

<p>EYFS objectives: In this unit, children will be taught to:</p>	
<p>Characteristics of Effective Learning:</p> <ul style="list-style-type: none"> • Show curiosity about objects, events and people • Questions why things happen • Engage in open-ended activity • Thinking of ideas • Find ways to solve problems / find new ways to do things / test their ideas • Use senses to explore the world around them • Create simple representations of events, people and objects • Planning, making decisions about how to approach a task, solve a problem and reach a goal • Checking how well their activities are going • Changing strategy as needed • Reviewing how well the approach worked 	<p>Exploring and using media and materials:</p> <ul style="list-style-type: none"> • I can experiment to create different textures. • I can understand that different media can be combined to create new effects. • I can manipulate materials to achieve a planned effect • I can construct with a purpose in mind, using a variety of resources • I can use simple tools and techniques competently and appropriately. • I can select appropriate resources and adapt work where necessary. • I can select tools and techniques needed to shape, assemble and join materials they are using.
<p style="text-align: center;">Early Learning Goals:</p> <ul style="list-style-type: none"> • Choose the resources they need for their chosen activities • Handle equipment and tools effectively • Children know the importance for good health of a healthy diet • They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. • They represent their own ideas, thoughts and feelings through design and technology 	<p>Planning</p> <ul style="list-style-type: none"> • <i>I can explore and begin to plan by suggesting what to do next</i> • I can select from a range of tools and equipment <p>Practical skills and techniques</p> <ul style="list-style-type: none"> • I can cut materials safely using tools provided • I can explore joining items in a variety of ways (e.g., glue, tape, string etc) • I can use simple tools to effect changes to materials. • I can handle tools, objects, construction and malleable materials safely and with increasing control. • I can show understanding of the need for safety when tackling new challenges and consider and manage some risks. • I can understanding of how to transport and store equipment safely.

<p>Projects</p> <p>Nursery: design a new chair for baby bear, making houses for the 3 Little Pigs using different materials, design a new coat for Little Red Riding Hood. Making porridge for the 3 Bears, den building, design a boat that will float</p> <p>Reception: Making Christmas cards and decorations, food tasting linked to story books, decorating gingerbread men, making a lighthouse for the lighthouse keeper,</p>	<ul style="list-style-type: none"> I can practise some appropriate safety measures without direct supervision. <p>Where food comes from</p> <ul style="list-style-type: none"> I can recognise and name a variety of foods <p>Food preparation, cooking and nutrition</p> <ul style="list-style-type: none"> I can mix (stir) foods and explore the taste of different foods I can prepare simple dishes safely and hygienically without using a heat source (with adult support)
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<p>Year 1 National Curriculum objectives: In this unit, children will be taught to:</p>	
<p>Design</p> <ul style="list-style-type: none"> 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 	<p>Understanding contexts, users and purposes:</p> <ul style="list-style-type: none"> I can work within a range of contexts (such as imaginary, story-based, home, school, gardens, playgrounds, local community) I can design products that have a clear purpose and an intended user I can say what products I am designing and making I can say whether my products are for myself or other users I can describe what my products are for I can say how my products will work I can use simple design criteria to help develop my ideas <p>Generating, developing, modelling and communicating ideas:</p> <ul style="list-style-type: none"> I can generate ideas by drawing on my own experiences I can use knowledge of existing products to help come up with ideas I can develop and communicate ideas by talking and drawing I can model ideas by exploring materials, components and construction kits and by making templates and mock-ups With support, I can use information and communication technology, where appropriate, to communicate my ideas

<p>Make</p> <ul style="list-style-type: none"> • select from and use a range of tools and equipment to perform practical tasks <i>[for example, cutting, shaping, joining and finishing]</i> • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics 	<p>Planning</p> <ul style="list-style-type: none"> • <i>I can plan by suggesting what to do next</i> • I can select from a range of tools and equipment, <i>and am beginning to explain my choices</i> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> • I can cut materials safely using tools provided • I can demonstrate a range of cutting and shaping techniques (<i>such as tearing, cutting and folding</i>) • I can use a range of materials and components, including construction materials and kits, textiles and food ingredients • I can measure, mark out, cut and shape materials and components • I can assemble, join and combine materials and components
<p>Evaluate</p> <ul style="list-style-type: none"> • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria 	<p>Own ideas and products</p> <ul style="list-style-type: none"> • I can say what I like and dislike about my existing designs • I can refine my design as my work progresses • <i>I can suggest how my products could be improved</i> <p>Existing products</p> <ul style="list-style-type: none"> • I can explore existing products (I can say who they are for, why they are used, what materials they are made from, likes and dislikes about them)
<p>Technical Knowledge</p> <ul style="list-style-type: none"> • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms <i>[for example, levers, sliders, wheels and axles]</i>, in their products. 	<p>Making products work_</p> <ul style="list-style-type: none"> • I am beginning to measure and mark out in cm • I demonstrate a range of joining techniques (such as gluing, hinges, or combining materials to strengthen) • I can create products using levers • I can talk about the simple working characteristics of materials and components • I am beginning to know how freestanding structures can be made stronger, stiffer and more stable • <i>I know that food ingredients should be combined according to their sensory characteristics</i> • <i>I use the correct technical vocabulary for the projects I am undertaking</i>

<p>Cooking and Nutrition</p> <ul style="list-style-type: none">• use the basic principles of a healthy and varied diet to prepare dishes• understand where food comes from.	<p>Where food comes from</p> <ul style="list-style-type: none">• I know that all food comes from plants or animals• I know that food has to be farmed, grown elsewhere (e.g. home) or caught <p>Food preparation, cooking and nutrition</p> <ul style="list-style-type: none">• can name and sort foods into the five groups in The Eatwell Plate• I know that everyone should eat at least five portions of fruit and vegetables every day• I can cut, peel or grate ingredients safely and with support• I can measure or weigh using measuring cups or electronic scales• I can prepare simple dishes safely and hygienically without using a heat source
<p>Project:</p> <ul style="list-style-type: none">• Autumn Term – Flying kites – design and make a kite to fly• Spring Term - Food – fruit kebabs/ fruit salad• Summer Term – Building houses – using different materials (Technical knowledge)	

Art and Design Progression of skills and knowledge

Year 2 National Curriculum objectives: In this unit, children will be taught to:

<p>Design</p> <ul style="list-style-type: none"> • 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 	<p>Understanding contexts, users and purposes:</p> <ul style="list-style-type: none"> • I can work within a range of contexts (such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment) • I can design products that have a clear purpose and an intended user • I can state what products I am designing and making • I can say whether my products are for myself or other users • I can describe what my products are for • I can say how my products will work • I can say how I will make my products suitable for the intended users • I can use simple design criteria to help develop my ideas <p>Generating, developing, modelling and communicating ideas:</p> <ul style="list-style-type: none"> • I can generate ideas by drawing on my own experiences • I can use knowledge of existing products to help come up with ideas • I can develop and communicate ideas by talking and drawing • I can model ideas by exploring materials, components and construction kits and by making templates and mock-ups • I can use information and communication technology, where appropriate, to develop and communicate my ideas
<p>Make</p> <ul style="list-style-type: none"> • select from and use a range of tools and equipment to perform practical tasks <i>[for example, cutting, shaping, joining and finishing]</i> • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics 	<p>Planning</p> <ul style="list-style-type: none"> • <i>I can plan by suggesting what to do next</i> • I can select from a range of tools and equipment, <i>explaining my choices</i> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> • I can cut materials safely using tools provided • I can demonstrate a range of cutting and shaping techniques <i>(such as tearing, cutting, folding and curling)</i> • I can use a range of materials and components, including construction materials and kits, textiles and food ingredients and mechanical components • I can measure, mark out, cut and shape materials and components

Art and Design Progression of skills and knowledge

	<ul style="list-style-type: none"> • I can assemble, join and combine materials and components • I can use finishing techniques, including those from art and design
<p>Evaluate</p> <ul style="list-style-type: none"> • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria 	<p>Own ideas and products</p> <ul style="list-style-type: none"> • I can say what I like and dislike about my existing designs • I can refine my design as my work progresses • <i>I can suggest how my products could be improved</i> <p>Existing products</p> <ul style="list-style-type: none"> • I can explore existing products (ie. who they were for, why they are used, how they work, what materials they are made from, likes and dislikes about them)
<p>Technical Knowledge</p> <ul style="list-style-type: none"> • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [<i>for example, levers, sliders, wheels and axles</i>], in their products. 	<p>Making products work</p> <ul style="list-style-type: none"> • I can measure and mark out to the nearest centimetre • I demonstrate a range of joining techniques (such as gluing, hinges, or combining materials to strengthen) • I can create products using levers, wheels and winding mechanisms • I can talk about the simple working characteristics of materials and components • I am beginning to know how freestanding structures can be made stronger, stiffer and more stable • <i>I know that a 3-D textiles product can be assembled from two identical fabric shapes</i> • <i>I know that food ingredients should be combined according to their sensory characteristics</i> • <i>I use the correct technical vocabulary for the projects I am undertaking</i>
<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from. 	<p>Where food comes from</p> <ul style="list-style-type: none"> • I know that all food comes from plants or animals • I know that food has to be farmed, grown elsewhere (e.g. home) or caught <p>Food preparation, cooking and nutrition</p> <ul style="list-style-type: none"> • I can name and sort foods into the five groups in The Eatwell Plate • I know that everyone should eat at least five portions of fruit and vegetables every day • I can cut, peel or grate ingredients safely and with support • I can measure or weigh using measuring cups or electronic scales • I can prepare simple dishes safely and hygienically without using a heat source

Art and Design Progression of skills and knowledge

Project ideas:

- Autumn Term - Explorers – design a new boat for Christopher Columbus / Minibeast hotel (linked to science)
- Spring Term – Kings & Queens - Castles – can you design a draw bridge / port cullies using a pulley system
- Summer Term - Food – making sandwiches for the light house keeper / smoothies

Art and Design Progression of skills and knowledge

Year 3 Curriculum objectives: In this unit, children will be taught to:	
<p>Design</p> <ul style="list-style-type: none"> • 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 	<p>Understanding contexts, users and purposes:</p> <ul style="list-style-type: none"> • I can work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • I can design with purpose by identifying opportunities to design • I can describe the purpose of my products • I can indicate the design features of my products that will appeal to intended users • I can explain how particular parts of my products work <p>Generating, developing, modelling and communicating ideas:</p> <ul style="list-style-type: none"> • I can develop my own design criteria and use these to inform my ideas • I can share and clarify ideas through discussion • I model my ideas using prototypes and pattern pieces • I use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate my ideas • I can use computer-aided design to develop and communicate my ideas • <i>I can make design decisions that take account of the availability of resources</i>
<p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks <i>[for example, cutting, shaping, joining and finishing]</i>, 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 	<p>Planning</p> <ul style="list-style-type: none"> • I can select tools and equipment suitable for the task • I can explain my choice of tools and equipment in relation to the skills and techniques I will be using • I can select materials and components suitable for the task • I can explain my choice of materials and components according to functional properties and aesthetic qualities • <i>I can order the main stages of making</i> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> • I can measure and mark out to the nearest millilitre • I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material <i>(such as slots or cut outs)</i> • I can select appropriate joining techniques • I can make products by working efficiently <i>(e.g. by carefully selecting materials)</i> • I use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components

Art and Design Progression of skills and knowledge

	<ul style="list-style-type: none"> I apply a range of finishing techniques, including those from art and design, with some accuracy
<p>Evaluate</p> <ul style="list-style-type: none"> 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 D+T have helped shape the world 	<p>Own ideas and products</p> <ul style="list-style-type: none"> I can refine work and techniques as work progresses, continually evaluating the product design I can identify the strengths and areas for development in my ideas and products I consider the views of others, including intended users, to improve my work <p>Existing products</p> <ul style="list-style-type: none"> I can explore existing products: <ul style="list-style-type: none"> how well products have been designed and made why materials have been chosen what methods of construction have been used how well products work how well products achieve their purposes how well products meet user needs and wants who designed and made the products where products were designed and made when products were designed and made whether products can be recycled or reused <p>Key Events and individuals</p> <ul style="list-style-type: none"> I can name an inventor, designer, engineer, chef or manufacturer who has developed a ground-breaking product
<p>Technical Knowledge</p> <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products <i>[for example, gears, pulleys, cams, levers and linkages]</i> understand and use electrical systems in their products <i>[for example, series circuits incorporating switches, bulbs, buzzers and motors]</i> 	<p>Making products work_</p> <ul style="list-style-type: none"> I can use knowledge from maths and science to design and make products that work I know that materials have both functional properties and aesthetic qualities <i>I know that materials can be combined and mixed to create more useful characteristics</i> <i>I use the correct technical vocabulary for the projects I am undertaking.</i> I know how mechanical systems such as levers and linkages or pneumatic systems create movement I am beginning to program a computer to control my products I can control and monitor models using software designed for this purpose I can make strong, stiff shell structures <i>I know that a single fabric shape can be used to make a 3D textiles product</i>

Art and Design Progression of skills and knowledge

<ul style="list-style-type: none">• apply their understanding of computing to program, monitor and control their products.	<ul style="list-style-type: none">• <i>I know that food ingredients can be fresh, pre-cooked and processed</i>
<p>Cooking and Nutrition</p> <ul style="list-style-type: none">• 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.	<p>Where food comes from</p> <ul style="list-style-type: none">• I know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world <p>Food preparation, cooking and nutrition</p> <ul style="list-style-type: none">• I can measure ingredients to the nearest gram• I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source• I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking• I can follow a recipe• I know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate• I know that to be active and healthy, food and drink are needed to provide energy for the body
<p>Project ideas:</p> <ul style="list-style-type: none">• Autumn term: Levers – moving pictures (linked to Egyptians)• Spring Term: Moving monsters – exploring pneumatics (link with stone age boy cave)• Summer Term: Recycling – Lego Wedo – a recycling truck, look at how designers helping to protect the planet, new inventions. How recycling works? (linked to computing)	

Art and Design Progression of skills and knowledge

Year 4 Curriculum objectives: In this unit, children will be taught to:

<p>Design</p> <ul style="list-style-type: none"> • 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 	<p>Understanding contexts, users and purposes:</p> <ul style="list-style-type: none"> • I can work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • I can design with purpose by identifying opportunities to design • I can describe the purpose of my products • I can indicate the design features of my products that will appeal to intended users • I can explain how particular parts of my products work <p>Generating, developing, modelling and communicating ideas:</p> <ul style="list-style-type: none"> • I can develop my own design criteria and use these to inform my ideas • I can share and clarify ideas through discussion • I model my ideas using prototypes and pattern pieces • I use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate my ideas • I choose appropriate software to design and represent product designs • <i>I can make design decisions that take account of the availability of resources</i>
<p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks <i>[for example, cutting, shaping, joining and finishing]</i>, 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 	<p>Planning</p> <ul style="list-style-type: none"> • I can select tools and equipment suitable for the task • I can explain my choice of tools and equipment in relation to the skills and techniques I will be using • I can select materials and components suitable for the task • I can explain my choice of materials and components according to functional properties and aesthetic qualities • <i>I can order the main stages of making</i> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> • I can measure and mark out to the nearest millilitre • I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (<i>such as slots or cut outs</i>) • I can select appropriate joining techniques • I can make products by working efficiently (<i>e.g. by carefully selecting materials</i>) • I use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components

Art and Design Progression of skills and knowledge

	<ul style="list-style-type: none"> I apply a range of finishing techniques, including those from art and design, with some accuracy
<p>Evaluate</p> <ul style="list-style-type: none"> 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 D+T have helped shape the world 	<p>Own ideas and products</p> <ul style="list-style-type: none"> I can refine work and techniques as work progresses, continually evaluating the product design I can identify the strengths and areas for development in my ideas and products I consider the views of others, including intended users, to improve my work <p>Existing products</p> <ul style="list-style-type: none"> I can explore existing products: <ul style="list-style-type: none"> how well products have been designed and made why materials have been chosen what methods of construction have been used how well products work how well products achieve their purposes how well products meet user needs and wants who designed and made the products where products were designed and made when products were designed and made whether products can be recycled or reused <p>Key Events and individuals</p> <ul style="list-style-type: none"> I can identify some of the great inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
<p>Technical Knowledge</p> <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products <i>[for example, gears, pulleys, cams, levers and linkages]</i> 	<p>Making products work</p> <ul style="list-style-type: none"> I can use knowledge from maths and science to design and make products that work I know that materials have both functional properties and aesthetic qualities <i>I know that materials can be combined and mixed to create more useful characteristics</i> I know that mechanical and electrical systems have an input, process and output <i>I use the correct technical vocabulary for the projects I am undertaking.</i> I know how mechanical systems such as levers and linkages or pneumatic systems create movement I know how simple electrical circuits and components can be used to create functional products

Art and Design Progression of skills and knowledge

<ul style="list-style-type: none"> • understand and use electrical systems in their products <i>[for example, series circuits incorporating switches, bulbs, buzzers and motors]</i> • apply their understanding of computing to program, monitor and control their products. 	<ul style="list-style-type: none"> • I can control and monitor models using software designed for this purpose • I can make strong, stiff shell structures • <i>I know that a single fabric shape can be used to make a 3D textiles product</i> • <i>I know that food ingredients can be fresh, pre-cooked and processed</i>
<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> • 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. 	<p>Where food comes from</p> <ul style="list-style-type: none"> • I know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world <p>Food preparation, cooking and nutrition</p> <ul style="list-style-type: none"> • I can measure ingredients to the nearest gram accurately • I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • I can follow a recipe • I know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate • I know that to be active and healthy, food and drink are needed to provide energy for the body
<p>Project ideas:</p> <ul style="list-style-type: none"> • Autumn Term: Food – Roman bread making • Spring Term: design and make a Viking purse / broach– linked to art • Summer Term: Light up signs project - using circuits (see planbee website) / Alarms – using circuits to create an alarm (linked to science) 	

Art and Design Progression of skills and knowledge

Year 5 Curriculum objectives: In this unit, children will be taught to:

<p>Design</p> <ul style="list-style-type: none"> • 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 	<p>Understanding contexts, users and purposes:</p> <ul style="list-style-type: none"> • I can work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • I can carry out research, using surveys, interviews, questionnaires and web-based resources • I can design with the user in mind and can indicate the design features of my products that will appeal to them • I can describe the purpose of my products and explain how particular parts of my products work • I can develop a simple design specification to guide my thinking <p>Generating, developing, modelling and communicating ideas:</p> <ul style="list-style-type: none"> • I can share and clarify ideas through discussion • I can model my ideas using prototypes and pattern pieces • I use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate my ideas • I can use computer-aided design to develop and communicate my ideas generate innovative ideas, drawing on research • I can use innovative combinations of electronics (<i>or computing</i>) and mechanics in product design. • <i>I can make design decisions, taking account of constraints such as time, resources and cost</i>
<p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks [<i>for example, cutting, shaping, joining and finishing</i>], accurately 	<p>Planning</p> <ul style="list-style-type: none"> • I can select tools and equipment suitable for the task • <i>I can explain my choice of tools and equipment in relation to the skills and techniques I will be using</i> • I can select materials and components suitable for the task • I can explain my choice of materials and components according to functional properties and aesthetic qualities

Art and Design Progression of skills and knowledge

<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> <i>I can produce appropriate lists of tools, equipment and materials that I need</i> <i>I can formulate step-by-step plans as a guide to making</i> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> I can follow procedures for safety and hygiene I use a wide range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components I use a range of practical skills to create products (<i>such as cutting, drilling and screwing, nailing, gluing, filing and sanding</i>) I can accurately measure, mark out, cut and shape materials and components I can accurately assemble, join and combine materials and components I can accurately apply a range of finishing techniques, including those from art and design <i>I use techniques that involve a number of steps</i> I demonstrate resourcefulness when tackling practical problems
<p>Evaluate</p> <ul style="list-style-type: none"> 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 D+T have helped shape the world 	<p>Own ideas and products</p> <ul style="list-style-type: none"> I critically evaluate the quality of the design, manufacture and fitness for purpose of my products as I design and make it I consider the views of others, including intended users, to improve my work <i>I evaluate my ideas and products against my original design specification</i> <p>Existing products</p> <ul style="list-style-type: none"> I can explore existing products: <ul style="list-style-type: none"> how well products have been designed how well products have been made why materials have been chosen what methods of construction have been used how well products work how well products achieve their purposes how well products meet user needs and wants how much products cost to make how innovative products are how sustainable the materials in products are what impact products have beyond their intended purpose <p>Key Events and individuals</p>

Art and Design Progression of skills and knowledge

	<ul style="list-style-type: none"> I can identify some of the great inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
<p>Technical Knowledge</p> <ul style="list-style-type: none"> apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products <i>[for example, gears, pulleys, cams, levers and linkages]</i> understand and use electrical systems in their products <i>[for example, series circuits incorporating switches, bulbs, buzzers and motors]</i> apply their understanding of computing to program, monitor and control their products. 	<p>Making products work</p> <ul style="list-style-type: none"> I use learning from science and mathematics to help design and make products that work I know that materials have both functional properties and aesthetic qualities <i>I can combine and mix materials to create more useful characteristics</i> <i>I use the correct technical vocabulary for the projects I am undertaking</i> I know how mechanical systems such as cams or pulleys or gears create movement; I can convert rotary motion to linear motion using cams. I can use more complex electrical circuits and components to create functional products I am beginning to write code to control and monitor models and products. I can reinforce and strengthen a 3D framework <i>I know that a 3D textiles product can be made from a combination of fabric shapes</i> <i>I know that a recipe can be adapted by adding or substituting one or more ingredients</i>
<p>Cooking and Nutrition</p> <ul style="list-style-type: none"> 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. 	<p>Where food comes from</p> <ul style="list-style-type: none"> I know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world I know that seasons may affect the food available I know how food is processed into ingredients that can be eaten or used in cooking <p>Food preparation, cooking and nutrition</p> <ul style="list-style-type: none"> I can prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking <i>I know that recipes can be adapted to change the appearance, taste, texture and aroma</i>

Art and Design Progression of skills and knowledge

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|--|---|
| | <ul style="list-style-type: none">• I know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health |
|--|---|

Project ideas:

- Autumn Term: Fashion and textiles – link with India – design, embellish and make a bag / India – cooking an Indian meal
- Spring Term: Lego Wedo project / structures – design and build a chair project
- Summer Term: Victorian toys – design a moving toy using camms

Art and Design Progression of skills and knowledge

Year 6 Curriculum objectives: In this unit, children will be taught to:

<p>Design</p> <ul style="list-style-type: none"> • 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 	<p>Understanding contexts, users and purposes:</p> <ul style="list-style-type: none"> • I can work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • I can carry out research, using surveys, interviews, questionnaires and web-based resources • I can design with the user in mind and can indicate the design features of my products that will appeal to them • I can describe the purpose of my products and explain how particular parts of my products work • I can develop a simple design specification to guide my thinking <p>Generating, developing, modelling and communicating ideas:</p> <ul style="list-style-type: none"> • I can share and clarify ideas through discussion • I can model my ideas using prototypes and pattern pieces • I use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate my ideas • I can use computer-aided design to develop and communicate my ideas generate innovative ideas, drawing on research • I can use innovative combinations of electronics (<i>or computing</i>) and mechanics in product design. • <i>I can make design decisions, taking account of constraints such as time, resources and cost</i>
<p>Make</p> <ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks [<i>for example, cutting, shaping, joining and finishing</i>], 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 	<p>Planning</p> <ul style="list-style-type: none"> • I can select tools and equipment suitable for the task • <i>I can explain my choice of tools and equipment in relation to the skills and techniques I will be using</i> • I can select materials and components suitable for the task • I can explain my choice of materials and components according to functional properties and aesthetic qualities • <i>I can produce appropriate lists of tools, equipment and materials that I need</i> • <i>I can formulate step-by-step plans as a guide to making</i> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> • I can follow procedures for safety and hygiene

Art and Design Progression of skills and knowledge

	<ul style="list-style-type: none"> • I use a wide range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components • I use a range of practical skills to create products (<i>such as cutting, drilling and screwing, nailing, gluing, filing and sanding</i>) • I can accurately measure, mark out, cut and shape materials and components, then refine the finish with appropriate tools (<i>such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape</i>) • I can accurately assemble, join and combine materials and components • I can accurately apply a range of finishing techniques, including those from art and design • <i>I use techniques that involve a number of steps</i> • I demonstrate resourcefulness when tackling practical problems
<p>Evaluate</p> <ul style="list-style-type: none"> • 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 D+T have helped shape the world 	<p>Own ideas and products</p> <ul style="list-style-type: none"> • I can make products through stages of prototypes, making continual refinements • I critically evaluate the quality of the design, manufacture and fitness for purpose of my products as I design and make it • I consider the views of others, including intended users, to improve my work • <i>I evaluate my ideas and products against my original design specification</i> <p>Existing products</p> <ul style="list-style-type: none"> • I can explore existing products: <ul style="list-style-type: none"> • how well products have been designed • how well products have been made • why materials have been chosen • what methods of construction have been used • how well products work • how well products achieve their purposes • how well products meet user needs and wants • how much products cost to make • how innovative products are • how sustainable the materials in products are • what impact products have beyond their intended purpose <p>Key Events and individuals</p>

Art and Design Progression of skills and knowledge

	<ul style="list-style-type: none"> • I know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
<p>Technical Knowledge</p> <ul style="list-style-type: none"> • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products <i>[for example, gears, pulleys, cams, levers and linkages]</i> • understand and use electrical systems in their products <i>[for example, series circuits incorporating switches, bulbs, buzzers and motors]</i> • apply their understanding of computing to program, monitor and control their products. 	<p>Making products work_</p> <ul style="list-style-type: none"> • I use learning from science and mathematics to help design and make products that work • I know that materials have both functional properties and aesthetic qualities • <i>I can combine and mix materials to create more useful characteristics</i> • <i>I use the correct technical vocabulary for the projects I am undertaking</i> • I know how mechanical systems such as cams or pulleys or gears create movement; I can convert rotary motion to linear motion using cams. • I can create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips) • I can independently write code to control and monitor models and products. • I can reinforce and strengthen a 3D framework • <i>I know that a 3D textiles product can be made from a combination of fabric shapes</i> • <i>I know that a recipe can be adapted by adding or substituting one or more ingredients</i>

Art and Design Progression of skills and knowledge

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.

Where food comes from

- I know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world
- I know that seasons may affect the food available
- I know how food is processed into ingredients that can be eaten or used in cooking

Food preparation, cooking and nutrition

- I can understand the importance of correct storage and handling of ingredients (*using knowledge of micro-organisms*)
- I can use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
- *I know that recipes can be adapted to change the appearance, taste, texture and aroma*
- I can measure accurately and calculate ratios and ingredients to scale up or down from a recipe
- I know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health

Project ideas:

- Autumn Term: WW2 – air raid shelters (structures) / Food – baking using rations linked to WW2
- Spring Term: Programming Project – linked to computing
- Summer Term: wire 'nerves of steel game' linked with science / design and create props for the Y6 production