High View Primary Learning Centre

DT Curriculum

Overview of Topics

	FS1	FS2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1	I am Glad I am me! My house, our street.	Helping hands – den building	Art focus	Art focus	Art focus	Art focus	Art focus	Art focus
Autumn 2	Let's be friends! Junk modelling – selecting and fastening	Fantastic Friends – obstacle courses using real-life items	Textiles: Puppets *Designer link: Jim Henson, creator of the muppets.*	Textiles: Pouches	Textiles: Cushions *Designer link: Laura Ashley, textiles design and manufacture started from her family home*	Art focus	Textiles: Christmas Tree Decorations	Digital world: Navigating the world
Spring 1	Toys How does it work?	Transport: making vehicles *Designer link: Robert Stephenson, creator of the rocket train.*	*Structures* and mechanisms: Making a moving story book	Art focus	Nutrition: Eating seasonally	*Structures* and mechanisms: Pavilions	Art focus	Art focus
Spring 2	Whatever the weather. Bird feeders	Outdoor explorers Making habitats	Art focus	Art focus	Art focus	Electrical systems:	Nutrition: Adapting a North American Dish	Electrical systems: steady hand game
Summer 1	What's at the bottom of the garden? Bug huts	Amazing animals puppets	Art focus	Nutrition: balanced diet wraps	Structures and *mechanisms*: Pneumatic toys	Art focus	Structures and *mechanisms*: Bridges	Art focus
Summer 2	Keeping healthy! (Nutrition: healthy snacks)	Happy and healthy! (Nutrition: happy, healthy pitta pizza)	Nutrition: Smoothies	Structures and *mechanisms*: Fire engines *Designer link: Richard Newsham, inventor of a popular early fire engine.*	Art focus	Nutrition: Adapting a recipe	Art focus	Nutrition: Come dine with me

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
National Curriculum Objectives	-Explore different materials, using all their senses to investigate them. -Manipulate and play with different materials. -Use their imagination as they consider what they can do with different materials. -Make simple models which express their ideas. -Explore different materials freely, in order to develop their ideas about how to use them and what to make. -Develop their own ideas and then decide which materials to use to express them. -Join different materials and explore different textures. -Explore, use and refine a variety of artistic effects to express their ideas and feelings. -Return to and build on their previous learning, refining ideas and developing their ability to represent them. -Create collaboratively sharing ideas, resources and skills. Know and talk about the different factors that support their overall health and wellbeing: - Healthy eating.	**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. **Nutrition** -Use the basic principles of a healthy and varied diet to prepare dishes -Understand where food comes from.		**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. **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.		

Structures and mechanisms

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Vocabulary	Explore, join, materials, models, build, construction, plan, create, cut, stick Move, propel, turn, forward, backward, wheel, mechanic, vehicle, sail	Design, stable structure, assemble, evaluate, design criteria, instructions, test, alter, purpose, 2D and 3D nets, improve, stiff, cylinder, cone, cube, cuboid, aerodynamic, fins, rockets	Sketching, linkages, split pins, pivots, width, length, thickness, assembling, characteristics, levers	Features, pneumatic system, secure, syringes, functional, appealing, manipulate, cutting, creasing, folding, weaving	Aesthetically, frame structure, support, free standing, architects, base	Aesthetic, Computer-aided design (CAD), Caption, Design, Design brief, Design criteria, Exploded-diagram, Function, Input, Linkage, Mechanism, Motion, Output, Pivot, Prototype, Slider, Structure, template	[Substituting this unit for Digital world unit].
Design	Consider what they can do with different materials including boxes, card board, card, bottle tops, lids, paper, string, tubes and pots. Develop their own ideas and then decide which materials to use to express them. Explore moving objects (vehicles, moving toys) and identify parts that move (wheels, levers).	Design a windmill Learning the importance of a clear design criteria that specifies shapes, colours and purpose to guide the design. Including individual preferences and requirements in a design.	Generating and communicating ideas using sketching and modelling including shape. Justifying chosen design with reasons why.	Design a pneumatic toy Drawing and labelling design i: -2D shapes (circle, square, rectangle, triangle, hexagon, pentagon, kite, oval, and rhomboid). -3D shapes (cube, sphere, cuboid, cylinder, pyramid, and cone). -materials (card board, latex balloon, card, glue) -colours Consider and decide materials and colours, indicated on design.	Designing a stable structure that is aesthetically pleasing and selecting materials to create a desired effect.	Design a stable structure that is able to support weight, approx. 500g. Design a frame structure with focus on triangulation.	
Make	Make simple models which express their ideas including vehicles and buildings. Join different materials and explore different textures. [smooth, rough, scratchy, soft, hard, bumpy, fluffy]	Making stable structures from card, tape and glue Following instructions to cut and assemble the supporting structure Making a rocket structure featuring an aerodynamic cone and fins for stability.	Making linkages using card for levers and split pins for pivots Experimenting with linkages adjusting the widths, lengths and thicknesses of card used Cutting and assembling components neatly Selecting materials according to their characteristics; thickness, strength, flexibility. Following a design brief.	Creating a pneumatic system to create a desired motion Building secure housing for a pneumatic system Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy Selecting materials due to their functional and aesthetic characteristics Manipulating Boxes, card, straws, pipe cleaners, cotton wool, buttons, bottles, socks, plastic bags and stuffing to create different effects by cutting, creasing, folding, weaving	Creating triangular and quadrilateral shaped, free standing frame structures. Use shapes to create 2D nets, showing awareness of the natural length of materials to determine size of finished pavilion. Selecting appropriate materials to build a strong structure. Reinforcing corners to strengthen a structure with beams and cross pieces. Creating a design in accordance with a plan Learning to create different textural effects with materials by cladding with paper, card and wood.	Make a range of different shaped beam bridges out of wood. Use triangles to create truss bridges that span 30cm and supports a load of 500g. Independently measure and mark wood accurately. Select appropriate tools and equipment for each task. (Pencil, ruler, saw, bench clamp, glue) Use the correct techniques to saw safely. Identify where a structure needs reinforcement and use card corners for support.	

	Evaluate	Return to and build on their previous learning, refining ideas and developing their ability to represent them. Use words including plan, create, change, add	Evaluating according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't. Use words including change, improve, solve	Evaluating own designs against design criteria Using peer feedback to modify a final design Evaluating different designs Testing the movements of the mechanism and fixing the mechanism if it doesn't work.	Using the views of others to improve designs Testing the outcome against criteria and suggesting modifications of equipment and method to improve and refine the mechanism.	Evaluating structures made by the class against the design criteria. Considering effective and ineffective designs and describe what characteristics of the design and construction made it the most effective. Identifying weak structures, - Lack of support and bracing and strong structures through stability and ability to support own weight and additional decorative features. Selecting characteristics found in peer's models to improve and enhance own structure.	Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary. Suggest points for improvements for own bridges and those designed by others. Improve a design plan based on peer evaluation. Test and adapt a design to improve it as it is developed. Identify what makes a successful structure. Explain why selecting appropriating materials is an important part of the design process.	
	Technical knowledge	Identify a building or vehicle structure , naming the finished result and components used. Learning how to use 3D shapes to build effective structures including cube, cuboid, cone, cylinder, pyramid). Understanding that structures need a solid base. Identify moving parts of an object.	Describing the purpose of structures including rockets. Learning how to turn 2D nets into 3D structures of a Rectangular prism, cylinder, and cone. Learning that the shape of materials can be changed to improve the strength and stiffness of structures including rolling, folding, scrunching. Understanding that cones provide an aerodynamic structure Understanding that fins add stability to a rocket structure Developing awareness of different structures for different purposes; buildings, vehicles, bridges,	Learning that mechanisms are a collection of moving parts that work together in a machine Learning that there is an input and output in a mechanism Identifying mechanisms in everyday objects including wheels and axles, levers, pivots. Learning that a lever is something that turns on a pivot Learning that a linkage is a system of levers that are connected by pivots Exploring wheel mechanisms Learning how axels help wheels to move a vehicle	Understanding how pneumatic systems work Learning that mechanisms are a system of parts that work together to create motion Understanding that pneumatic systems can be used as part of a mechanism Learning that pneumatic systems force air over a distance to create movement	Learning about the purpose of the pavilion structure. Pavilions – to provide shelter and a platform, open air structure, can be temporary/free standing Building on prior knowledge of net structures and broadening knowledge of frame structures triangular prism, rectangular prism, cylinder, cone, pyramid (square and triangular based) Learning that architects consider light, shadow and patterns when designing Implementing frame and shell structure knowledge.	To understand the material (functional and aesthetic) properties of wood. To understand the difference between arch, beam, truss and suspension bridges. To understand how to carry and use a saw safely. To understand that 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 their properties, to provide appropriate strength and form.	

Nutrition

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Vocabulary	Fruit, vegetable, grow, bake, cook, mix, melt, whisk, Healthy	Carton, smoothie, chopping, , fruit, vegetable, Blender Carton Fruit Healthy Ingredients Peel Peeler Recipe Slice Smoothie Stencil Template Vegetable	Alternative, Diet, Balanced diet, Evaluation. Expensive., Ingredients, Nutrients , Packaging Refrigerator, Sugar, Substitute	Nutritious, Climate Dry climate Exported Imported Mediterranean climate Nationality Nutrients Polar climate Recipe Seasonal food Seasons Temperate climate Tropical climate	Budget, hygiene, , adapting Adapt Budget Cooling rack Creaming Equipment Flavour Method Net Prototype Quantity Rubbing Sieving Target audience Unit of measurement Utilities recipe Ingredients Evaluation Packaging Recipe	Preparing, appealing, substitute, nutritional, method, Beef , Cross-contamination Ethical issues Farm Healthy Ingredients , Method, Packaging , Reared , Research , Substitute , Supermarket , Vegan , Vegetarian , Welfare Diet Recipe , Nutrients	research Accompaniment , Collaboration, Cookbook, , Flavour , Illustration , Imperative-verb, Preparation , Processed, Research , Storyboard , Target audience , Top tips Unit of measurement Method, Farm, Nationality , Cross-contamination , Equipment, Ingredients Reared, Recipe
Design	Select from a range of appropriate healthy options to add to an existing recipe. [savoury – peppers, mushrooms, tomatoes, onion, sweet corn, olives] [sweet – banana, strawberry, pineapple, orange, lemon]	Designing a carton package by-hand or on ICT software. Choose 3 or more fruits and vegetables to combine in a smoothie. Pepper*, Avocado*, Cucumber*, Orange (with seeds), Apple, Kiwi, Strawberry, Banana, Pineapple, Mango, Blueberries, Carrot, Spinach, Celery,	Designing a healthy wrap based on a food combination which work well together from the following ingredients; cheddar, feta, cream cheese, sour cream, chicken, ham, tofu, crab sticks?, iceberg, spinach, rocket, tomato, cucumber, pepper, radish, beetroot, Encourage a balance of taste, textures and nutrition - chicken (protein, textured), avocado (healthy fat, smooth and creamy) and rocket leaves (strong peppery flavour, good source of vitamins, high energy density)	Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish Identify seasonal fruits and vegetables that can be sourced at that time of year.	Designing a biscuit within a given budget, drawing upon previous taste testing	Adapting a traditional recipe (spaghetti Bolognese), understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients Writing an amended method for a recipe to incorporate the relevant changes to ingredients Designing appealing packaging to reflect a recipe	Writing a recipe, explaining the key steps, method and ingredients Including facts and drawings from research undertaken
Make	Adding healthy toppings to a pancake/'pitta' pizza to add flavour. Follow basic hygiene rules of hand washing and surface cleaning before preparing food.	Chopping fruit and vegetables safely to make a smoothie Identifying if a food is a fruit or a vegetable. Pepper*, Avocado*, Cucumber*, Butternut squash*, Tomato*, Grapes (with seeds), Orange (with seeds), Apple, Kiwi, Strawberry, Banana, Pineapple, Mango, Blueberries, Potato, Carrot, Green beans, Lettuce, Onion, Spinach, Celery, Parsnip Learning where and how fruits and vegetables grow. (carrots, celery, lettuce, apples, tomatoes)	Slicing food safely using the bridge or claw grip, and knowing how to apply this skill with any food suitable for slicing. Constructing a wrap that meets a design brief	Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination. Following the instructions within a printed recipe.	Following a baking recipe Cooking safely, following basic hygiene rules Adapting a basic biscuit recipe by adding additional ingredients.	Cutting and preparing vegetables safely Using equipment safely, including knives, hot pans and hobs. Knowing how to avoid cross-contamination Following a step by step method carefully to make a recipe	Following a recipe, including using the correct quantities of each ingredient (See Kapow; pepper starter, salmon main, pineapple dessert) Adapting a recipe based on research Working to a given timescale as specified within recipe design. Working safely and hygienically with independence
Evaluate	Taste and decide if they enjoy their choice of ingredient. To say what they could do differently next time?	Taste combinations of fruits and vegetables to evaluate the overall taste. Describe appearance, smell and taste of fruit and vegetables.	Describe the taste, texture and smell of fruit and vegetables that they have used. Taste test food combinations and final products	Establishing and using design criteria to help test and review seasonal tarts. Describing the benefits of seasonal fruits and vegetables	Evaluate a recipe, considering: taste, smell, texture and appearance using own modified recipe.	Identifying the nutritional differences between different products and recipes Identifying and describing health benefits of all food groups	Evaluating a recipe, considering: taste, smell, texture and origin of the food group Taste testing and scoring final products

			Use smell and taste to suggest information to be included on packaging.	Describe the information that should be included on a label Describe and evaluate which grip was most effective	and the impact on the environment Describe the benefits of seasonal fruit and vegetables - Environmentally friendly, fresh and most nutrient rich. Describe the impact on the environment. Seasonal produce doesn't need to travel so uses less emissions and retains nutrients and quality. Suggest points for improvement when making a seasonal tart.	Describe the impact of the budget on the selection of ingredients. Evaluate and compare colourings, flavourings and additional ingredients that can be added to a basic biscuit recipe. Suggesting modifications to the finished product.	(carbohydrates, fats, fruits and vegetables, dairy, protein).	Suggesting and writing up points of improvements in productions. Evaluating health and safety in production to minimise cross contamination.
	Technical knowledge	To know that we need a range of different foods to be healthy. To know that vegetables and fruits help to keep our bodies healthy. To know the fruit and vegetables grow.	Understanding the difference between fruits and vegetables Fruits Pepper* Avocado* cucumber* Butternut squash* Tomato* Grapes (with seeds) Orange (with seeds) Apple Kiwi Strawberry Banana Pineapple Mango Blueberries Vegetables Potato, Carrot, Green beans Lettuce, Onion, Spinach, Celery Parsnip Describe and group fruits by texture and taste Fruits as above	Understanding what makes a balanced diet Knowing where to find the nutritional information on packaging Knowing the five food groups; Fats, proteins, dairy, carbohydrates and fruit/vegetables	Explain that climate affects food growth Bananas – tropical Strawberries – temperate Lychee – tropical Work with cooking equipment safely and hygienically Discuss how imported foods travel from far away and this can negatively impact the environment. Explain that vegetables and fruit grow in certain seasons Learning that each fruit and vegetable gives us nutritional benefits Demonstrate how to use, store and clean a knife safely	Understanding the impact of the cost and importance of budgeting while planning ingredients for biscuits Explain the impact of cost and of budgeting while planning ingredients. For biscuits Understanding Explain the environmental impact on future product and cost of production Explain the environmental impact on future product and cost of production - The environmental cost of importing out of season, if additional ingredients are not locally sourced.	Understanding where food comes from - learning that beef is from cattle and how beef is reared and processed Understanding what constitutes a balanced diet Learning to adapt a recipe to make it healthier Comparing two adapted North American recipes using a nutritional calculator and then identifying the healthier option	Learning how to research a recipe by ingredient Recording the relevant ingredients and equipment needed for a recipe Understanding the combinations of food that will complement one another Understanding where food comes from, describing the process of 'Farm to Fork' for a given ingredient

Textiles		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Vocabulary	Material, fabric, cut, stick, colour,	Decorate, Design, Fabric, Glue, Model, Hand puppet Safety pin, Staple, Stencil, Template	Accurate Knot Pouch Running-stitch Sew Shape Thimble needle , thread Stencil Fabric Template	Applique Cross-stitch Cushion Detail Patch Running-stitch Seam Stuffing Target audience Target customer Accurate, Template, Decorate, Fabric, Stencil	[Electrical systems unit to be covered in year 4].	Blanket stitch, applique	[Electrical systems unit to be covered in year 6].
	Design	To represent their ideas for using textiles through drawing and mark making.	Using a given puppet template design the features of their puppet including: -hair -facial features -clothing	Design a square pocket, including: -a dashed line to represent joining method. -decoration details. -simple labels to indicate materials (thread, felt, sequins).	Decide a simple design criterion stating cushion shape, applique design. Create 2-3 sample sketches following set criteria. Create a final design sketch, showing following details: -running stitch for edge of cushion (dashed line) -applique shape with running stitch to join (dashed line) -cross stitch pattern (x's)		Generate sample sketches from a basic design brief (to create a small, Christmas themed hanging decoration). Decide design criterion stating overall shape, decorations to be added (applique, buttons, sequins, ribbons), blanket stitch for seam, running /cross stitch for décor and stuffing to give shape. Create a final design with detailed labelling including shapes, materials, joining methods, decoration. Consider the proportions of individual components.	
	Make	Explore different materials (recycled ribbons, nets, felt, vivelle, recycled clothes) freely, to develop their ideas about how to use them and what to make	Use fabric scissors to cut fabric. Explain 3 methods to join two materials (Glue, staple, safety pin). Follow the steps in the given order	Demonstrate neat cutting when using a given template. Decorating a pouch using fabric glue or running stitch	Create a template for the cushion fabric. Demonstrate control and skill when using fabric scissors on a chosen fabric. Demonstrate joining fabrics using cross stitch. Decorate fabric using appliqué. Complete a cushion by stuffing and stitching the edge.		Create a 3D stuffed toy from a 2D design. Measure, mark and cut paper templates Measure, mark and cut fabric accurately and independently using fabric scissors and templates. Create strong and secure blanket stitches when joining fabric. Use applique to attach pieces of fabric decoration.	

	Evaluate	Articulate what they	Reflect on a finished product, explaining likes and dislikes.	Suggest solutions to problems given. -Hole in bottom of pouch -Can't fit anything in -Stitches coming undone Evaluate the quality of the stitching on others' work. Explain how to make effective stitches (uniform size and small spacing) Identifying aspects of their peers' work that they particularly like and why	Evaluating an end product and thinking of other ways in which to create similar cushions.		Testing and evaluating an end product and giving point for further improvements	
	Technical knowledge		Learning different ways in which to join fabrics together: pinning, stapling, gluing Join fabrics in different ways. pinning, stapling, gluing	Joining items using fabric glue or stitching Identifying benefits of these techniques Thread a needle with some support from an adult Sewing running stitch, with evenly spaced, neat, even stitches to join fabric Pin and cut fabric using a template	Thread a needle with greater independence. Tie overhand and figure of eight knots with greater independence. Demonstrate decorative sewing using applique and cross stitch Explain why it is important to count thread on a piece of even weave fabric to create uniform size. Understanding that fabrics can be layered for affect		Learning to sew blanket stitch to join fabric Applying blanket stitch so the space between the stitches are even and regular Threading needles independently	

Electrical systems

	Year 3	Year 4	Year 5	Year 6
Vocabulary	[Textiles unit to be covered in year 3].	Battery, Bulb, Buzzer, Cell, Conductor, Copper, Electrical item, Electricity, Electronic item, Function, Insulator, Series circuit, Switch, Torch, Wire, Design criteria Component, Test	[Textiles unit to be covered in year 5].	Assemble, Battery pack, Benefit, Bulb holder, Circuit symbol, Component, Design, Evaluation, Fine motor skills, fit for purpose, Form, Function, Gross motor skills Insulator, Use Battery, bulb, Circuit, Design criteria LED, Buzzer, Conductor, Copper
Design		Designing a torch, considering the target audience and creating both design and success criteria focusing on features of individual design ideas		Design a steady hand game. Identify and name the required components. Draw a design from three different perspectives. Front, back and above Generate ideas through sketching and discussion. With target audience/peers Model ideas through prototypes made from wire and card.
Make		Making a working electrical circuit and switch Using appropriate equipment to cut and attach materials (Pliers, wire-cutters) Assembling a torch according to the design and success criteria		Make an electromagnetic motor. Tweak the motor to improve its function. Construct a stable base for an electromagnetic game using wood Decorate the base of the game to a high-quality finish using paint Make and test a circuit. Incorporate a circuit into a base
Evaluate		Evaluating their own electrical products. Testing and evaluating the success of a final product and taking inspiration from the work of peers		Testing own and others finished games, identifying what went well and making suggestions for improvement Test own and others games. Identify what went well and make suggestions for improvements.

Digital World

	Year 6
Vocabulary	Smart, Equipment, Compass, Pedometer, GPS tracker, Tablet, Smartphone, Navigation, Application (apps), Design brief, Design criteria, Client, sustainable, recyclable,
Design	Write design criteria that fulfils the adventure company client's needs for a multi-functional tool. Consider and suggest additional functions to their navigation tool. Develop product ideas through annotated sketches. To place and manoeuvre 3D objects in a CAD software. Change the properties of, or combine one or more 3D objects, using CAD software.
Make	Choose materials based on their functional properties. (sustainable, recyclable, waterproof, strong, durable). To explain material choices and why they were chosen as part of a product concept. To program an N, E, S, W cardinal compass.
Evaluate	Explain how a program fits the design criteria and how it would be useful as part of a navigation tool Develop an awareness of sustainable design Identify 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

	Technical knowledge		Learning the basis of how all electrical items work. Explain how to identify an electrical product. Learning what electrical conductors and insulators are Understanding that a battery contains stored electricity and can be used to power products Identifying the features of a torch Understanding how a torch works Articulating the positives and negatives of different torches by comparing brightness and colour of bulb.		Understand how an electromagnetic motor works. Explain what batteries contain. Explain when the acid can be dangerous. Discuss what can be made when electricity enters a magnetic field. (it can make a motor)

		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 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 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