



**Subject Overview 2024/25: Design and Technology**  
**Curriculum and Pedagogy**



**Subject Overview 24/25: Design & Technology**

**Intent (Skills/ knowledge): At Alexandra Junior School, pupils use their creativity and imagination to design and make products that solve problems in a range of contexts. They draw on the disciplines of other subjects such as: maths, science, engineering, computing and art. Pupils learn how to become resourceful and innovative. They will become able to evaluate notable designers and existing products to inspire them to create their own ideas and designs.**



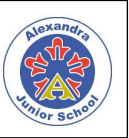


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	Year 3	Year 4	Year 5	Year 6
<b>Curriculum objectives</b>	<p><b>Design</b> Show that the design meets a range of requirements.</p> <p>Put together a plan which shows the order and also which equipment and tools are needed.</p> <p>Describe designs using an accurately labelled sketch and words.</p> <p>Take account of the ideas of others when designing.</p> <p>Say how realistic their plan is.</p> <p><b>Make</b> Can I use equipment and tools accurately?</p> <p>Can I stop and think about how good my product is going to end up?</p> <p><b>Evaluate</b> Can I say what I would change which made my design even better?</p> <p>Can I practice my evaluation skills by evaluating existing products?</p>	<p><b>Design</b> Show that designs meet a range of requirements.</p> <p>Come up with at least one idea about how to create the product.</p> <p>Take account of the ideas of others when designing.</p> <p>Produce a plan and explain it to others.</p> <p>Describe designs using an accurately labelled sketch and words.</p> <p>Suggest some improvements and say what was good and not so good about the original design.</p> <p><b>Make</b> Can I show I am conscience of the need to produce something that will be liked by others?</p> <p>Can I show a good level of expertise when using a range of tools and equipment?</p> <p>Can I explain how my product will appeal to the audience?</p>	<p><b>Design</b> Come up with a range of ideas after collecting information.</p> <p>Take a user's view into account when designing.</p> <p>Produce a detailed step-by-step plan.</p> <p>Suggest some alternative plans and say what the good points and drawbacks are about each.</p> <p>Use cross sectional planning to show designs.</p> <p>Produce prototypes to show ideas.</p> <p><b>Make</b> Can I explain why my finished product is going to be of good quality?</p> <p>Can I explain how my product will appeal to the audience?</p> <p>Can I use a range of tools and equipment expertly?</p> <p>Can I think about the aesthetic qualities of my work?</p> <p>Can I think about the functionality of my work?</p>	<p><b>Design</b> Use a range of information to inform designs.</p> <p>Use market research to inform plans.</p> <p>Work within constraints.</p> <p>Follow and refine plans, if necessary.</p> <p>Justify plans to someone else.</p> <p>Consider culture and society in designs.</p> <p>Use exploded diagrams to show my designs.</p> <p>Use computer aided designs to show ideas.</p> <p><b>Make</b> Can I use tools and materials precisely?</p> <p>Do I change the way I am working if needed?</p> <p>Can I think about the aesthetic qualities of my work?</p>

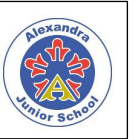


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	<p>Can I use a range of tools and equipment expertly?</p> <p><b>Evaluate</b></p> <p>Can I begin to explain how I can improve my original design?</p> <p>Can I evaluate my product, thinking of both appearance and the way it works?</p> <p>Can I practice my evaluation skills by evaluating existing products against set criteria?</p>	<p><b>Evaluate</b></p> <p>Do I keep checking that my design is the best it can be?</p> <p>Can I check whether anything could be improved?</p> <p>Can I evaluate appearance and function against the original criteria?</p> <p>Can I test and evaluate my final product?</p> <p>Can I say if my product is fit for purpose?</p> <p>Can I practice my evaluation skills by evaluating existing products against criteria which I have set?</p>	<p>Can I think about the functionality of my work?</p> <p><b>Evaluate</b></p> <p>Can I test and evaluate my final product?</p> <p>Can I say if my product is fit for purpose?</p> <p>Can I evaluate what would improve it?</p> <p>Can I evaluate if different resources would have improved my product?</p> <p>Can I say if I would need more or different information to make it even better?</p> <p>Can I practice my evaluation skills by evaluating existing products against criteria which I have set?</p>
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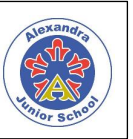


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	<p><b>Vocabulary</b> user, purpose, design, <b>model</b>, evaluate, <b>prototype</b>, <b>annotated sketch</b>, <b>functional</b>, <b>innovative</b>, <b>investigate</b>, <b>label</b>, <b>drawing</b>, <b>function</b>, <b>planning</b>, <b>design criteria</b>, <b>annotated sketch</b>, <b>appealing</b></p> <p>* Vocabulary in red are new words to be introduced</p> <p>**Vocabulary in black are words previously introduced in DT topics.</p>	<p><b>Vocabulary</b> evaluating, <b>design brief</b>, <b>design criteria</b>, <b>innovative</b>, prototype, user, <b>purpose</b>, function, <b>prototype</b>, design criteria, <b>innovative</b>, <b>appealing</b>, <b>design brief</b>, <b>planning</b>, <b>annotated sketch</b>, <b>sensory evaluations</b></p>	<p><b>Vocabulary</b> <b>design decisions</b>, <b>functionality</b>, <b>authentic</b>, user, purpose, <b>design specification</b>, design brief, innovative, <b>research</b>, <b>evaluate</b>, design criteria, <b>annotate</b>, evaluate, <b>mock-up</b>, prototype</p>	<p><b>Vocabulary</b> <b>function</b>, innovative, <b>design specification</b>, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, <b>research</b>, <b>functional</b>, mock-up, prototype</p>
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IMPLEMENTATION	<p><b>Technical Knowledge</b></p> <p><b>Textiles:</b></p> <p>Can I join textiles of different types in different ways?</p> <p>Can I choose textiles both for their appearance and also qualities?</p> <p><b>Cooking and nutrition:</b></p> <p>Can I choose the right ingredients for a product?</p> <p>Can I use equipment safely?</p> <p>Can I make sure that my product looks attractive?</p> <p>Can I describe how my combined ingredients come together?</p> <p>Can I set out to grow plants such as cress and herbs from seed with the intention of using them for my food product?</p> <p><b>Stiff and flexible sheet materials:</b></p> <p>Can I use the most appropriate materials?</p> <p>Can I work accurately to make cuts and holes? Can I join materials?</p>	<p><b>Technical Knowledge</b></p> <p><b>Stiff and flexible sheet materials:</b> Can I measure carefully so as to make sure I have not made mistakes?</p> <p>Can I attempt to make my product strong?</p> <p><b>Cooking and nutrition:</b></p> <p>Can I describe what I do to be both hygienic and safe?</p> <p>Can I present my product well?</p> <p><b>Moldable materials:</b></p> <p>Can I take time to consider how I could have made my idea better?</p> <p>Can I work at my product even though their original idea might not have worked?</p> <p><b>Technical knowledge</b></p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages</p> <p>Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors</p> <p>Apply their understanding of computing to programme, monitor and control their products.</p>	<p><b>Technical Knowledge</b></p> <p><b>Electrical &amp; mechanical components:</b></p> <p>Can I incorporate a switch into my product?</p> <p>Can I refine my product after testing it?</p> <p>Can I incorporate hydraulics and pneumatics?</p> <p>Can I use different kinds of circuit in my product?</p> <p>Can I think of ways in which adding a circuit would improve my product?</p> <p><b>Moldable materials:</b></p> <p>Can I consider the use of the product when selecting materials? Can I say how my product meets all design criteria?</p> <p><b>Stiff and flexible sheet materials:</b></p> <p>Can I measure accurately enough to ensure that everything is precise? Can I ensure that my product is strong and fit for purpose?</p> <p><b>Technical knowledge</b> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages</p>	<p><b>Technical Knowledge</b></p> <p><b>Textiles:</b></p> <p>Can I think what the user would want when choosing textiles?</p> <p>Can I make my product attractive and strong? Can I make up a prototype first?</p> <p>Can I use a range of joining techniques?</p> <p>Can I think about how my product could be sold?</p> <p>Can I give considered thought about what would improve my product even more?</p> <p><b>Electrical and mechanical components:</b> Can I use different kinds of circuit in my product?</p> <p>Can I think of ways in which adding a circuit would improve my product?</p> <p><b>Moldable materials:</b></p> <p>Can I consider the use of the product when selecting materials?</p>
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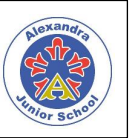


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<p><b>Technical knowledge</b> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors Apply their understanding of computing to programme, monitor and control their products.</p> <p><b>Cooking and Nutrition</b> understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savory 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>	<p><b>Cooking and Nutrition</b> understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savory 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> <p><b>Power it up</b> <b>How do I make a good light?</b> I can talk about how to be safe when using electricity. I can make a simple circuit using a battery, light bulb, switch and connecting wires. I can find and correct a fault in a simple circuit. I can identify how torches are designed with the particular needs of the user and how these needs can vary widely. I can describe the simple circuits within torches and I know that these can contain metal parts which do not necessarily have to be wires. I can discuss how torches are made from a variety of materials suited to the purpose for which they are intended. I can identify the user's specific needs and prioritise these in a specification. I can plan for a new product using drawings with labels. I can recognise hazards and take steps to control the risks. I can evaluate my work throughout the making</p>	<p>Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors Apply their understanding of computing to programme, monitor and control their products. <b>Cooking and Nutrition</b> understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savory 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> <p><b>The Marvellous Mayans</b> <b>How did the Mayans make fabric?</b> I can construct a weaving loom based on my research. I can select colours and fabrics similar to those used by the Mayans (research) I can create a piece of fabric in the style of the Mayans on a loom I have made. I can use simple sewing techniques to complete the finish on my woven fabric. I can evaluate my work and explain the good elements of my work and also how it can be improved.</p>	<p>Can I say if my product meets all design criteria?</p> <p><b>Technical knowledge</b> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors Apply their understanding of computing to programme, monitor and control their products. <b>Cooking and Nutrition</b> understand and apply the principles of a healthy and varied diet prepare and cook a variety of predominantly savory 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>
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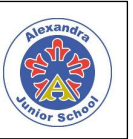


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<p><b>Vocabulary</b>  <b>utensils, techniques, ingredients</b>  <b>texture, taste, sweet, sour, hot, spicy,</b>  <b>appearance, smell, preference, greasy,</b>  <b>moist, cook, fresh, savoury, hygienic,</b>  <b>edible, grown, reared, caught, frozen,</b>  <b>tinned, processed, seasonal, harvested</b>  <b>healthy/varied diet</b></p> <p>* Vocabulary in red are new words to be introduced</p> <p>**Vocabulary in black are words previously introduced in DT topics.</p>	<p>process and when the product is complete.          I can design and make a product which takes into account the needs of a specific user.          I can evaluate my torch against the original design criteria; identify modifications that may be needed and check that the product is safe to use.</p> <p><b>Vocabulary</b>          utensils, techniques, ingredients texture,          taste, sweet, sour, hot, spicy, appearance,          smell, preference, greasy, moist, cook, fresh,          savoury, hygienic, edible, grown, reared,          caught, frozen, tinned, processed, seasonal,          harvested healthy/varied diet, <b>specific user,</b></p>	<p>I can evaluate my plan to say what changes if any had to be made in order to improve my work.</p> <p><b>Vocabulary</b>          ingredients, <b>yeast, dough, bran, flour, wholemeal,</b>  <b>unleavened, baking soda, spice, herbs fat, sugar,</b>  <b>carbohydrate, protein, vitamins, nutrients, nutrition,</b>  <b>healthy, varied, gluten, dairy, allergy, intolerance,</b>  <b>savoury, source, seasonality utensils, combine, fold,</b>  <b>knead, stir, pour, mix, rubbing in, whisk, beat, roll</b>  <b>out, shape, sprinkle, crumble</b></p>	<p><b>Vocabulary</b>          ingredients, yeast, dough, bran, flour,          wholemeal, unleavened, baking soda, spice,          herbs fat, sugar, carbohydrate, protein,          vitamins, nutrients, nutrition, healthy,          varied, gluten, dairy, allergy, <b>intolerance,</b>          savoury, source, <b>seasonality</b> utensils,          combine, fold, knead, stir, pour, mix, rubbing          in, whisk, beat, roll out, shape, sprinkle,          crumble</p>
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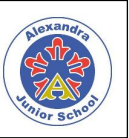


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<p><b>Possible DT Activities</b></p> <p><u>Earth Rocks!</u> <u>How can I create a juggling ball?</u> I can explain why we need to analyse products. I can investigate and evaluate different features such as colour, shape, child appeal, decoration and function. I can think about design criteria when creating my design, discussing my ideas confidently and annotating clearly. I can aim my design at a particular group. I can decide which design technique I want to use. I can correctly place elastic bands or strings onto my product. I can carefully dye my fabric. I can trial different fillings such as beans, rice, lentils and sand, selecting the filling which I think will be most functional. I can use a running stitch to create a hem, explaining why a hem is important. I can carefully cut around a template. I can carefully copy my design onto fabric using pencils first and then using fabric paint or pens. I can explain why we use different stitches. I can use an overcast stitch to join my juggling ball. I can fill my juggling ball to create a finished shape. I can explain how well my design has met the design criteria. I can evaluate my work as part of a team and suggest improvements.</p> <p><u>Stone Age</u> <u>What would my favourite book character like</u></p>	<p><b>Possible DT Activities</b></p> <p><u>Favourite Stories</u> <u>Do I prefer moving or non-moving books?</u> I can investigate and evaluate products with levers and linkage systems in order to learn how they function. I can use appropriate vocabulary to describe materials and mechanisms. I can describe how different mechanisms can be used to produce different types of movements. I can produce a range of different mechanisms and develop an understanding of how they work. I can cut and shape materials and components with some precision to enable their mechanism examples work. I can explore, develop and communicate my design proposals by modelling a variety of ideas. I can produce an outline plan that identifies the main stages for making the book. I can identify an audience and purpose for my book. I can identify what is and is not working well in my book. I can identify what makes a good quality finish. I can evaluate my book against the design criteria and identify ways of improving the design.</p> <p><u>What's that Sound?</u> <u>How do we create different sounds?</u> I can investigate, disassemble and evaluate a range of musical instrument to learn how they function. I can relate the way things to work to their intended purpose, how materials and how</p>	<p><b>Possible DT Activities</b></p> <p><u>Volatile Volcanoes</u> <u>What does it look like when a volcano erupts?</u> I can name the different parts of a volcano (research) I can explain the different types of volcanoes including their different shapes and distinguishing features e.g. conduit etc. (research) I can produce a step by step plan to show what I am going to do. I can illustrate my instructions by using cross sectional drawings I can construct the basic shape of my volcano using papier mache . I will consider a suitable vessel to put inside my model so that I can include a real eruption upon completion I can select a suitable paintable material to add as an outer layer on my model. I can use my art skills to replicate the out outside of my volcano. I can create a prototype eruption to experiment using different amounts of ingredients in order to create the most effective eruption I can measure and prepare the ingredients that will create a chemical reaction eruption (science link) I can evaluate my model as part of a team and suggest improvements.</p> <p><u>The Victorians</u> <u>How can I use book creator to showcase the information I have found out about life in Victorian times?</u></p>	<p><b>Possible DT Activities</b></p> <p><u>Where in the World</u> <u>Do people in different countries eat different food?</u> I can name a variety of ingredients from different countries. I can identify on a map where different ingredients flourish I can suggest how different ingredients might be prepared and used. I can explain similarities and differences of food eaten around the world and can say why this is important. I can group food from around the world into the correct food group. I can discuss the nutritional benefits of rice. I can follow a recipe to measure ingredients accurately. I can scale my recipe up or down. I can grate and dice food. I can use some more advanced food skills and techniques, such as frying. I can use some basic skills such as cracking an egg, peeling and slicing. I can use some more advanced food skills and techniques, such as baking. I can set up a neat and orderly cooking area. I can assess my ability to use different cooking techniques.</p>
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<p><b>for their dinner?</b></p> <p>I can name common herbs such as thyme, basil, mint, parsley, tarragon and rosemary. I can explain how to plant and care for herbs, considering their need for warm conditions. I can explain the eatwell plate and which foods I should be eating more or less of. I can carefully follow a recipe to create a balanced meal. I can say how to plant and look after my own strawberry plant. I can safely and correctly use a range of kitchen tools such as a knife, a whisk and a masher. I can measure ingredients accurately to the nearest millilitre. I can create a runny, tasty, smooth drink and explain why it is good for me. I can explain that tomato seeds need warmth and water to start to grow and can explain that this is best achieved in warm seasons. I can assemble and cook ingredients including controlling the temperature on an induction hob. I can prepare ingredients safely and hygienically using appropriate cooking utensils to create tomato sauce or bruschetta.</p> <p><b>The Local Area</b> <b>How would I design a frame to hold a picture of Longton?</b></p> <p>I can describe why it is important for a structure to be free standing. I can disassemble and evaluate familiar</p>	<p>components have been used. I can combine and join materials components accurately in temporary ways. I can describe how different types of sound can be made using different techniques. I can identify a purpose for my instrument. I can develop a clear idea of what has to be done and plan how to use different resources. I can select appropriate materials, tools and techniques. I can use information sources including ICT to help with my designing. I can evaluate my design and ideas as they are developing and indicate ways of improving. I can evaluate my own work and the work of others considering the purpose for which the product is intended.</p>	<p>I can use the Book Creator App on the ipad. I can use my research information to create an e book about the Victorians. I can design and make a product which takes into account the needs of a specific user. I can consider my target audience when I am designing my book e.g. text size, use of pictures, language used etc. I can suggest some alternative plans for my book, suggesting any points that could be improved on or how the book could be changed to reach a different target audience.</p>	<p><b>The Rise and Fall of the Roman Empire</b> <b>What makes an exciting fairground?</b></p> <p>I can include an electric motor in a simple circuit. I can control the direction of rotation and speed of the motor using a pulley and belt. I can use the appropriate vocabulary related to control systems. I can model my ideas for my product using mechanism from a set of instructions. I can make decisions with regard to the type of ride I will make. I can model my intended fairground ride and make modifications as I go along. I can plan what I have to do. I can evaluate against the original design criteria. I can control a model using an interface connection to a computer. I can suggest ways my ride could be improved.</p> <p><b>Going Global- Fair-trade Project</b> <b>What could I design to keep my phone safe?</b></p> <p>I can create design criteria for a specific group of people. I can evaluate phone cases considering appearance, function and safety.</p>
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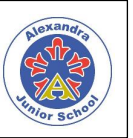


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<p>products. I can discuss the ways of making a stable structure and strengthening paper, I can talk about the effectiveness of triangulation in structures. I can use a range of different joining techniques. I can hazards, assess consequent risks and take steps to control these risks. I can consider who I am designing for. I can implement my prior learning about stiffness and stability into my design proposals. I can make drawings with labels when I am designing. I can evaluate my product against the original design criteria. I can give a simple explanation about the product I have made.</p>			<p>I can think about the aesthetics and functionality of a phone case.  I can create innovative designs thinking about my target market and listening to other people's ideas.  I can sketch my design from different angles and add detailed annotations to my design.  I can transfer measurements onto squared paper.  I can explain why templates are necessary and use a template accurately.  I can choose which stitch to use on my final phone case, explaining my choices clearly.  I can use a back stitch, whipstitch and over stitch.  I can create a step-by-step plan to show the main stages of making.  I can evaluate my on-going work.  I can use decorative techniques to achieve a well-constructed and finished slipper.  I can evaluate my phone case critically against the design specification.  I can identify strengths in my product.  I can identify areas for development in my product and suggest modifications I could have made to solve these.</p>
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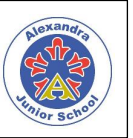


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**Intent (Skills/ knowledge): At Alexandra Junior School, pupils use their creativity and imagination to design and make products that solve problems in a range of contexts. The draw on the disciplines of other subjects such as: maths, science, engineering, computing and art. Pupils learn how to become resourceful and innovative. They will become able to evaluate notable designers and existing products to inspire them to create their own ideas and designs.**



## DT curriculum and Pedagogy

Through the study of design and technology, the children combine practical skills with an understanding of aesthetic, social and environmental issues. Design and technology helps all children to become discerning and informed consumers and potential innovators. It provides children with a greater awareness and understanding of how everyday products are designed and made.

### **Our aims are:**

- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making;
- to enable children to talk about how things work, and to draw and model their ideas;
- to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;
- to foster enjoyment, satisfaction and purpose in designing and making;
- to use ICT software to assist our designing and learning.

### **Teaching and Learning**

We use a variety of teaching and learning styles in design and technology lessons. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning, making products and evaluating them.

We do this through a mixture of whole class teaching and individual/group activities. All children's ideas are treated with respect and they are encouraged to critically evaluate their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.



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We teach design and technology to all pupils, whatever their ability, and provide learning opportunities that enable them to make progress. We do this by setting suitable learning challenges and respond to children's individual needs. We strive to support individual needs and enable children to achieve their full potential through appropriate challenge and questioning.

Children are encouraged to think and work independently and collaboratively evaluating, extending and improving their ideas.

### **Adaptive Teaching/SEND**

Our Design and Technology curriculum allows for inclusivity, allowing all children to engage with their lessons. It is our belief that all children have an equal right to a broad and balanced curriculum, which enables them to meet their full potential. Through our teaching, we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those who are deemed more-able and talented and those learning English as an additional language, and we make all reasonable adjustments to achieve this.

### **Reading for learning**

Reading for learning is encouraged to enable learners to gain more information about the units being covered. E.G. evidence in floor books of related Design and Technology topics in guided reading sessions. Each year group also has a box of books for reading around the curriculum. Within this box, there are books for every unit covered, these are for use before, during and after units are taught.

### **The Curriculum**

Children are given the opportunity to work within three main areas of development during each topic:

- investigative tasks including analysing existing products;

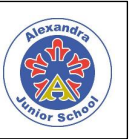


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- focused practical tasks allowing children to learn, practice and develop key skills;
- design and make assignments allowing children to apply their knowledge, skills and understanding when developing their ideas and creations.

Across Key Stage 2, we plan design and technology activities so that they build upon prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and ensuring progressive challenge, breadth and depth to their design and making. The units are focused on the following areas:

- cooking and nutrition;
- materials;
- construction including mechanics.

Where possible the planning is completed through a cross curricular approach ensuring that design technology has a link to the topic/s being studied.

Subjects such as English, Maths, Science and Computing are reinforced through design and technology by giving children the opportunity to:

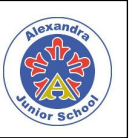


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- apply methods of calculation and measurement to real life situations;
- write plans, instructions, rationales and evaluations;
- articulate ideas and compare and contrast their views with others;
- discuss views and clarify design ideas;
- use a range of increasingly technical vocabulary;
- apply scientific knowledge to designs and inventions;
- use a range of resources including computer design.



## **Assessment**

In design and technology, teachers assess children's progress by making observations during lessons and discussions, marking design sheets and evaluating end products. Teachers make progress judgements against learning objectives and staged success criteria.

At the end of a unit, children review their own and each other's work, focusing upon an evaluation of the finished product and how effectively it meets the learning objective.

Due to the practical nature of design and technology, evidence of work undertaken by children can be in the form of teacher's notes or as a photographic record. Samples of the design process and end product are also valuable evidence.



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### SMSC

Spiritual development in Design and Technology aims to foster the mystery of how and why things work and the reasons and research that have happened so far. It helps children to realise the significance of how individuals in the past have seen the world and how through reinvestigating and through the development of new ideas and theories we can build on what has been suggested before.

Moral development in Design and Technology aims to encourage pupils to comment on moral questions and dilemmas from past scientific enquiries. This will aid the children to empathise with the decisions that people from the past had to make. They will also become more open minded when considering the actions and decisions of people from the past e.g. unsuccessful engineering that has had an impact on the world e.g. the Titanic.

Social development encourages the children to think about what societies from the past have done for us. In Design and Technology, it promotes the children's own social development through collaboration with their peers and problem solving.

Cultural development in Design and Technology develops a better understanding of our own multicultural society through studying links between local, British, European and world influence in engineering development. It allows children to gain an understanding of what it means to be an engineer and that engineers and designers come from different cultures as well as many other walks of life.



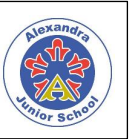


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## Notable Designers

### Year 3

Wilhelm Conrad Roentgen	Developed X ray machine (nutrition, skeletons, etc)
Nazca Culture	Rocks – Nazca lines
Galileo Galilei	Plants – (1609 – inventor of the microscope.)
Han Dynasty (China) between the 2nd century BC and 1st century AD	Forces and Magnets (inventors of the magnetic compass)
Sir Isaac Newton Hippolyte Marié-Davy	Light (Split light using a prism, 1672) Light (inventor of the periscope)
Imhotep	Architect of the great Egyptian pyramid

### Year 4

Boyan Slat	Habitats - Slat created a 62-mile underwater, V-shaped barrier to trap plastic trash as it floats along ocean currents
Basil Hirschowitz and Larry Curtiss	Digestion – (inventors the first fiber optic endoscope in 1957)
Kevin Kumala	States of Matter – (designer of biodegradable carrier bag)
John Logie Baird	Electricity (inventor of the TV)
Alexander Graham Bell	Sound (inventor of the telephone)

### *Great builders and architects*

*Isambard Kingdom Brunel (designer of bridges and steamships)*

*Gustave Eiffel (Builder of the Eiffel Tower)*

*Augustus Pugin (architect of Big Ben)*

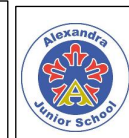


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<b>Year 5</b>		
Zang Heng	Extreme Earth (Inventor of the seismograph)	
The Mayans Great potters of Stoke on Trent	Materials (development of chocolate) John Turner (experimented and discovered different types of clay (including peacock marl) around Stoke on Trent)	
Robert H. Goddard	Space (inventor of liquid fueled rocket)	
Cornelis Drebbel	Forces (inventor of the submarine)	
1851, Reverend Lorenzo Lorraine Langstroth	Habitats (designer of the bee hive)	
	Lifecycles	
<b>Year 6</b>		
Greeks	Archimedes Screw -3rd century BC	
Vikings	Viking - (ship building)	
Reginald Mitchell	Word War 2 (- designer of the spitfire)	
Obstetrician Ian Donald	Circulatory System (inventor of the ultrasound, 1956)	
Hippolyte Marié-Davy	Light (inventor of the periscope)	
Sir Isaac Newton	Light (Split light using a prism, 1672)	
Nikola Tesla	Electricity ( breakthroughs in the production, transmission and application of electric power.)	

