

Camps Hill Primary School – DT Curriculum Progression 2026-27

Kapow	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	Structures: Junk modelling	Structures: Stable structures	Mechanisms: Levers	Structures: Product packaging	Cooking and nutrition: Adapting a recipe	Electrical systems: Wobble bots	Textiles: Bags
Spring	Textiles: Bookmarks	Textiles: Simple stitches	Cooking and nutrition: Balanced diet	Digital world: Wearable technology	Mechanical systems: Mechanical cars	Mechanical systems: Gears and pulleys	Cooking and nutrition: Come dine with me
Summer	Structures Boats	Mechanisms: Wheels and axles	Structures: A chair for a bear	Cooking and nutrition: Eating seasonally	Electrical systems: Exploring electrical products -Torches	Structures: Bridges	Digital world: Navigating the world

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	EYFS Foundation areas: Fine Motor Skills: Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases; Use a range of small tools, including scissors, paint brushes and cutlery; Begin to show accuracy and care when drawing. Creating with Materials ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; Share their creations, explaining the process they have used; Make use of props and materials when role playing characters in narratives and stories.	National Curriculum: When designing and making, pupils should be taught to: Design: ♣ 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 Make: ♣ 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: ♣ explore and evaluate a range of existing products ♣ evaluate their ideas and products against design criteria Technical knowledge: ♣ build structures, exploring how they can be made stronger, stiffer and more stable ♣ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. Cooking and nutrition: ♣ use the basic principles of a healthy and varied diet to prepare dishes ♣ understand where food comes from.	National Curriculum: When designing and making, pupils should be taught to: 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 ♣ 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 and linkages] ♣ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ♣ apply their understanding of computing to program, monitor and control their products Cooking 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.				

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Structures

	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Making verbal plans and material choices. Developing a junk model. Designing a junk model boat Using knowledge from exploration to inform design	Thinking about what others might want from a design. Beginning to recognise how products and designs in the world around us solve certain needs. Considering who they are designing for – identifying the user. Stating what they intend to make and why – identifying the purpose. Talking about ideas, with purpose and user in mind. Talking about existing products when generating ideas. Using basic drawing skills to communicate ideas.	Using a simple design brief that outlines the intended use, target user, and key features of the product, to create simple design criteria. Creating ideas with design criteria in mind. Referring to specific parts of existing products when generating ideas.	Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. Beginning to use 2D CAD software to communicate their ideas.		Designing a stable structure that is able to support weight. Creating a frame structure with a focus on triangulation	
Make	Improving fine motor/scissor skills with a variety of materials Joining materials in a variety of ways (temporary and permanent). Joining different materials together. Describing their junk model, and how they intend to put it together Making a boat that floats and is waterproof, considering material choices	Choosing between a small number of materials, ingredients or components. Explaining their choices based on personal experiences. Requesting equipment appropriate to the purpose. (e.g. scissors for cutting, glue for joining) Beginning to use objects with a fixed width or length to create even spacing of markings or cuts (e.g. a lolly stick). Refining their grip to cut competently and confidently. Cutting straight lines and evenly spaced lines. Beginning to cut large shapes and thicker materials like card.	Choosing materials, ingredients or components from a wider range of materials, ingredients or components. Explaining their choices based on the properties of materials and components. Looking for ways to make cutting easier, like turning the material they are cutting, not fully closing scissors etc. Choosing known geometric shapes when making. Beginning to shape objects to improve how they work.	Creating accurate shapes from templates. Cutting out more complex shapes accurately. Choosing shapes to suit the function of a product.		Making a range of different shaped beam bridges. Using triangles to create truss bridges that span a given distance and support a load. Building a wooden bridge structure. Independently measuring and marking wood accurately. Selecting appropriate tools and equipment for particular tasks. Using the correct techniques to saws safely. Identifying where a structure needs reinforcement and using card corners for support. Explaining why selecting appropriating materials is an important part of the design process. Understanding basic wood functional properties.	
Evaluate	Giving a verbal evaluation of their own and others' junk models with adult support. Checking to see if their model matches their plan. Considering what they would do differently if they were to do it again. Describing their favourite and least favourite part of their model.	Discussing existing products, saying what they like about them. Comparing two products and discuss which is better for a specific purpose. Saying what they like about their peers' designs and products. Accepting feedback and understanding it is meant to improve their work.	Discussing a range of existing products and saying what they like and dislike about them. Comparing a range of products and explaining why some better meet different design criteria than others. Evaluating their ideas and creations against simple design criteria.	Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements. Investigating and analysing a range of existing products by looking at their functionality and appeal. Reflecting on feedback to decide if and how it could be used to improve future iterations.		Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary. Suggesting points for improvements for own bridges and those designed by others.	

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	Making predictions about, and evaluating different materials to see if they are waterproof. Making predictions about, and evaluating existing boats to see which floats best. Testing their design and reflecting on what could have been done differently. Investigating the how the shapes and structure of a boat affect the way it moves.						
	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical Knowledge	To know there are a range to different materials that can be used to make a model and that they are all slightly different. Making simple suggestions to fix their junk model. To know that 'waterproof' materials are those which do not absorb water.	Recognising that different structures are used for different purposes. Exploring the features of structures. Describing structures as buildings or freestanding structures. Making stable structures from card. Creating supporting structures to aid stability. Using stable objects like cylinders to create structures.	Recognising that different structures are used for different purposes. Exploring the features of structures. Making stable structures from card. Creating supporting structures to aid stability. Using stable objects like cylinders to create structures. Building a strong and stiff structure by folding paper. Folding to strengthen or stiffen. Comparing the stability of different shapes. Identifying the weakest part of a structure.	Beginning to understand how different structures are built. Strengthening structures by ribbing. Constructing a range of 3D shapes		To understand some different ways to reinforce structures. To understand how triangles can be used to reinforce bridges. To know that properties are words that describe the form and function of materials. To understand why material selection is important based on properties. To understand the material (functional and aesthetic) properties of wood	
Additional Knowledge	.To know that some objects float and others sink. To know the different parts of a boat.	To know: -the 'user' is the person who will use the product. -different users may want different things from a design. -who they are designing for makes a difference to what they design. -the purpose is what something is for. -existing products can help when deciding what to design. -drawings are a way to explain ideas. -a plan is deciding what to do first and next. -different equipment does different things.	To know: -a design brief helps to decide what to make. -design criteria are the steps for making a product successful. -design criteria help when thinking of ideas. -different products work in different ways and have parts that make them work. - properties of materials like hard, soft, flexible, waterproof, strong etc. --names of some geometric shapes, triangle, pyramid, square, cube, circle, sphere.	To know: -creating accurate shapes improves how they look and sometimes their function. -good suggestions help give better feedback. -they can choose to use feedback or not. -a shell structure is a hollow shape with a thin outer layer. -3D shapes can form structures. -structures can be strengthened by manipulating materials and shapes.		To understand the difference between arch, beam, truss and suspension bridges. To understand how to carry and use a saw safely	

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		-names of common pieces of equipment. -some products will be better than others. -their ideas or products can be made better. -their ideas can makes someone else's work better. -other people's ideas can help make their work better. -a structure is something that has been made and put together. -stable structures do not topple. -shapes and structures with wide, flat bases or legs are the most stable. -adding weight to the base of a structure can make it more stable.	-existing products can be evaluated against design criteria.- design criteria help to decide if their product is a success. -improve means to make something better. - To know that a structure is something that has been made and put together. -the shape of a structure affects its strength. -materials can be manipulated to improve strength and stiffness. -a 'strong' structure is one which does not break easily. -a 'stiff' structure or material is one which does not bend easily. - know mechanisms usually limit unwanted movement. -a pivot is the part that a lever moves around.				
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Textiles:

	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Discussing what a good design needs. Designing a simple pattern with paper. Designing a bookmark. Choosing from available materials	Talking about ideas, with purpose and user in mind. Using basic drawing skills to communicate ideas					Developing annotated sketches to communicate design ideas. Creating pattern pieces to use in design.
Make	Developing fine motor/cutting skills with scissors. Exploring fine motor/threading and weaving (under, over technique) with a variety of materials. Using a prepared needle and wool to practise threading.	Explaining in simple terms why certain tools must be handled carefully. Following and recalling simple safety instructions. Using a straightedge to draw a straight line. Beginning to use objects with a fixed width or length to create even spacing of markings or cuts. (e.g. a lolly stick). Using a large plastic needle and large-weave embroidery fabric to begin to create a running stitch. Applying masking tape to fix something in place or join to edges					Using a ruler to accurately measure and draw lines and marks. Using nets to create 3D objects.

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Textiles:

	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluate	Reflecting on a finished product and comparing to their design.	Reflecting on a finished product, explaining likes and dislikes.	.		.	.	Reflecting on the functionality and aesthetics of products. Discussing reasons for design choices.
Technical Knowledge	To know that a design is a way of planning our idea before we start. To know that threading is putting one material through an object	Discussing fabric properties. Threading large needles. Rehearsing sewing techniques with large needles and thick thread, like wool. Sewing a running stitch in large-weave embroidery fabric or hessian.					Tying knots at the end of thread to secure it. Selecting textiles and buttons to improve aesthetics and function. Attaching objects like buttons using thread.
Additional Knowledge							To know: -nets can be folded to create 3D shapes. -pattern pieces are like nets/templates. -how designers use pattern pieces when creating textiles products. -products are sometimes made in parts that are sewn together. -safety pins can hold fabric in place before sewing. -there are different types of stitches. -what a running stitch is. -aesthetics is how something looks. -consistently sized stitches improve the aesthetic of a product. --the shape of an object can affect both its aesthetics and function.

Mechanisms/ Mechanical systems:

	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design		Thinking about what others might want from a design. Beginning to recognise how products and designs in the world around us solve certain needs. Considering who they are designing for - by identifying the user. Stating what they intend to make and why - by identifying the purpose. Talking about ideas with purpose and user in mind.	Creating ideas with design criteria in mind. Referring to specific parts of existing products when generating ideas. Using labels to explain parts of a design, label materials etc, including using ICT. Integrating moving parts when creating mock-ups		Developing drawing and sketching skills with a focus on clarity and simplicity. Beginning to recognise the benefit of a range of diagram types or prototypes to communicate ideas. (eg. sketches, cross-sectional diagram, thumbnail sketches and exploded diagrams) Creating prototypes using materials with similar properties to their final design.	Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in design. Using a series of prototypes to refine and improve their designs	

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Design		Talking about existing products when generating ideas. Using basic drawing skills to communicate ideas.			Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. Developing designs by adding detail and justifications about materials, tools, methods		
	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Make		Planning more than one step ahead. Choosing between a small number of materials, ingredients or components. Explaining their choices based on personal experiences. Requesting equipment appropriate to the purpose (e.g. scissors for cutting and glue for joining). Explaining in simple terms why certain tools must be handled carefully. Following and recalling simple safety instructions Finding the middle of an object. Refining their grip to cut competently and confidently. Cutting straight lines and evenly spaced lines. Beginning to cut large shapes and thicker materials like card. Puncturing holes. Recognising the edges of paper and card need to be stuck firmly using a glue stick. Using tools, like scissors, to create shapes. Beginning to cut large shapes and thicker materials like card. Beginning to use controlled painting or colouring techniques to finish a product. Adding texture to create visual interest.	Integrating moving parts when creating mock-ups. Planning more than one step ahead. Choosing materials or components from a wider range of materials or components. Choosing between pieces of equipment that are used for the same purpose (e.g. joining) and explaining why their choice suits the task. Explaining their choices based on the properties of materials and components. Following and recalling simple safety instructions.		Following detailed safety instructions. Using a ruler as a measuring tool with increasing accuracy by creating spaced marks using millimetres and measuring lengths of objects. Handle different sizes and types of scissors with confidence. With close supervision using a hot glue gun to join wooden materials (e.g. lolly sticks). Selecting equipment required for a series of tasks based on the plan. Explain why each piece is suitable for each stage. Selecting materials, components or ingredients from a wider choice but within a limited design space (e.g. seasonal ingredients from May and June in the UK).	Consistently apply safety instructions. Select appropriate scissors to handle delicate cutting tasks and challenging materials. Cutting patterns and drawings accurately. In supervised groups, using hot glue guns safely. Recognising that hot glue is useful for joining materials that need a strong bond that sets quickly. Choosing PVA glue over hot glue for its safety when joining materials in less intensive projects.	
Evaluate		Discussing existing products, saying what they like about them. Comparing two products and discussing which is better for a specific purpose. Discussing how their products could be improved based on personal preferences. Comparing their finished products with their original designs.	Saying what they like about their peers' designs and products. Accepting feedback and understanding it is meant to improve their work. Discussing whether they were able to use the tools and techniques effectively. Comparing a range of products and explaining why some better meet different design criteria than others. Evaluating their ideas and creations against simple design criteria		Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements. Reflecting on feedback to decide if and how it could be used to improve future iterations. Investigating and analysing a range of existing products by looking at their functionality and appeal. Analysing why specific products, designers or inventors are successful.	Reflecting on the usability, aesthetics, innovation and sustainability of products and discussing how design choices impact these aspects. Assessing their designs against a more complex set of design criteria that includes functionality, aesthetics, user experience, sustainability and cost.	

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	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluate					Evaluating their designs by comparing them against design criteria and considering feedback from peers to suggest improvements. Evaluating how effective their chosen materials and tools were in fulfilling the design brief	Considering alternative materials, tools or techniques that could enhance the product. Providing feedback that is helpful, specific, and encouraging. Incorporating feedback from peers or users improve their product further, explaining the changes they made and the impact they had	
Technical Knowledge		Recognising and exploring everyday objects that have mechanisms. Many things that move have parts inside to help them work. Mechanisms usually limit unwanted movement.	An axle allows the wheel to turn without falling off. Recognising and exploring everyday objects that have mechanisms. Exploring everyday objects that use levers (e.g scissors, tongs, door handle, stapler)		To understand that a mechanical system can allow us to move something more easily. To know that mechanical systems have more than one mechanism that moves to make them work. To know that mechanical systems are often hidden in products to make them look more appealing	That mechanical systems that use gears in everyday objects (eg bicycle, clock). That gears and pulleys allow us to transfer movement and force from one part of a mechanical system to another. That gears allow us to increase the output of a mechanism.	
Additional Knowledge		To know: -the 'user' is the person who will use the product. -different users may want different things from a design. -designers usually design and make something to solve a problem. -who they are designing for makes a difference to what they design. -the purpose is what something is for. -existing products can help when deciding what to design. -drawings are a way to explain ideas. -a plan is deciding what to do first and next. -choosing different materials or components will have an effect on what their product does or looks like. -different equipment does different things. -the names of common pieces of equipment. -some tools are sharp like scissors and knives. -following instructions helps with safety. -cutting in a straight line can be helpful when making. -tools can be used to shape objects. -different materials can be shaped by different tools.	To know that different products work in different ways and have parts that make them work. To know drawings can help explain how something works. To know many things that move have parts inside to help make them work. To know some properties of materials, e.g., hard, soft, flexible, waterproof, strong, etc. To know some pieces of equipment are better suited to certain jobs. To know some tools are sharp like scissors and knives. To know following instructions helps with safety. To know many things that move have parts inside to help them work. To know mechanisms usually limit unwanted movement. To know a pivot is the part that a lever moves around.		To know that extra information on drawings or diagrams can help the user understand a design or idea. To know that an exploded diagram shows how the parts of a product fit together. To know that a prototype is a detailed model that helps a user understand how a product will work. To know that a target audience is a group of people that might like the idea. To know that different tools and equipment have different dangers. To know that a ruler can be used to measure length. To know that a hot glue gun can be used to join materials. To know that better suggestions of improvements mean better feedback. To know that they can choose to use feedback or not. To know that some products are more successful than other because of their function.	That original and innovative ideas are different from what has been made before. That annotations are detailed labels and comments on diagrams. That risks are things that might happen. That hot glue creates a strong bond quickly. That is often better to choose safer equipment. That sustainability means thinking about the materials that were used to make a product and how the product was made. That their final product can still be improved by different materials or techniques. That evaluating their designs in detail will help them understand its successful and less successful parts. That feedback should be	

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		-some products will be better than others. -their ideas or products can be made better. -their final product might be different to their original idea. -their ideas can make someone else's work better. -other people's ideas can help make their work better.			To know that choices of materials and equipment can affect the final product. To know that feedback is ideas and suggestions from other people that can help improve their work	positive, helpful and specific. That explaining how they used feedback to improve their design can help them create better products in the future	
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Cooking and nutrition

	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design			Designing three wrap ideas	Describing how climate affects where foods grow.	Designing a biscuit within a given budget. Conducting market research		Writing a recipe, explaining the key steps, method and ingredients. Including facts and drawings from research undertaken
Make			Chopping foods safely to make a wrap. Constructing a wrap that meets a design brief. Grating foods to make a wrap. Snipping smaller foods instead of cutting. Spreading soft foods to make a wrap. Identifying the five food groups. Learning about balanced diet	Identifying seasonal ingredients from the UK. Following the instructions within a recipe. Tasting seasonal ingredients. Peeling foods by hand or with a peeler. Cutting ingredients safely. Choosing ingredients based on a design brief	Following a baking recipe. Understanding safety and hygiene rules. Adapting a recipe		Following a recipe, including using the correct quantities of each ingredient. Adapting a recipe based on research. Working to a given timescale. Working safely and hygienically with independence.
Evaluate			Taste and evaluating different food combinations. Describing the information that should be included on a label Describing appearance, smell and taste.	Describing the texture and flavour of ingredients. Describing the benefits of seasonal fruits and vegetables and the impact on the environment	Evaluating an adapted recipe. Evaluating and comparing a range of products. Suggesting modifications.		Evaluating a recipe, considering: taste, smell, texture and origin of the food group. Taste testing and scoring final products. Suggesting and writing up points of improvements when scoring others' dishes, and when evaluating their own throughout the planning, preparation and cooking process. Evaluating health and safety in production to minimise cross contamination

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	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technical Knowledge			To know that 'diet' means the food and drink that a person or animal usually eats. To know what makes a balanced diet. To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar. To know that I should eat a range of different foods from each food group, and roughly how much of each food group. To know that 'ingredients' means the items in a mixture or recipe. To know how to cut, grate, snip and spread to prepare foods. To know how to review and give a score to evaluate.	To know that seasonal means foods that grow in a given season in a given country. To know some seasonal foods that grow in the UK and what season they grow in. To know that eating seasonal foods can have a positive impact on the environment. To know how to describe the flavour and texture of foods. To know how to cut a peel safely. To know that the appearance of food is as important as taste. To know that similar coloured fruits and vegetables often have similar nutritional benefits.	To know that the amount of an ingredient in a recipe is known as the 'quantity.' To know that safety and hygiene are important when cooking. To know the following cooking techniques: sieving, measuring, stirring, cutting out and shaping. To know the importance of budgeting while planning ingredients for a recipe. To know that products often have a target audience		To know that 'flavour' is how a food or drink tastes. To know that many countries have 'national dishes' which are recipes associated with that country. To know that 'processed food' means food that has been put through multiple changes in a factory. To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides. To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork).

Digital world/Electrical systems

	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design				Problem solving by suggesting which features on a micro:bit might be useful and justifying my ideas. Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge. Developing design ideas through annotated sketches to create a product concept. Developing design criteria to respond to a design brief	Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas	Using a series of prototypes to refine and improve their designs	Writing a design brief from information submitted by a client Developing design criteria to fulfil the client's request Considering and suggesting additional functions for my navigation tool Developing a product idea through annotated sketches. Placing and manoeuvring 3D objects, using CAD Changing the properties of, or combine one or more 3D objects, using CAD
Make				Following a list of design requirements. Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm.	Making a torch with a working electrical circuit and switch. Using appropriate equipment to cut and attach materials. Assembling a torch according to the design and success criteria	Selecting materials, components or ingredients based on research or user needs. Explaining their choices, referring to their research. Understanding and explaining the importance of each safety rule. Consistently apply safety instructions	Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo) Explaining material choices and why they were chosen as part of a product concept Programming an N,E, S,W cardinal compass

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	EYFS (Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluate					Evaluating electrical products. Testing and evaluating the success of a final product	Considering alternative materials, tools or techniques that could enhance the product. Providing feedback that is helpful, specific, and encouraging. Incorporating feedback from peers or users improve their product further, explaining the changes they made and the impact they had	Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool Developing an awareness of sustainable design Identifying key industries that utilise 3D CAD modelling and explain why Describing how the product concept fits the client's request and how it will benefit the customers Explaining the key functions in my program, including any additions Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch Demonstrating a functional program as part of a product concept
Technical Knowledge				To understand that, in programming, a 'loop' is code that repeats something again and again until stopped. To know that a micro:bit is a pocket-sized, codeable computer. To know that a simulator is able to replicate the functions of an existing piece of technology.	To know that an electrical circuit must be complete for electricity to flow. To know that a switch can be used to complete and break an electrical circuit.	Beginning to understand that electricity flows around a circuit. Using different components to produce different results from electrical systems. Creating working electrical circuits with a wider variety of electrical components. Deconstructing electrical systems to understand how they work	To know that accelerometers can detect movement To understand that sensors can be useful in products as they mean the product can function without human input
Additional Knowledge				To understand what is meant by 'point of sale display.' To know that CAD stands for 'Computer-aided design'.	To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens. To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison	Environmental impact is how the product and making the product might affect the environment. Original and innovative ideas are different from what has been made before. Improving on prototypes can help to improve the final design. Research can help decide which materials are best for both aesthetics and functional properties. Some equipment can work well with other equipment. Risks are things that might go wrong. The shape of an object can affect both its aesthetics and function. Sustainability means thinking about the materials that were used to make a product and how the product was made. Evaluating their designs in detail will help them understand its successful and less successful parts. Feedback should be positive, helpful and specific. Explaining how they used feedback to improve their design can help them create better products in the future. An electric motor converts electricity into rotational movement. A motorised product is one which uses a motor to function. The names of components that can form an electrical system	To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request To know that 'multifunctional' means an object or product has more than one function To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing