avoid too many large areas? Did you keep the lines smooth and avoid jagged lines? Can the figures of the two children still be made out? Does the comic collage take up the right amount of space? Are the lines drawn neatly with the pen, avoiding jagged lines or gaps? How many different tones of colours have you created from blending the paints? What colours are created when you blend these two colours?	Does anyone know where clay comes from? Has anyone used clay before? Can you remember what a repeat pattern is? Can you explain this to the rest of the class? What is weaving? Can you see any examples of weaving around you? (Look at fabrics, clothes, materials etc.) Why is weaving important? What are the benefits of weaving? (It creates large, flat sheets of fabric from long thin cord) Has all the space been filled? Why have some areas been left white? What colours were chosen for the circles? Why do you think Clarice Cliff chose these? What colours will not stand out behind the black trees? What do they like about the plates? How are they the same? How are they different? What happens if you press more lightly? Harder? How can you control your pencil to stay inside the lines and not leave gaps? Will your roller coaster be a smooth and even ride? Or will it be bumpy?

	How are the marks you make affected by how you hold the pencil? What grade of pencil makes the darkest marks? What grade of pencil creates the lightest shading? How did the artist make this drawing? (He probably arranged paper strips or ribbon and drew what he could see). Has the artist made the word look 2D or 3D? How?		
National Curriculum Links	To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination. To develop a wide range of art and design techniques in using line, shape, form and space. About the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work. To use a range of materials creatively to design and make products. To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space. Be taught about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.	To use a range of materials creatively to design and make products. To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space. To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination. Be taught about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.	To use drawing, painting and sculpture, to develop and share their ideas, experiences and imagination. To develop a wide range of art and design techniques in using line, shape, form and space. About the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work. To use a range of materials creatively to design and make products.
Cross Curricular Links	**Mathematics:** order and arrange combinations of mathematical objects in patterns and sequences. **Science:** describe the simple physical properties of a variety of everyday materials.	**PSHE**: **English: Reading -** Develop pleasure in reading, motivation to read, vocabulary and understanding by: listening to, discussing and expressing views about a wide range of contemporary and classic poetry, stories and non-fiction at a level beyond that at which they can read independently.	

Knowledge & Skills (Success Criteria)	I know that a pattern is created by repeating lines, shapes, tones or colours. I know that pattern can exist in nature and can be made by artists to design all sorts of art, craft and design. I can choose everyday items to paint with. I can use these items to create a repeating pattern. I know how to take a rubbing. I can identify different textures and record them using a rubbing technique. I know that the tool that I use will change how my rubbing looks. I can use colour to create different effects. I know that I can create a picture from the rubbings that I have made. I can make decisions about my work and create a final piece by: Carefully tearing my rubbings into shapes. Arranging the shapes into a picture. I know that 'tone' means the lightness or darkness of something. I can experiment with shading to create different tones. I can use contrasting tones to make a drawing look three dimensional. I can explore more than one way of holding a pencil to create different effects. I know that 'tone' means the lightness or darkness of something. I can experiment with a range of tools to create different tones. I can use different tones to make a drawing look three dimensional. I can remember that different drawing tools and different ways of holding them can give a variety of tones from light to dark.	I can create a superhero sculpture by: Bending wire/pipe cleaners into a superhero shape. Making legs, arms and a body using plasticine. I can show awareness of the proportions of limbs in my sculpture. I know that the parts of the face that convey most emotion are the: eyes, mouth, eyebrows. I can create different expressions by altering these features. I can draw around a member of my group in a superhero pose. I can add shapes and words to our superhero art piece. I can use materials to add texture to our art work. I can blend paint colour washes into the artwork. I can blend two primary colour washes together to make a secondary colour. I can create a dot matrix effect in the style of Lichtenstein. I can create shadow effects within the artwork by outlining the figures in black. I can study our work of art to see which sections are missing colour. I can use pastels to add colour in areas <u>not</u> already filled with comic collage or fingerprint dots. I can blend two primary pastel colours to make a secondary colour. I can shade tones to the edge with few gaps and with a neat finish.	I can remember that I can create repeating patterns into clay in the same way that I used them in my printing pattern. I know that clay is a material that can only be used when it is flexible and wet. I understand that fabric is made from weaving. I can fold a horizontal piece of paper into eight sections. I can fold a vertical piece of paper into six sections. I can cut along folded accurately with scissors. I can thread strips of paper to create a weave patterns. I can mix secondary colours. I can choose to paint with colours that look good next to each other. I can describe my plate and compare it to others. I can control my pencil to create dark and light tones. I know that I must take care to shade with no gaps. I know that I must not to go over the lines. I must rub out any small mistakes. I can use a comfortable grip when holding a brush. I know how to load a paint brush with the correct amount of paint. I can work carefully to control my brush. I can use a flowing stroke when painting. I understand that art can be enjoyable however good I think I am. I can appreciate other people's drawings. I can suggest ways to improve my own work and other peoples.
Artists	Max Ernst, George Seurat, Ed Ruscha,	Roy Lichenstein,	Clarice Cliff, Nancy McCroskey,

Key vocabulary	Rubbing, texture, frottage, Max Ernst, Contrast, 3D, Observational drawing, Shading, Shadow, Tone, Planets, Mercury, Venus, Earth, Mars, Saturn, Uranus, Jupiter, Neptune, Pluto	Superhero, Pose, Wire, Limbs, Torso, Joints, Emoji, Face, Features, Roy Lichenstein, comic, pop art, print, primary colours, tone, colour wash, pastels, shadowing	Clay, Template, Slip, Repeating, Pattern, weave, design, paint, concentric circles, silhouette, shade, sketch, rollercoaster, brush, draw, rub out

Year 2 - Design & Technology			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Structures - Baby Bear's Chair**	**Mechanisms - Fairground Wheel**	**Mechanisms - Moving Monsters**
Learning Objectives	To explore the concept and features of structures and the stability of different shapes. To explore the concept and features of structures and the stability of different shapes To explore strength in different structures To understand that the shape of the structure affects its strength To make a structure according to design criteria To produce a finished structure and evaluate its strength, stiffness and stability	To explore wheel mechanisms and design a wheel To select appropriate materials To build and test a moving wheel To make and evaluate a structure with a rotating wheel	To look at objects and understand how they move To look at objects and understand how they move To explore different design options To make a moving monster
Key Learning Questions	Are they man-made or natural? What 3D shapes can you see? Which part of the triangle and square sections are the most crumpled? Which is the weakest part of the structure? Why was the cylinder stronger? What is strength? What is stability? What is stiffness? Why are these important? How can you make structures stronger, stiffer and more stable? What were the structures the children saw in the story? Why didn't Goldilocks like Daddy Bear's chair? Why did Baby Bear's chair collapse? Is the chair stable enough? Is the chair strong enough? Is the chair stiff enough? Will Baby Bear like it? What might Baby Bear like to change/improve? What does a good quality/well made joint look like? What should a successful chair look like/do?	What shape will the pods be? What material will the pods be made from? Why? What is the advantage of that material? What will keep the people from falling out? Will people sit or stand? What will keep the people dry in bad weather? What properties should the wheel have and why? How will the wheel attach to the axle? What materials will the frame be made of? Why? What are we testing? Why? How can we test this? How will we make it fair? Is this a fair test? What have we learnt? Seeing these results, what would you do differently? When we use this tool/material, what should we do so that we stay safe? What will keep the people from falling out? Why do the pods need to rotate?	Can you name any components? Can you identify which products are mechanisms/mechanical and which are not mechanical? Can you explain what a mechanism is? Can you identify specific types of mechanisms within the objects? What is a mechanism? What is an input and an output? What is a lever? What is a linkage? What are levers and linkages used for? Can you identify a lever or a linkage? Can you name any products that use levers and linkages? What is a pivot? What do monsters look like? What famous monsters do the children know about? What features do monsters have? What are levers and linkages? What are pivots used for in linkages? What products use levers and linkages? What are Design Criteria?

	What would Baby Bear expect?	Does the wheel hold the required number of people? Does the wheel spin? Does frame holding the wheel stand up by itself? Do the pods rotate?	Why is it important to use Design Criteria? What materials can you use to make your monsters?
National Curriculum Links	Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Build structures, exploring how they can be made stronger, stiffer and more stable. 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 Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	Explore and evaluate a range of existing products Generate, develop and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Explore and use mechanisms in their products Design purposeful, functional, appealing products for themselves and other users based on design criteria Evaluate their own ideas and products against a design criteria Build structures exploring how they can be made stronger, stiffer, and more stable Select from and use a range of tools and equipment to perform practical tasks	Explore and evaluate a range of existing products Explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking and drawing, templates, mock-ups and, where appropriate, information and communication technology Evaluate their ideas and products against design criteria Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
Cross Curricular Links	**Mathematics: Geometry - Properties of shapes** Identify and describe the properties of three-dimensional shapes, including the number of edges, vertices and faces Identify two-dimensional shapes on the surface of three-dimensional shapes [for example, a circle on a cylinder and a triangle on a pyramid] Compare and sort common two-dimensional and three-dimensional shapes and everyday objects **Measurement:** Compare and order lengths	**Mathematics:** Identify and describe the properties of 2D shapes, including the number of sides and the line of symmetry in a vertical line **Science:** Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick , rock paper and cardboard for particular use	
Knowledge & Skills (Success Criteria)	I can identify natural and man-made structures. I understand what is meant by stability and can identify when a structure is more or less stable than another.	I know how axles help wheels to move a vehicle I can evaluate different designs I can design and label a working wheel I understand the properties of different materials	I understand that mechanisms are a collection of moving parts that work together in a machine I know that there is always an input and output in a mechanism

	I know that shapes and structures with wide, flat bases or legs are the most stable I can identify natural and man-made structures I understand what is meant by stability and can identify when a structure is more or less stable than another I know that shapes and structures with wide, flat bases or legs are the most stable I can remember that chairs are structures and need to be strong, stiff and stable I know how to create joints and structures from paper/card and tape I know that the chair I design for Baby Bear needs to: support Teddy; be strong, stiff and stable I know how to create joints and structures I can evaluate my structure according to the design criteria	I can communicate my ideas to someone else I can select appropriate materials for my wheel I can build a stable structure I can test elements of my design I can adapt my design as necessary I know how to make the wheel rotate I can evaluate a wheel mechanism and adapt as necessary I know how to ensure that my pod stays upright whilst being rotated around a fixed point	I can identify mechanisms in everyday objects I understand that a lever is something that turns on a pivot I understand that a linkage is a system of levers that are connected by pivots I can help devise whole-class design criteria for what our moving monster should do I understand that mechanisms are a collection of moving parts that work together in a machine I know that there is always an input and output in a mechanism I can identify mechanisms in everyday objects I understand that a lever is something that turns on a pivot I understand that a linkage is a system of levers that are connected by pivots I can help devise whole-class design criteria for what our moving monster should do I understand that linkages use levers and pivots to create motion I can think of two of my own points to add to the class Design Criteria I can draw two moving monster designs that meet all points of my Design Criteria My design includes the linkage I will use to make my monster move I know how to make linkages by connecting levers and pivots I know that materials can be selected according to their characteristics I can design and make the features of my monster I can evaluate how functional my monster is and whether it meets the Design Criteria
Designer			
Key vocabulary	design criteria, man-made, natural, properties, structure, stable, shape, model, test	Design, design criteria, wheel, Ferris wheel, pods, axle, axle holder, frame, mechanism	Axle, design criteria, input, linkage, mechanical, output, pivot, wheel

Year 3 - Art & Design			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Prehistoric Art**	**Formal Elements of Art**	**Craft & Art and Design Skills**
Learning Objectives	To understand how prehistoric man made art, and to reflect this style in their work To scale up drawings and sketches in a different medium To experiment with the pigments in natural products to make different colours To select and apply a range of painting techniques To apply painting skills when creating a collaborative artwork	To recognise and draw simple geometric shapes found in everyday objects To recognise and apply geometry when drawing To create and form shapes using soft modelling wire To apply even layers of pencil tone when shading To show tone by shading	To create a mood board. To create tie-dyed materials. To learn what paper weaving is and create a piece of art using this method. To weave using different materials. To understand how to create tint and shade of a colour. To develop observational drawing.
Key Learning Questions	Can you name the 2D shapes that make up your animal drawings? How will a drawing change if we 'scale it up'? Which details have you changed or altered to your own style? How did you find working with charcoal? What did it feel like? What is good about using charcoal? What is difficult? How is modern paint different to prehistoric paint? Where does the colour in paint come from? Could you do this in the dark, working only to the light of a small candle? What did you enjoy or not enjoy about this? How is the work similar/different to the real cave paintings? Are the colours accurate? Why do you think they painted their hands on cave walls in this way?	Was it easier to see the shapes of natural or man-made objects? Where it is more difficult to see a shape in an object, can we use more than one shape and combine them? Do you think drawing simple shapes first helped you create your drawing? What does the word 'tone' mean in art?	Why did you choose this particular picture? Colour? Fabric? Can you group your ideas? What words will you include to sum up this feeling? What colour dye will you use? What will happen if we mix two of the coloured dyes together? Can you predict what patterns will be produced from the way you tied up the cloth? How would you describe the way the cloth looks under the magnifying glass? What is a warp? What is a weft? How will you organise the colours and materials? How will you weave so that the piece stays together? Which parts worked well? Were there any materials that were hard to weave?

			Are there parts of the frame that have not worked well? Would it be easier if the pieces were longer/shorter?
			What does the word tone mean? What is a tint? What is a shade? What shapes can you see in my toy? Can you use your hands and finger to draw these shapes? What colours do you see? Is there any texture? Where? How could I draw this texture? What shapes can you see in my toy? Can you use your hands and finger to draw these shapes? What colours do you see? Is there any texture? Where? How could I draw this texture?
National Curriculum Links	Create sketchbooks to record their observations and use them to review and revisit ideas Know about great artists, craft makers and designers, and understand the historical and cultural development of their art forms Develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design Improve their mastery of art and design techniques, including drawing, painting and sculpture About great artists, architects and designers in history	To develop their techniques, including their control and their use of materials with creativity, experimentation and an increasing awareness of different kinds of art, craft and design To improve their mastery of Art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]	To develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design. Create sketch books to record their observations and use them to review and revisit ideas. Improve their mastery of art and design techniques. Develop their techniques, including their control and their use of materials. Improve their mastery of art and design techniques, including weaving. Learn about great artists, architects and designers in history.
			To develop a wide range of Art and design techniques in using colour, pattern, texture, line, shape, form and space.

			To use drawing, painting and sculpture to develop and share their ideas, experiences and imagination.
Cross Curricular Links	**History:** Learning about changes in Britain from Stone Age to Iron Age **Mathematics:** draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	**Mathematics:** draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	**Design and Technology:** 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.
			Mathematics: draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.

Knowledge & Skills (Success Criteria)	I can identify features that prehistoric paintings have in common I can describe why prehistoric people often painted animals I can look for basic shapes within an animal drawing to help get the proportions of my drawing accurate I can identify and collect coloured natural items to paint with I can describe which natural items made the most successful colours, giving reasons I can create paints using all natural ingredients as prehistoric artists did I can mix paint to create a range of natural colours I can experiment with techniques to create different textures I can add fine detail using smaller brushes I can work in a group to create a large piece of artwork. I can create designs using both positive and negative impressions of my hand. I can create natural colours using paint.	I can recognise and accurately draw simple shapes in objects I can identify objects made from shapes in my environment and draw from observation I know that: In nature objects are usually formed from wavy lines and Man-made objects consist of straight lines I know that the points, lines, shapes and space that make up simple 2D and 3D shapes are known as 'geometry' I can see basic geometrical shapes (such as circles and squares) when I draw objects I can use these shapes to help me draw, design and decorate more accurately I can use guidelines to help set out and construct more complicated images from observation I can bend, manipulate and join wire to create the shape of a fish I can use smaller pieces of wire to add features I can work safely with the tools and equipment I am using I can describe what 'tone' means in art (the light and dark areas of an object or artwork) I can hold my pencil correctly to shade I can apply the four rules of shading: Shading in one direction Creating smooth, neat, even tones Leaving no gaps Ensuring neat edges when filling a shape I know that 'tone' refers to the light and dark areas of an object or artwork I am able to control a pencil to shade tones smoothly from light to dark using the four rules of rules of shading I can blend tones gradually so that there aren't any sudden changes from dark to light	I know what a mood board is I can show what is important to me through the creation of my own mood board I can explain my choices I know the process of tie-dyeing I can secure the ties tightly I understand the similarities between tie-dyeing and wax resist I know what the 'warp and 'weft' are in paper weaving I can cut with accuracy I can weave with neatness My finished piece is reflective of me as it is based on my mood board I know how to weave I can weave with a range of materials I understand the terms 'warp' and 'weft.

			I know that tone is the areas of dark and light and can identify this in a painting or photograph. I know that a tint is to make a colour lighter by adding white and that a shade is to make a colour darker by adding black. I can use tints and shades to paint from light to dark in smooth and neat strokes. I can recognise and describe shapes in an object to start a drawing. I can look carefully to add details I can use mark-making techniques to add texture.
Artists	The drawings of the Chauvet cave		Anni Albers, Diego Velázquez,
Key vocabulary	Prehistoric, Sketch, Proportion, Scaled up, charcoal, Smudging, Texture, Tone, pigment, cave drawings, cave paintings, composition, positive and negative image, handprint	Geometric, shapes, geometry, 2D, 3D, wire, sculpture, shading, tone, light, dark	Mood board, decorate, palette, tie dye, pattern, Weave, Warp, Weft, Natural, Synthetic, loom, Diego Velázquez, Tone, Tint, Shade, Mark making, Observation, Outline, Sketch Texture,

Year 3 - Design & Technology			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Food - Eating Seasonal**	**Digital World - Electronic Charms**	**Structures - Constructing a Castle**
Learning Objectives	To know that climate affects food growth To understand the advantages of eating seasonal foods grown in the UK To create a recipe that is healthy and nutritious using seasonal vegetables and fruits. To safely follow a recipe when cooking.	To understand the impact of the digital revolution in the world of (D&T) product design To write a program to initiate a flashing LED panel after button press and/or automatically initiate using the Micro: bit light sensing, as part of an eCharm To create and decorate a foam pouch for the eCharm, using a template To design a display badge and/or stand using CAD (computer-aided design) software for an eCharm product	To recognise how multiple shapes (2D and 3D) are combined to form a strong and stable structure. To design a castle. To construct 3D nets. To construct and evaluate my final product.
Key Learning Questions	In which country has this ingredient been grown? Why do we think some ingredients are sourced from so far away? What conditions do you think these foods need to grow? Why do you think these foods cannot be grown in the UK? What does the term 'seasonal' mean? Where does the food in our supermarkets come from? Is the food in the supermarket always seasonable in the UK? Do we need to import food? What are the effects of importing food? What ingredients do we need? How will we prepare each ingredient? What must we consider to stay safe in the kitchen? What hygiene risks do we face? How much of each ingredient do we need approximately? How do we know? How will you prepare each ingredient? What must we do to stay safe in the kitchen? What hygiene risks do we face? Did it taste as they expected? Does it look appetising? Does it reflect a balanced diet?	What is the digital revolution? What do we mean by a 'digital world'? What are smart wearables? Can you name an electronic device that we use in school and explain how it is useful? What has changed over time with the digital revolution? Can you give an example of a product that evolved over time and describe how it changed? How will the Micro: bit help us to create an electronic charm? Why is it important to write a design criteria? What is a Micro: bit? What features does the Micro: bit have and what can they do? Which features did we discuss for the electronic charm (eCharm) and why? What do you need to do to begin the program? What do you want to happen when button [A] or [B] is pressed? How else can we initiate the program? Why did we use a loop? Did you find any errors (bugs) in your program? What were the errors (bugs)? What was the solution? How does your program meet the first design criteria point? Have you included any additional code to your program? What does the additional	What are castles for? Who lives in castles? Where do we see castles? Which stories have castles in them? What difficulties might you run into when creating that castle? What could be done practically to construct the parts? E.g. use/alter junk modelling materials. How could the design be simplified? What is a net? What is a tab? What is scoring? What will make a good quality castle? Does your castle include all the features in your original design? Are there any other features you would like to include?

		code do and why? What is a pouch? What are key features? What key features does our Micro:bit pouch need? Can you think of another solution for carrying the Micro:bit? How did you feel the project went? Why? Which part of the project did you enjoy the most? Which part of the project did you find most challenging? What new information and skills did you learn? Was your product successful/unsuccessful? What would you improve about the product? What is the purpose of a point of sale display? Can you think of any examples you have seen in the supermarket? How could we use point of sale displays to persuade the public to buy our eCharms?	
National Curriculum Links	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.	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. Understand how key events and individuals in design and technology have helped shape the world. Apply their understanding of computing to program, monitor and control their products. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Select from and use a wider range of tools and equipment Items and objects which are needed to complete a task. 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 their ideas and products against their own design criteria and consider the views of others to improve their work.	Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients according to their characteristics. 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. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design *(Extension activity).* 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. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
Cross Curricular Links	**Physical geography:** climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle. **Human geography:** types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.	**History:** a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066. **Computing:** Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	**History**: a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066. **Maths:** Draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them. **British values:** Mutual respect.
Knowledge & Skills (Success Criteria)	I know that not all fruits and vegetables can be grown in the UK. I know that each country has its own climate. I understand that these climates enable different fruits and vegetables to grow. I can consider hygiene when preparing food. I can use cooking equipment safely. I know that imported food will have travelled from far away and has an impact on the environment. I know that vegetables and fruit grow in certain seasons and that in the UK we often import food from other countries when it is not in season. I know what foods are currently in season. I am aware that each vegetable and fruit gives us nutritional benefits. I can design a puff pastry tart using seasonal vegetables and fruits. I can describe my puff pastry tart and the benefits of its ingredients. I know how to prepare a kitchen to cook in. I know how to prepare myself to start cooking. I know the basic rules of food contamination. I can use, store and clean a knife safely. I can follow a recipe to make a tart.	I can identify some key product developments that occurred as a result of the digital revolution. I can analyse and evaluate an existing product. I can problem solve by suggesting potential features on the Micro: bit and justifying my ideas. I can write a program to control (button press) and/or monitor (sense light) to initiate a flashing LED algorithm. I understand what a loop is in programming. I can explain the basic functionality of my eCharm program. I can identify the key features of a pouch. I can develop design ideas for a technology pouch. I can use a template when cutting and assembling the pouch. I can draw and manipulate 2D shapes, using computer-aided design, to produce a point of sale badge. I understand what is meant by 'point of sale display'. I can follow a list of design requirements.	I can identify different features of castles. I can design my own castle. I can label the features of my castle. I can explain why a castle needs to be strong and stable. I know the features of a castle. I can add two design points to the Design Specification to appeal to the person/purpose of my castle. I can draw the design of my castle using 2D shapes, labelling: the 3D shapes that will create the features materials I need colours I will use. I know that a net is what a 3D shape would look like if it were opened out flat. I can construct a range of 3D geometric shapes using a net by: Cutting along the bold lines Folding along the dotted lines Keeping the tabs the correct size Making crisp folded edges Constructing the net using glue to make a geometric shape.

			I can construct my castle to meet the requirements of my brief by: -making neat 3D shapes using nets -stacking shapes and recyclable materials to make the structures of my castle -creating a castle base to secure my structures to -adorning my castle with facades and other decorative features. I can evaluate my work and the work of others.
Designer			
Key vocabulary	Climate, Fruits (lychees, watermelon, strawberries), Countries, Weather, Seasons, Sugar, Export, Import, Ingredients, Natural, Vegetable, Recipe	smart wearables, product design, digital revolution, technology, analogue, digital, feature, function, digital world, Micro:bit, electronic products, program, loops, initiate, simulator, control, monitor, sense, template, develop, fasten, test, user, CAD (computer-aided design), point of sale, display, badge, stand	Castle, Key features, Strong, Stiff, Stable, 3D, 2D,

Year 4 - Art & Design			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Art & Design Skills**	**Formal Elements of Art**	**Every Picture Tells a Story**
Learning Objectives	To create an image using an artistic process I know that lenticular printing gives an optical illusion I know that this illusion is created using two images I can create an image using the principles of lenticular printing I can score lines safely To apply an understanding of tint to recreate a traditional design style. To paint in the style of a famous artist. To create a small scale sculpture. To arrange and draw a still-life image from observation. To understand the role of a curator and to create an exhibit.	To develop a range of mark-making techniques. To create patterns using printing techniques. To create patterns using a stamp. To create patterns using reflection and symmetry.	To understand how to analyse a famous painting. To understand how to find meaning in painting. To develop an understanding of art through role-play. To develop analytical skills to respond to a painting. To apply interpretation skills to analyse and respond to an abstract painting. To understand how artists use art to tell stories and evoke feelings.
Key Learning Questions	Where does the pattern originate from? Is traditionally Chinese? How are we creating tints of blue? What pattern will decorate the edge of your plate? How do we make the secondary colours: green, orange, purple? How do we make brown? (Use all the primary colours together.) How am I holding the pencil? What grade of pencil am I using? Which of these (rubber, bread, and white tack) works best and why? What is a curator? What does a curator do? What would be good skills for a curator to have? Have you ever been to a gallery or a museum?	How many different patterns can you create with the same shape?	How would you describe Hockney's work? (Write their responses on the board. If you need to ask leading questions to start this, ask: are they colourful) What sizes do you think they are? What do you like or not like about his work? Do the people remind you of anyone that you know? Why? What might you be able to hear? How does this painting make you feel? How might the people in this painting feel? What do you think happened before this moment in time? What might happen next? Who do you think speaks first? What might they say? What have we found out about Paula Rego's artworks? What is the inspiration for her work? What words would you use to describe her work? How many people are in the painting? What ages do you think they are? What are they earing? What are they doing? Where are they? What else can you see in the painting? What time of day do you think it is? Why do you think this? What sounds do you think you could hear? How does this painting make you feel? How many people are in this painting? What are each of them doing? Where do you think the building is? What time do you think it is? What sounds would you hear if you were

	Ask for examples. Do you now understand that somebody has to decide where to put things and how to display them?		able to walk into the cafe? We can't see all of the café, so what might we see to the left of the picture? Do you think this is a modern painting or was it done some time ago? What makes you think that? Although it was painted long ago, is anything in the painting the same today? What are the groups of people doing? (Point to a group on your displayed image.) Is it all children? Can you see people of any other age? Is everyone facing the same way? We can only see a part of some figures; why do you think this is? What type of buildings can you see? Is it part of a town or a village? How do you know? This painting is on a flat canvas but you feel as if you can walk into it; how does the artist create that effect? Why are some people larger than others, e.g.: people at the front compared to people at the back? What sort of sounds might you be able to hear? Is this an easy picture to look at and understand? Does it tell a story? What might this be? If we made this picture today, what new games would we add? What does Fiona's studio look like? How does she organise her paints? What type of paint does Fiona use? What does she think people might like in her paintings? What do you like about her paintings? What shapes do you see? Do you see shapes that look like real things, do you see abstract shapes? What colours do you see? If this painting could make sounds, what would they be like? What adjectives would you use to describe this painting? How does this painting make you feel? If anything on this painting could move, where would it go? How would it move? If you could take the painting home, where would you put it in your house? Why? Can your group come up with a name for the painting? What would it be? What can you see in the painting? Who do you think the people are? What do you think is happening in the painting? Why do you think it is called The Last Supper? What can you tell about the people in the picture by looking at them, their actions and their expressions? What do you think the story of the painting is? What is the meaning behind the painting?

National Curriculum Links	Improve their mastery of Art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] About great artists, architects and designers in history. Develop a wide range of Art and design techniques in using colour, pattern, texture, line, shape, form and space. Create sketchbooks to record their observations and use them to review and revisit ideas. Produce creative work, exploring their ideas and recording their experiences. Evaluate and analyse creative works using the language of art, craft and design. Know about great artists, craft makers and designers, and understand the historical and cultural development of their art form.	Create sketchbooks to record their observations and use them to review and revisit ideas. Improve their mastery of Art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]. Develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.	About great artists, architects and designers in history. Learn about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work.

Cross Curricular Links	**Mathematics:** Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Pupils connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts. **Design and Technology:** select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. **English: Reading – Comprehension:** Understand what they read, in books they can read independently, by: identifying main ideas drawn from more than one paragraph and summarising these. Participate in discussion about both books that are read to them and those they can read for themselves, taking turns and listening to what others say. **English: Spoken Language:** Listen and respond appropriately to adults and their peers. Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments. Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas	**Mathematics:** Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry.	**English: Spoken Language:** Ask relevant questions to extend their understanding and knowledge. Articulate and justify answers, arguments and opinions. Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments. Participate in discussions, presentations, performances, role play, improvisations and debates. **RE:** RE should provide opportunities for pupils to develop positive attitudes and values and to reflect and relate their learning in RE to their own experience. It is recommended that there should be a wide-ranging study of religion and belief across the key stages as a whole.
Knowledge & Skills (Success Criteria)	I know that lenticular printing gives an optical illusion I know that this illusion is created using two images I can create an image using the principles of lenticular printing I can score lines safely. I know about the creation of the willow pattern I can choose three parts from a story to use in my willow pattern design I can select and use tools appropriately in my work	I can experiment with charcoal to create different textures and effects. I can express the meaning of words and phrases in an abstract way using an appropriate charcoal technique. I can make a printing block using playdough. I can press an object into the block to create texture and pattern. I can print using my playdough block by: coating the surface in ink and placing paper over the block and pressing with my hand.	I can understand that artists tell stories or show feelings in their artwork. I can interpret a picture and suggest meaning. I can look closely at a picture and notice details. I can describe the formal elements in a picture. I can describe a picture using the formal elements. I can respond to a painting by making inferences justifying my ideas using my own experiences. I can develop a narrative from the elements in a painting.

	I can make tints; using undiluted ink to add detail and using a water wash to add lighter tones. I have analysed paintings by the artist Paul Cézanne and can remember key facts about his work. I can paint in the style of Paul Cézanne by: mixing colours as he did using the same brushstroke techniques. I can draw a design for a three-dimensional piece. I can work with the material safely and creatively to make a recognisable object. I can use tools and my hands to carve, model and refine my sculpture. I can work in a group to create an interesting still-life arrangement. I can sketch an outline of the still life objects using symmetry lines. I know that 'tone' means the lightness or darkness of something. I can use light, medium and dark tones to make the drawing look three-dimensional. I can add highlights to my drawing.I know that the role of a curator is to set up and manage collections of works of arts within museums and gallery spaces. I can work in a group to select and choose objects and create a collection or exhibition of them. I can connect this to a career in the creative and cultural industries.	I can make my own stamp using geometric and mathematical shapes. I can use my stamp to create prints. I can make my prints unique through my use of colour and pattern. When printing I have tried to use: Repeating patterns Symmetrical patterns A simple symmetrical figure I can apply mathematical techniques of reflection and symmetry to my artwork to create a flip pattern.	I know that artists tell stories in their artwork and that art can be about feelings. I can understand and describe the story behind a painting. I can act out the story behind a picture. I can analyse and interpret a painting through questions. I can discuss a painting using personal experiences. I can respond to an artwork with a modern interpretation. I can discuss and describe the work of another artist. I can reflect on the feelings that a painting evokes. I can create an abstract piece using personal experiences that reflect how I felt.
Artists	Thomas Minton, Paul Cézanne, Barbara Hepworth, Giorgio Morandi		David Hockney, Edward, Hopper, Pieter Bruegel, Fiona Rae, Leonardo Da Vinci
Key vocabulary	Portrait, Landscape, Optical illusion, Willow pattern, Chinoiserie pottery, Paul Cézanne, Brushstrokes, Geometry, Perspective, Soap carving, Sculpture, Barbara Hepworth, Texture, Giorgio Morandi, Still life, Sketch, Dark, Light, Curator, Exhibition	Charcoal, Mark-making, Abstract, Playdough, Print, Pattern, Tessellation, Pattern, 2D Shapes, Symmetry,	Interpret, Meaning, Narrative, Pattern, Shape, Tone, Inference, Justify, Paula Rego, Respond Narrative, Edward Hopper, Role-play, Analyse, Collage, Abstract, Reflect, Medium, Mixed Media, Painting, Mural (art painted directly onto a wall or ceiling, most often in public spaces). Convey (to express an idea to someone). Viewfinder (a frame made from paper or card to lay on a painting or drawing to frame a small area).

Year 4 - Design & Technology			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Structures: Pavilions**	**Mechanical Systems: Making a sling shot car**	**Electronic Systems: Torches**
Learning Objectives	To create a range of different shaped frame structures. To design a structure. To build a frame structure. To add cladding to a frame structure. I can select appropriate materials for my cladding. I can add cladding which reflects my design. I can create different textural effects with my chosen material.	To build a car chassis. To design a shape that reduces air resistance. To make a model based on a chosen design. To assemble and test my completed product.	To learn about electrical items and how they work. To analyse and evaluate electrical products. To design a product to fit a set of specific user needs. To make and evaluate a torch.
Key Learning Questions	What is a world expo? What is a pavilion for? Name a famous pavilion in France? (Eiffel Tower) What is a frame structure? (House, church, barn, Tudor house, stall with hatch, windmill, Ferris wheels (e.g.: the London Eye), suspension bridge, Sydney Opera House, The Beehive Pavilion at Kew Gardens') **How long it will take to attach** (paper or fabric will be much faster than individual bits of string or straws). **How the cladding will attach** (smaller pieces of material like sweet wrappers would be more difficult to attach). **The weight of the cladding** (heavy material could weigh the whole structure down, possibly causing it to collapse).	What are cars for? Why are they so popular? What was the earliest form of the car? (horse and cart). How might your life change if they didn't exist? Can you identify any types of mechanisms that you know of in a car? How are cars fuelled? Can you think of eco-friendlier alternatives? (electric, solar, etc.) What is air resistance? Why might larger objects move more slowly through the air than smaller ones? How can you apply this science to your own designs?	What is electricity? (Energy for the things we use.) How do we use it? (To power objects around us like computers and lights.) How can electricity be dangerous? (It can travel through your body and give you an electric shock.) How can we make sure we are safe around electrical items? (Ask an adult to help, do not touch plugs or sockets, do not use metal objects to touch electrical objects.) What is the purpose of a torch? To create directional light (this makes the difference between this and a lamp more obvious). How does a torch work? It has a circuit inside. What features do torches have? Who are you designing your torch for? What colours might they like? What key or special features might they need you to include? Why is this? Does it need to be able to stand freely, more like a lamp? Does it need a loop or key ring to attach to? How could you improve your design? Does the torch light up? Can the torch be switched on and off? Does the circuit remain securely in place when carrying the torch?

National Curriculum Links	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 and CAD. Select from and use a wider range of materials, components and construction materials according to their functional properties and aesthetics. Investigate and analyse a range of existing product. Select from and use a wider range of tools and equipment to perform practical tasks. Select from and use a wider range of materials, components and construction materials according to their functional properties and aesthetics. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	**Design:** 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**: 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:** Investigate and analyse a range of existing products. Understand how key events and individuals in design and technology have helped shape the world. **Technical knowledge:** Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products. [for example, gears, pulleys, cams, levers & linkages]	Investigate and analyse a range of existing products. Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Understand how key events and individuals in design and technology have helped the world. Select from and use a wider range of tools and equipment to perform practical tasks. 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 their ideas and products against their own design criteria and consider the views of others to improve their work.
Cross Curricular Links	**Maths:** Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.		**Science:** Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. **History:** a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066.

Knowledge & Skills (Success Criteria)	I can make a variety of different frame structures. I know what the structure (pavilion) is used for. I know that different materials can create different effects. I understand how to make a stable structure. I can design a structure that is stable and aesthetically pleasing. I can build a free-standing structure. I can select appropriate materials to build a strong structure. I know how to reinforce corners to strengthen my structure. I refer to my design sheet to create my pavilion.	I understand that car designs have developed over many years. I know that a chassis is the frame of a car on which everything else is built. I know that all moving things have kinetic energy. I know that kinetic energy is the energy that something (an object or person) has by being in motion, e.g.: the energy that a swing has to keep on moving; any object in motion is using kinetic energy. I can design a suitable car body to cover my chassis by: Drawing a net to create a structure from. Choosing shapes that increase or decrease the speed of the car as a result of air resistance. Adding graphics to personalise my design. I can make the body of my car by: Remembering that nets are flat shapes that can be turned into 3D structures. Measuring, marking and cutting the panels (nets) against the dimensions of my chassis. Including tabs on my net so I can secure it to the panels of my chassis. Decorating the panels. I can assemble the panels of the body to the chassis correctly. I can remember that smaller shapes create less air resistance and can move faster through the air. I can evaluate the speed of my design based on the understanding that some cars are faster than others as a result of: Body shape, Stored energy in the elastic band, Accuracy of the angle in the chassis and axle.	I can identify electrical products. I know what electrical conductors and insulators are. I know that a battery contains stored electricity and can be used to power products. I can identify the features of a torch. I understand how a torch works. I can say what is good and bad about different torches. I understand what is important in torch design. I can factor in who my product is for in my design criteria. I can design a torch which satisfies both the design and success criteria. I can make a working circuit with a switch. I can use appropriate equipment to cut and attach materials. I can assemble a torch according to my design criteria. I can assemble a torch which satisfies the success criteria. I can test my torch to evaluate its success.
Designer			
Key vocabulary	Design criteria, Natural, Structure, Innovative, 3D Shapes, Reinforce, Cladding.	Chassis, energy, kinetic, mechanism, air resistance, design, structure, graphics, research, model, template	Battery, Bulb, Buzzer, Conductor, Circuit, Circuit diagram, Electricity, Insulator, Series circuit, Switch, Design, Design criteria, Diagram, Evaluation, LED, Model, Shape, Target audience, Component, Input, Recyclable, Theme,

Year 5 - Art & Design			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Sculpture & 3D: Interactive Isolation**	**Drawing: I need space**	**Painting - Mixed Media: Portraits**
Learning Objectives	To identify and compare features of art installations. To investigate the effect of space and scale when creating 3D art. To problem-solve when constructing 3D artworks. To plan an installation that communicates an idea. To apply their knowledge of installation art and develop ideas into a finished piece.	To explore the purpose and effect of imagery. To understand and explore decision making in creative processes. To develop drawn ideas through printmaking. To test and develop ideas using sketchbooks. To apply an understanding of drawing processes to revisit and improve ideas.	To explore how a drawing can be developed. To combine materials for effect. To identify the features of self-portraits. To develop ideas towards an outcome by experimenting with materials and techniques. To apply knowledge and skills to create a mixed-media self-portrait.
Key Learning Questions	What makes Cai Guo-Qiang's work 'installation' art? Why might an artist use gunpowder not just paint or other 'ordinary' materials? How does the scale of his work (i.e. big!) affect the viewer? What would be the effect of your installation room on the viewer? Is it peaceful, chaotic, scary, or enjoyable? If you wanted to give the room a different atmosphere, how would you change what you did? What could be the message or idea behind this installation? How did your group make changes and try new ideas as you worked? What message will your installation communicate? How do you want people who visit your installation to feel? Where will your installation be set up? (inside school, in another building, somewhere outside.) What objects, equipment or materials will you need to make it? What size will it be? Will it fill the space? If you are making it, how will you join things together? How will you arrange things within the space? What is installation art? (Artwork displayed in a certain location, often on a large scale and temporary, often constructed in mixed media or made out of everyday objects, can include interactive elements such as things you hear or touch). How is it different to sculpture? (Its location is part of the artwork, it is often interactive rather than being something you only look at, it is made up of more than one part).	What can you see? What could be the purpose of this image? Can you identify any common themes in retro-futuristic art? (They should recognise that space features heavily, as well as pioneering technology and robotics.) Why do you think so many images of the future were heavily influenced by space, technology and science? Why do you think world events influence art, design and culture? Can you think of anything that has influenced art at other times in history? How would an artist describe drawing? What would your definition of drawing be? It is only a drawing if it looks like something. Agree or disagree? It is only drawing if you use a pencil. Agree or disagree? Drawings must be neat. Agree or disagree? That do you think of the colours? Why do think he chose these colours? Why do think he chose to make one astronaut in black? Do they want to make any changes? Could they work into a particular section to improve it? If they have created a simple print, what would happen if they now draw on top? Could it be a poster to promote a cause or product? Could it be the cover of a book or music album? Could there be text included? If so what would it say?	How could you use colour to create a particular mood for your printed self-portrait? How could the background make certain areas of your face stand out in a print? How will the texture of the collage materials you choose affect your finished piece? Which compositions look good next to each other? Which portraits need to be kept separate? (Perhaps they have very similar colour palettes). What shape will your group composition have? What do you think of this self-portrait? Do you think this artwork has a message? What could it be? What is the effect of using more than one kind of material to make it? How important is it that a self-portrait looks exactly like the artist? Do all self-portraits have the same aim or are they created for different reasons? Is there enough of the face visible to identify the portrait? What do you think about the composition? Does the combination of materials work well together? What does the image communicate about that person? Why have you chosen these materials? What does your self-portrait communicate about you?

	How well does your installation idea communicate your chosen message?		
National Curriculum Links	To create sketch books to record their observations and use them to review and revisit ideas. Learn about great artists, architects and designers in history. To develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.	To create sketch books to record their observations and use them to review and revisit ideas. Learn about great artists, architects and designers in history. To develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design. To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay].	To create sketch books to record their observations and use them to review and revisit ideas. To improve their mastery of Art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]. To know about great artists, architects and designers in history.
Cross Curricular Links		**Science - Earth & Space:** Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	**English - handwriting and presentation**: choose the writing implement that is best suited for a task. **Computing:** Use and combine a variety of software (including internet services) on a range of digital devices to design and create… content that accomplishes given goals, including ….presenting information.
Knowledge & Skills (Success Criteria)	I can give a definition for installation art. I can identify similarities and differences between art installations. I can analyse artworks and justify my ideas. I can justify my opinions of installation artworks. I can work safely when creating my model installation space. I can create the effect of a large-scale space when photographing my box. I can suggest the effect on the viewer of being in my model installation space. I can adapt everyday objects and make them interesting for the viewer. I can make changes and try new ideas if something doesn't work first time. I can move my object around within a space and find the best way to display it. I can choose a clear message for my	I can discuss the effect of an image. I can discuss how popular culture can influence art and design. I can explain what retro-futurism means. I can evaluate different images using the formal elements. I can suggest how a piece of art is created. I can discuss the choices an artist has made. I can make decisions about tools and materials to try in my own work. I can use a range of processes to create a drawing. I can describe how I think an artwork was made. I can choose and combine materials based on their texture. I can create an effective printing plate that considers how I expect it to print. I can generate ideas about the future. I can record ideas through sketches and visual	I can draw a portrait using the continuous line method. I can vary the size, shape and position of the words for interest. I can explore the way a background can change the effect of a drawing. I can explain what I want my photo composition to be. I can decide the best position for my line drawing when copying it onto the background. I can use Art vocabulary to describe similarities and differences between portraits. I can justify my opinion when discussing the message behind a self-portrait. I can justify my opinion when discussing the message behind a self-portrait. I can give a definition of 'mixed media'. I can try out at least three different ideas when

	installation. I can identify how my installation idea might make the viewer feel. I can describe how I have considered space, materials and arrangement in my installation. I can describe how installations can be interactive. I can show what I have learned about installation art in my final idea. I can explain the choices I have made when displaying my installation art.	notes. I can develop ideas to form a composition for a final piece. I can apply printing ink evenly to cover the plate. I can apply even pressure when printing. I can select appropriate tools and materials. I can choose a drawing technique to produce my drawn idea. I can evaluate my work to make improvements.	adapting my photograph. I can describe the intention of my self-portrait. I can explain why my choice of medium matches my idea. I can use my chosen medium to create a self-portrait that represents an aspect of my identity.
Artists	Cai Guo-Qiang's, Fernando and Humberto Campana, Yoo, Hyun Mi,	Teis Albers	
Key vocabulary	Analyse, annotate, display, evaluate, features, installation art, location, mixed media, scale, special effects, three dimensional (3D), stencil, atmosphere, installation, location, props, performance art, concept, cultural revolution, experience, influence, installation, revolution, elements, issue, senses.	Architecture, Cold War, culture, evaluate, future, futuristic, influence, propaganda, retro-futuristic, Space Race, The Soviet Union, continuous, formal elements, line, medium, process, stimuli, stimulus, technique, texture, tone, collagraph, composition, materials, placement, print, printing plate, printmaking, printing, roller, replicate, tracing.	Background, Collage, Continuous line drawing, Paint wash, Portrait, Self-portrait, Texture, Carbon paper, Composition, Mixed media, Monoprint, Printmaking, Transfer, Evaluate, Justify, Multi-media, Research, Atmosphere, Photomontage, Art medium.

Year 5 - Design & Technology			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Electrical Systems: Doodlers**	**Mechanical Systems: Making a Pop-up book**	**Cooking & Nutrition: What could be healthier?**
Learning Objectives	To understand how motors are used in electrical products. To investigate an existing product to determine the factors that affect the product's form and function. To put findings from research into practice to develop a unique product. To develop a DIY kit for another individual to assemble their product.	To design a pop-up book. To follow my design brief to make my pop-up book. To use layers and spacers to cover the working of mechanisms. To create a high-quality product suitable for a target user.	To understand where food comes from. To understand the term 'healthy'. To adapt a traditional recipe. To complete a food product.
Key Learning Questions	What is a bulb (or lamp)? What is a battery? What is a switch? What is a wire? What is a series circuit? What do you think this product is and what is its purpose? (This product generates doodles and scribbles when switched on.) Who do you think the target user is and why? (A child, for entertainment and artistic fun – or they may give an equally suitable suggestion.) What circuit component does this product use to generate movement? (A motor.) Why did you configure your Doodler with (specify an element – e.g., angle of pens)? Did you come across any problems when testing configurations for your Doodler and how did you fix them? What do you like about your Doodler design? Why? What is the purpose of the motor in the Doodler? (To shake and spin the Doodler on the drawing tools.) What is the purpose of the Doodler? (To generate scribbles using an electrical product.) Is your Doodler design fit for purpose (does it function as it should)? Why? Is there anything you could change about your Doodler design? What and why? What did you learn by writing instructions for someone else to assemble your Doodler?	Who has stuck to their plan and who has deviated? Why? Is their practical work better than their original designs? Why? Can they think of what they need to do to improve it next lesson? Have they produced the outputs they planned?	What ingredients go into a Bolognese? Do you know where these ingredients come from? How do cattle find their way onto our supermarket shelves as beef? Do you think it is fair to eat meat? Why/Why not? Is it important that cattle and other animals we eat are well looked after? Why? What ingredients did you expect to be included? Are any of these ingredients surprising? What might that ingredient add to the recipe? How are the ingredients/quantities different/the same in the recipes you have found? Is there a difference as to how you prepare or store the two products? What might you add? What might you remove? How will 'X' change the sensory characteristics of the dish? How might that alter the nutritional information of the dish?

National Curriculum Links	**Make:** 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. **Design:** 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. **Technical knowledge:** understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. **Evaluate**: Investigate and analyse a range of existing products. **Technical knowledge**: Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	**Design:** 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:** 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:** 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. **Technical knowledge:** Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].	**Cooking and nutrition**: 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. **Design:** 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:** Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. **Evaluate**: 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:** Apply their understanding of computing to program, monitor and control their products.
Cross Curricular Links	**Science:** (Year 4) Electricity: construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. **English: Writing – composition:** assessing the effectiveness of their own and others' writing. proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning.		**British values:** Mutual respect, Tolerance of those with different faiths and beliefs. **Computing:** Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

Knowledge & Skills (Success Criteria)	I can identify simple circuit components (battery, bulb, motor and switch). I can explain what a series circuit is. I can give examples of motorised products and explain their primary function. I can take apart a product and reassemble it. I can determine which parts of the product affect its function. I can determine which parts of the product affect its form. I can alter the way a product functions by tinkering with its configuration. I can develop design criteria based on findings from an investigation. I can develop my design based on key points discovered in an investigation. I can incorporate an electrical system that uses a motor. I can identify and list the materials, equipment and circuit components required to build my product. I can explain the steps required to assemble my product. I can explain how to build and integrate an electrical system as part of my product.	I can remember that: - an input is the motion used to start a mechanism. - an output is the motion that happens as a result of starting the input. I know that structures use the movement of the pages to work. I know that mechanisms control movement. I can design a book made up of a front cover and four pages and include a mixture of structures and mechanisms within it. I can use paper, card and glue to make my book structure. I can make mechanisms and/or structures as detailed in my design template by using sliders, pivots and folds to produce movement. I can complete the mechanisms and structures as detailed in my design template. I can make my book look neater and more attractive by using layers using spacers to hide relevant parts of my mechanisms. I can complete the surface decoration of my pop-up book by adding the story through: Pictures & Captions. I know that I need to consider the preferences and needs of the user. I know that good quality making should be neat, accurate and securely assembled.	I know that beef is the name of meat from cattle (cows). I know how beef is reared and processed. I have an understanding of the ethical issues around the way in which cattle should be farmed. I know what foods make up a balanced diet. I know how a recipe can be adapted to make it healthier. I can use keywords to research for alternative ingredients for a well-known dish. Based on my research I can suggest healthy substitutions and additions to a recipe. I know that the nutritional value of a recipe can change if you remove, substitute or add additional ingredients. I can calculate and compare two adapted Bolognese recipes using a nutritional calculator. Based on this information I can decide which recipe is healthier. I can write an amended method for my recipe to incorporate the relevant changes to ingredients. I can use equipment safely, including knives, hot pans and hobs. I know how to avoid cross-contamination. I can carefully follow a method to make a recipe. I know how to chop an onion. I can design appealing packaging that reflects my recipe.
Designer			
Key vocabulary	circuit component, configuration, current, develop, DIY, investigate, motor, motorised, problem solve, product analysis, series circuit, stable, target user.	Design, Input, Motion, Mechanism, Criteria, Research, Reinforce, Model.	Beef, Reared, Processed, Ethical, Diet, Ingredients, Supermarket, Farm, Balanced.

Year 6 - Art & Design			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Craft & Design: Photo Opportunity**	**Drawing: Make My Voice Heard**	**Sculpture & 3D: Making Memories**
Learning Objectives	To apply an understanding of composition to create an effective photomontage advertising poster. To apply understanding of abstract art through photography. To demonstrate an understanding of design choices made for effect using digital photography techniques. To demonstrate observation and proportion to create art in a photorealistic style.	To explore expressive drawing techniques. To consider how symbolism in art can convey meaning. To apply understanding of the drawing technique chiaroscuro. To evaluate the context and intention of street art. To apply an understanding of impact and effect to create a powerful image.	To analyse how art can explore the concept of self. To explore sculptural techniques. To use creative experience to develop ideas and plan sculpture. To apply an understanding of materials and techniques to work in 3D. To problem solve, evaluate and refine artwork to achieve a chosen outcome.
Key Learning Questions	How did Hannah make these images? Where might she have found the images that she used? How many different parts do you think are in this image? How would you describe the image? What does it remind you of? Is it a dream-like image? Is it real or is it impossible? Explain why. What words can you use to describe this picture? Ask the children to start with nouns, then adjectives. What colours do you see? Challenge anyone who says the photograph is black and white, and get them to see the monochrome qualities in the various grey tones. Why do you think Weston used just monochrome tones? What makes the album cover the most / least appealing? What do you like or dislike about the design? What is the best part of the design and why? What would you change? How effective is the piece? What makes it look realistic? What stands out the most? Is there any part you would change?	What do you think being a street artist means? Do you think Diego Rivera was a street artist? why? or why not? How is street art different to other forms of art? Does this image use chiaroscuro? (Yes, we can say this photograph does use light and dark to emphasise the image.) How would you describe this image? (Children may suggest black and white, but question, is it JUST black and white? Point out the scales of grey. Encourage them to think about tone). Should you graffiti? Is it graffiti if an artist is commissioned? How is street art different to Maya wall murals? Why do you think these artists chose to produce their art this way? Why do you think they have chosen to create their art in that specific place? (Wanting to send a message – make their voice heard!) Does all street art communicate a message? What was Picasso trying to say? How did he use this piece to convey his message? (his choice of imagery, symbols and colour).	What did you want to portray in your sculpture? Direct the children to think whether it was literal, like a person or object, or whether it was something like a feeling, memory or personal attribute. Why did you choose the materials they used? How did you feel as you were making it? Did any emotions or memories affect what you did? What did you like about this technique? What else would you like to try? Would you change anything about your sculpture? How will you make this? What colour will this be? Where will you find this object? How long will this take to make? What will you do if this doesn't work? How do you want your artwork to be viewed? On its own? If so, where? Placed on top of something else, suspended, on a wall? Or, could your work be grouped with other sculptures? Whose sculptures could work with yours?

National Curriculum Links	To create sketch books to record their observations and use them to review and revisit ideas. To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]. Learn about great artists, architects and designers in history.' Produce creative work, exploring their ideas and recording their experiences. Become proficient in drawing, painting, sculpture and other art, craft and design techniques. Evaluate and analyse creative works using the language of art, craft and design. Know about great artists, craft makers and designers, and understand the historical and cultural development of their art forms.	To develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design. To create sketch books to record their observations and use them to review and revisit ideas. To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]. About great artists, architects and designers in history.'	To develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design. To create sketchbooks to record their observations and use them to review and revise ideas. To improve their mastery of art and design techniques, including drawing, painting and sculpture with q range of materials [for example, pencil, charcoal, paint, clay]. About great artists, architects and designers in history.
Cross Curricular Links	**Computing:** select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information'.	**History:** a non-European society that provides contrasts with British history – one study chosen from: early Islamic civilization, including a study of Baghdad c. AD 900; Mayan civilization c. AD 900; Benin (West Africa) c. AD 900-1300.	
Knowledge & Skills (Success Criteria)	I can explain what a photomontage is. I can select appropriate images and experiment with composition to create an interesting layout. I can work in the style of an artist to meet a design brief. I know that artists use photography to record and observe. I can compose a close-up photograph of a natural form. I can make decisions about cropping, editing and presenting photographic images in the style of Edward Weston. I know the terms macro and monochromatic. I can discuss the features of a design and reflect on the effect. I can make design choices to plan, select and arrange props in an interesting composition to meet a design brief. I can edit a photograph to emulate the style of another artist. I can use	I can collect information to identify the key features of Maya art. I can explore mark-making using a range of handmade tools. I can make comparisons between different artworks. I can draw my Maya Spirit companion and consider its meaning. I can generate a range of symbols, patterns and colours that represent me. I can take inspiration from an artist's style. I can discuss the effect of light and dark on an object and consider how to draw it. I can explain the term Chiaroscuro and understand how it can be used for effect. I can create form by applying chiaroscuro to a tonal drawing. I can discuss the similarities and differences between art styles. I can discuss ideas about 'what art is' or 'should be' and justify choices. I	I can identify common themes within different artworks. I can consider how I can use art to express myself. I can reflect on my work and choices. I can generate a selection of memories from primary school. I can represent ideas within a composition of shapes. I can create a cardboard relief sculpture. I can discuss the approach of different artists and consider how this may influence my own work. I can use my sketchbook to test and develop ideas into a plan. I can explain what I need and how I will make my sculpture. I can use my plans to construct 3D forms. I can combine materials and techniques to fit my ideas. I can work independently, experimenting with tools and materials. I can identify areas of my work to

	photographic equipment to take a clear self-portrait. I can use the grid drawing method to translate a photo into a drawing using careful observation. I can understand how the grid method helps me to retain the same proportions as an original image. I can choose and use materials effectively to create a photorealistic painting or drawing.	can identify something I feel strongly about and consider how to represent it through a drawing. I can analyse how an artist conveys a message. I can use my creative work to develop an idea, applying drawing techniques for visual impact and effect. I can work independently, revisiting and reviewing my work to develop it.	refine. I can select appropriate tools and materials to improve my work. I can reflect on my work and personal development as an artist.
Artists	Edward Weston, Oscar Ukonu, Sarah Graham, Michael Gaskell.	Diego Rivera, Farid Rueda, Dan Fenelon, Picasso.	Yinka Shonibare, Judith Scott, Nicola Anthony, Louise Nevelson, Joseph Cornell.
Key vocabulary	Album, arrangement, cityscape, composition, Dada, digital, editing, emulate, focus, frame, grid, image, layout, macro, monochromatic, monochrome, photography, photomontage, photorealism, photorealistic, portrait, pose, prop, proportion, recreate, replacement, saturation, software.	Aesthetic, audience, character traits, chiaroscuro, commissioned, composition, expressive, graffiti, guerrilla, imagery, impact Interpretation, mark making, Maya, Mayan, mural, representative, street art, symbol, symbolic, technique, tone, tonal.	Assemblage, attribute, collection, composition, embedded, expression, identity, juxtaposition, literal, manipulate, originality, pitfall, relief, representation, sculpture, self, symbolic, tradition.

Year 6 - Design & Technology			
Term	**Autumn**	**Spring**	**Summer**
Topic Title	**Textiles: Waistcoats**	**Structures: Playgrounds**	**Digital World: Navigating the World**
Learning Objectives	To design a waistcoat. To mark and cut fabric according to a design. To assemble a waistcoat. To decorate your waistcoat.	To design a playground with a variety of structures. To build a range of structures. To improve and add detail to structures. To create surrounding landscape.	To write a design brief and criteria based on a client request. To write a program to include multiple functions as part of a navigation device. To develop a sustainable product concept. To develop 3D CAD skills to produce a virtual model. To present a pitch to 'sell' the product to a specified client.
Key Learning Questions	What are the differences between the shape of your design and the *Activity: Waistcoat template?* What must you do before you start sewing? What must you do when you finish sewing a section? What patterns and materials are included in your design? How will you replicate this? What materials have you noted on your design?	What are the different apparatuses? How can they be used? Can you identify the different types of structures used? Which are your favourite/least favourite? Why? Can you identify the structures used in the models? Which materials have been used? Why? Which tools have been used to cut, shape or join the materials? What is the name of this piece of equipment? Did any of the miniature models stand out to you more than others? Why was this? How do you feel about the quality of the models? Where are you going to add cladding to your structures? Why? Which materials are you going to use? Why? Which tools have been used to cut/shape/join the materials? Why is it important to consider the landscape design for outdoor spaces? It is important to carefully think about how a landscape design will work around a structure because once built, it is usually a very long-term building and can stand for hundreds of years. If the structure does not look natural or fit with the surrounding area, it can make it look unappealing. What positive or negative impact can it have on users? Can you think of landscape features you like or don't like? Why?	Have you used any of the equipment shown on slide 3 before? If so, what for? Are there any pieces of equipment that are missing? How could a new smart product improve the weight of a person's load for their adventure? What is a Micro: bit? Have you used one before and if so, what for? What do we mean by 'function' and 'form'? Explain how your program meets the design brief and client's request. Name and explain a '_____' Block. (Provide an example of a particular input, logic, basic or music block). Name key functions in your program. What do you think about the unsustainable product lifespan? What do we mean by 'non-recyclable', 'finite' and 'unsustainable'? (These are all keywords for materials that are limited in supply, cannot be remade into other products and therefore will eventually run out but be left in landfill or polluting the ocean). How could you change your own habits to help the planet? (The 'six Rs' of sustainability, making sustainable material choices). What materials have you chosen and why? Define 'concept' (in Design and technology, a concept is a visual plan of an invention or idea to share with others). Does your product concept meet all of the design criteria? What could be improved about your product concept? Which materials did you choose and why? What is a product pitch and its purpose? What key information should be included in a product pitch?

National Curriculum Links	Generate, develop, model and communicate their ideas through discussion, annotates sketches, cross-sectional and exploded diagrams, prototypes, patterns pieces and computer aided design. Select from and use a wider range of tools and equipment to perform practical tasks. Understand how key events and individuals in design and technology have helped shape the world. Evaluate their ideas and products against their own design criteria and consider the views of others.	Use research to develop and inform the design of innovative, functional and appealing products that are fit for purpose and aimed at particular groups. Generate, develop, model and communicate ideas through discussion and annotated sketches. 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. Select from and use a wide range of tools and equipment to perform practical tasks. Select from and use a wider range of materials and components including construction materials, according to their functional properties and aesthetic qualities. Apply understanding of how to strengthen, stiffen and reinforce complex structures. Inform the design of innovative, functional and appealing products, aimed at particular individuals or groups.	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. Apply their understanding of computing to program, monitor and control their products. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. 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 their ideas and products against their own design criteria and consider the views of others to improve their work.
Cross Curricular Links			**English: Reading - Comprehension:** Retrieve, record and present information from non-fiction. **Computing:** Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. **Geography: Human and physical geography:** Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water. **Computing:** Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that

			accomplish given goals, including collecting, analysing, evaluating and presenting data and information. **English: Spoken language:** give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings.
Knowledge & Skills (Success Criteria)	I can annotate my designs. I can design clothing to a set of design criteria. I can explain the differences between my design and the template. I can accurately mark out the outline of the panels for my waistcoat. I can cut neatly and accurately. I can sew a strong running stitch. I can make sure my stitches and small, neat and follow the edge. I can tie strong knots to secure the thread in place. I can secure a fastening. I can attach objects for decoration using thread. I can evaluate my work according to the design criteria.	I know that there are different types of structures used in playgrounds as apparatus. I can consider how the structures can be used. I can design five different pieces of apparatus using three different structures. I can improve my design based on peer evaluation. I can build play apparatus structures using the techniques demonstrated as well as prior knowledge of structures. I know that structures can be strengthened by manipulating materials and shapes. I can measure, mark, cut and shape wood to create a range of structures. I can test and adapt my design to improve it. I can identify what makes a successful structure. I can use a range of materials to reinforce and add decoration to my structures. I can attach structures to a base, reinforcing the join where necessary. I can consider the surrounding environment of my playground. I can create landscape features using a range of materials.	I can write a design brief from information submitted by a client. I can develop design criteria to fulfil the client's request. I can consider and suggest additional functions for my navigation tool. I can program an N, E, S,W cardinal compass. I can explain the key functions in my program, including any additions. I can explain how my program fits the design criteria and how it would be useful as part of a navigation tool. I can consider materials and their functional properties. I have an awareness of sustainability in design. I can develop a product idea through annotated sketches. I identify key industries that utilise 3D CAD modelling and explain why? I can place and manoeuvre 3D objects, using computer-aided design. I can change the properties of, or combine one or more 3D objects, using computer-aided design to produce a 3D CAD model. I can explain the key functions and features of my navigation tool. I can explain my material choices and why they were chosen. I can demonstrate a functional program. I can describe how my product fits the client's request and how it will benefit the customers.
Designer			
Key vocabulary	Annotate, decorate, design criteria, fabric, target customer, waistcoat, waterproof.	Apparatus, design criteria, equipment, playground, landscape features, cladding	Smart, smartphone, equipment, navigation, cardinal compass, application (apps), pedometer, GPS tracker, design brief, design criteria, client, function, program, duplicate, replica, loop, variable, value, if statement, boolean, corrode, moudable, lightweight, sustainable design, environmentally friendly, biodegradable, recyclable, product lifecycle