

Key Stage 1

Structures – Constructing a Windmill		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Identifying and articulating some features and a design that would appeal to the character within a given story</p> <p>Making stable structures from card, tape and glue which will eventually support the turbine</p> <p>Articulating historical and contemporary uses of windmills and cutting and assembling components with accuracy</p> <p>Making functioning turbines and axles which are assembled into the main supporting structure. Identifying what is good about the structure and what could be done better</p>	<p>Identifying a greater range of features that would appeal to the character within a given story, which may go beyond basic aesthetic considerations, such as colour, and focus on functional aspects, such as doors and windows. Extending the structure to include a roof</p> <p>Cutting and sticking with accuracy to create a strong and stable structure. Successfully securing a separate structure for the roof of the windmill</p> <p>Explaining the function of windmills in different times and situations. Creating more sophisticated products through greater attention to accuracy and precision during the making process</p> <p>Creating more sophisticated products through greater attention to accuracy and precision during the making process. Evaluating the outcome by referencing the 'Success and Design Criteria'</p>

Textiles - Puppets

<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Joining fabrics together using staples, pins or glue.</p> <p>Designing a puppet and using a template.</p> <p>Joining the two puppets' faces together as one, aligning the two pieces of fabric.</p> <p>Decorating a puppet to match a design using joining methods</p>	<p>Joining fabrics together using staples, pins or glue as well as deciding which joining method is most suitable for the desired outcome.</p> <p>Designing a puppet that reflects a chosen character and using a template, cutting with a consistent level of accuracy.</p> <p>Accurately and neatly joining the two puppets' faces together as one, with even spacing.</p> <p>Adapting a design to decorate a puppet so that it represents a chosen character which features a range and/or quality of joining techniques used to decorate the puppet.</p>

Cooking and Nutrition - Smoothies

<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Naming fruits and vegetables; identifying seeds; classifying a food as a fruit or non-fruit.</p> <p>Naming places where vegetables grow (aboveground and underground); naming places where fruits grow (aboveground, on bushes, trees, vines); using prior knowledge to decide whether produce will grow aboveground or underground.</p> <p>Using a table knife safely to chop foods into equal pieces; using a fork to secure foods when cutting; extracting juice from a fruit with a manual juicer; identifying equipment used for each skill.</p> <p>Following instructions to choose two fruits and a juice they like to create a smoothie; describing the taste, smell and look of different fruits.</p> <p>Following a recipe to create a smoothie; identifying which ingredients to chop and which to juice; using their senses to describe and compare smoothies.</p> <p>Creating a carton design for a smoothie; deciding on the recipe they liked best after</p>	<p>Drawing on their own understanding to determine whether a food is a fruit or not.</p> <p>Making suggestions of useful plant choices for different meals.</p> <p>Cutting foods into simple fractions.</p> <p>Choosing combinations of fruits that they like based on the taste and which ones taste good together; comparing fruits; describing why given fruits are the same or different.</p> <p>Considering their ingredient choices in the context of other people and their healthiness; using prior knowledge to make links with foods they have tried before and their own product.</p> <p>Explaining their choices; suggesting other combinations of ingredients that might work well.</p>

DT End Points of Learning - Assessment (for Insight)

	a discussion; discussing whether their smoothie fulfilled a design brief.	
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Structures: Baby Bear's Chair		
Working Towards Age-Related Expectations	Working at Expected Age-Related Expectations	Greater Depth Exceeding Age-Related Expectations
	<p>Identifying man-made/natural structures. Contributing to discussions. Identifying stable and unstable structural shapes. Identifying features that make a chair stable</p> <p>Explaining the definition of strength. Identifying the strongest and weakest shaped and part of a structure. Making and testing a structure</p> <p>Working independently to use the materials as demonstrated to begin to make a stable structure. Explaining how their ideas would be suitable for the given brief</p> <p>Producing a model that satisfies the given brief, using the appropriate materials and construction techniques and explaining how they made it strong, stiff and stable</p>	<p>Ability to explore a wider range of structural shapes and interpret the results of the tip-test. Accurately identifying the information above, making more detailed observations/records and drawing accurate conclusions independently</p> <p>Accurately distinguishing between strength and stability. Making accurate, functional structures and testing them independently. Articulating why cylindrical structures are stronger than those with corners</p> <p>Working independently to produce a more demanding design and working with a wider range of materials and construction methods. Using more complicated joining techniques and producing neat results. Articulating why their designs will be suitable for the given brief and identifying how it could be made even better</p> <p>Producing a model that satisfies the given brief, made using a range of materials and construction techniques to produce a more demanding design. Explaining how they made it strong, stiff and stable and how to improve it</p>

Mechanisms – Fairground Wheel		
Working Towards Age-Related Expectations	Working at Expected Age-Related Expectations	Greater Depth Exceeding Age-Related Expectations
	<p>Designing and labelling a wheel, considering the designs of others and making comments about their practicality or appeal</p> <p>Considering the materials, shape, construction and mechanisms of the wheel and labelling the designs</p> <p>Building a stable structure with a rotating wheel and testing and adapting the design as necessary</p> <p>Following a design plan to make a completed model of the wheel</p>	<p>Explaining the function of each part of a Ferris wheel when creating a design and incorporating the most practical aspects of other designs, as well as suggesting improvements</p> <p>Selecting appropriate materials for each component in the wheel design, justifying their choices. Providing detail about the way the design will be assembled and the relative size of the component parts</p> <p>Making predictions based on evidence and ensuring sure that the structure rotates smoothly, without resistance</p>

DT End Points of Learning - Assessment (for Insight)

		Producing a high quality working model of the wheel adapting, with rotating pods and decoration and explaining any changes made
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Mechanisms – Moving Monsters		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Using key terms accurately. Identifying the correct terms for levers, linkages and pivots. Analysing popular toys with the correct terminology</p> <p>Creating functional linkages that produce the desired input and output motions</p> <p>Designing monsters suitable for children, which satisfy most of the design criteria. Selecting the suitable linkage system to produce the desired motions. Evaluating two designs against the design criteria, and deciding selecting a favourite based on this and the feedback of their peers</p> <p>Selecting and assembling materials to create planned monster features. Assembling the monster to the linkages without affecting the function of them. Evaluating the final product against the design criteria</p>	<p>Applying technical knowledge to more sophisticated mechanisms. Using a wider range of observations when analysing products. Identifying a more sophisticated design criteria</p> <p>Creating imaginative and functional linkages that produce the desired input and output motions. Deviating from original designs with intent, working out how to produce more complex designs. Producing work of a high quality (neatly cut and assembled components)</p> <p>Producing more sophisticated and suitable monster designs using complex linkage systems of their own creation (rather than selected from a stock of suggested systems). Explaining in greater depth why they have selected their chosen design</p> <p>Selecting, assembling and using materials creatively to make planned monster features with sophistication and greater complexity. Assembling the finished monster to linkages without impeding the function. Evaluating the final product against the Design Criteria and determining ways to improve the design to be more effective</p>

Key Stage 2 – Y3/4

Cooking and Nutrition – Eating Seasonally		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Identifying fruits and vegetables that cannot be grown in the UK; demonstrating an understanding that different climates enable different fruits and vegetables to grow.</p> <p>Acknowledging that imported food travels from far away and has an environmental impact; understanding that vegetables and fruits grow in certain seasons, leading to the UK importing food when it is not in season; using knowledge of seasonal foods to find recipes that fit design criteria.</p> <p>Identifying equipment used for preparing food by matching specific food items with the appropriate piece of equipment; justifying the use of a specific piece of equipment with a type of food; recalling safety rules for the preparation equipment used in the lesson.</p> <p>Identifying what foods are currently in season; tasting various fruits and vegetables to describe their flavours and contribute to the class taste wheel; expressing preferences for the ingredients tasted and explaining which ones would work well together in a tart.</p> <p>Designing a puff pastry tart using seasonal vegetables and fruits; understanding that each vegetable and fruit provides nutritional benefits.</p> <p>Tasting tarts and providing feedback, considering taste, texture, appearance, and use of seasonal ingredients; receiving and reflecting upon feedback from classmates and identifying strengths in their own tart.</p>	<p>Comparing the climates of different regions and their influence on the variety of fruits and vegetables that can be grown; providing examples of specific fruits or vegetables and explaining why their growth is limited to certain climatic conditions.</p> <p>Describing in detail the environmental impact of food importation and providing examples; explaining the seasonal nature of certain fruits and vegetables; providing examples of when the UK would need to import specific items and from which countries.</p> <p>Comparing different pieces of equipment and their uses in food preparation; matching a variety of food items with multiple appropriate pieces of equipment; providing detailed justifications for their equipment choices based on efficiency, safety and the nature of the food being prepared.</p> <p>Describing nuanced flavours of a variety of fruits and vegetables; contributing words to the class taste wheel; articulating pairings of ingredients for a tart while justifying their choices.</p> <p>Designing a puff pastry tart using an array of seasonal vegetables and fruits based on specific criteria such as taste, appearance and nutritional value; using complementary flavours as well as colours to construct their tart.</p> <p>Providing suggestions about how flavours could be balanced so that a tart will taste better; looking at the feedback provided by their peers and suggesting suitable ingredients to improve their tart.</p>

Digital World – Wearable Technology		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Explaining who might use a product; recognising the function of a product.</p> <p>Developing specific criteria so that a product fits the needs of those who will most likely use it.</p> <p>Writing a program that initiates a flashing LED panel when a button is pressed; checking code against an example that is correct to check for errors and debug.</p> <p>Creating a drawing of a product that represents an idea of how the final product could look; explaining to a user what each feature on the product does using annotations.</p> <p>Describing what is meant by 'point of sale display' and giving an example; following simple design requirements; using computer-aided design software to create a POS badge; evaluating their design.</p> <p>Providing opinions about the quality of the overall design and specific choices that others have made; making decisions about changes they could make to their design based on the feedback of others.</p>	<p>Recognising what makes a product useful; making links between older and newer products; suggesting reasons for product changes.</p> <p>Suggesting how each part of the design criteria can be accomplished without guidance.</p> <p>Writing the program with minimal guidance; suggesting the next steps in a code independently; debugging or fixing errors in programming independently.</p> <p>Creating a product concept drawing, but with care taken to explain the choices for design features; considering material choices and how the properties of those materials improve the 'usability' of the product.</p> <p>Describing and explaining what a point of sale display can include, with examples (including from their own experience); following the design requirements, including their own additions with justification and any extension work; evaluating their design, including positive points to improve it with an explanation.</p> <p>Explaining the opinions they provide about the overall design quality; providing helpful feedback to others to assist them in making design changes; being critical of their design by suggesting meaningful changes based on the feedback of the focus group.</p>

Structures – Constructing a Castle		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Drawing a simple castle that includes the most common features and labelling the drawing</p> <p>Designing a castle with key features which appeals to a given person/purpose</p> <p>Constructing a range of 3D geometric shapes using a net by: Cutting along the bold lines Folding along the dotted lines Keeping the tabs the correct size Making crisp folded edges Gluing securely to assemble the geometric shape</p> <p>Building a complex structure from simple geometric shapes. Evaluating own work by answering simple questions</p>	<p>Drawing a more comprehensive castle with all of the features of the castle included. Labeling the drawing with key words and definitions of each feature</p> <p>Identifying specific details of the design, eg: materials, colours. Designing a castle in detail, incorporating basic features as well as other useful features specific to the person or purpose they're designing for</p> <p>Working creatively and accurately to make the unique features found in their initial design through more complex structures. Constructing nets with accuracy and designing their own nets</p> <p>Building a complex structure from simple geometric shapes with accuracy and creativity, justifying design decisions and identifying ways to improve own work. Evaluating own work and the work of others in relation to the original design</p>

Structures – Pavilions		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Producing a range of free standing frame structures of different shapes and sizes</p> <p>Designing a pavilion that is strong, stable and aesthetically pleasing, including a range of materials to create a desired effect</p> <p>Selecting appropriate materials and construction techniques to create a stable, free-standing frame structure for the pavilion which clearly reflects the design</p> <p>Selecting appropriate materials and techniques to add cladding to their pavilion which clearly reflects the chosen theme and the design criteria</p>	<p>Experimenting with more abstract shapes, potentially exploring creating overhangs and combinations of different geometric shapes</p> <p>Designing an aesthetically pleasing pavilion which uses a stable structure based on their explored techniques and an accurate plan drawn on their base</p> <p>Experimenting with a wide range of materials and more sophisticated construction techniques to create an imaginative, well-made frame structure which has strong links to the theme</p> <p>Experimenting with a wide range of materials and more sophisticated techniques to create and attach cladding which has strong links to the theme as well as creating the surrounding landscape</p>

DT End Points of Learning - Assessment (for Insight)

Mechanical Systems – Making a slingshot car		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Working independently to produce an accurate, functioning car chassis</p> <p>Designing a shape that is suitable for the project and making some attempt to reduce air resistance through the design of the shape</p> <p>Producing panels that will fit the chassis and can be assembled effectively using the tabs they have designed</p> <p>Constructing the car bodies effectively. Conducting the trial accurately and drawing conclusions and improvements from the results</p>	<p>Making a high quality and functioning car chassis through the implementation of neat angles and secure gluing/assembly. Adding additional strengthening features to their design. An awareness that weight affects the speed an object can travel at</p> <p>Designing a shape that is sophisticated and fully embraces the concept of reducing air resistance. Including sophisticated graphic design on the product</p> <p>Producing panels that will fit the chassis and can be assembled effectively using the tabs they have designed neatly and accurately with a more sophisticated shape and graphic design</p> <p>Constructing the car bodies independently and to a high-quality finish. Testing a wider range of features of the vehicles and therefore drawing on a wider range of conclusions as to the ways their cars could be improved</p>

Electrical Systems - Torches		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Identifying electrical products and explaining why they are useful and helping to make a working switch</p> <p>Identifying the features of a torch, how it works and describing what makes a torch successful</p> <p>Creating suitable designs which fit both the success criteria and their personal design criteria</p> <p>Creating a functioning torch with a switch according to their design criteria</p>	<p>Identifying the features of electrical products, making a working switch and suggesting other ways this could be made, including mentioning conductors</p> <p>Explaining what features are important to all torches and which are tailored to the target audience as well as generating creative suggestions for how the components could be made</p> <p>Applying the outcome of the evaluation task to improve their design and adding special features specifically designed for their 'client'</p> <p>Creating a torch with special features to suit their 'client' and discussing how these components could be used in other products</p>

DT End Points of Learning - Assessment (for Insight)

Key Stage 2 – Y5/6

Electrical Systems - Doodlers		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Identifying simple circuit components (battery, bulb and switch) with a basic explanation of their function (e.g. the battery powers the circuit). Explaining that a series circuit is assembled in a loop to allow the electricity to flow along one path, with no crossover wires. Describing a motor as a circuit component that changes electrical energy into movement. Providing examples of motorised products that use the movement to rotate or spin different parts.</p> <p>Carrying out their duty by removing and replacing different parts of the Doodler in their team and suggesting ways to switch the configuration to amend the form or function of the Doodler. Explaining in their investigation report each of the changes that were made by themselves and others in the team and the effect this had on the Doodler's ability to draw scribbles (function) and appearance (form).</p> <p>Developing design criteria that clarifies who the target user is, the purpose of their Doodler, a key function, and the Doodlers form with regards to the final appearance (e.g. fun, bright, soft). Explaining simply why their Doodler has a certain configuration based on the findings of the investigation (e.g. I used four pens because the Doodler would fall over with two). Creating a functional Doodler that creates scribbles on paper with or without a switch.</p> <p>Identifying and listing each of the required materials, tools and circuit components required to build a Doodler. Explaining simply the steps to assemble a Doodler as part of a set of instructions (or storyboard). Writing instructions to build a functional electrical circuit, and explaining how to identify if it is functional or not (the motor spins when the circuit is powered). Providing suggestions to improve a set of peer's instructions after testing how effective they are at guiding someone.</p>	<p>Identifying simple circuit components (battery, bulb and switch) with a more detailed explanation of their function (e.g. batteries hold an electrical charge, and allow a product to be portable without the need for a plug). Explaining that a series circuit has only one path for the electrical current to flow, has no crossover wires and the electrical current travels in a loop. Explaining that by causing a break in a series circuit, you can create an on/off switch. Describing a motor as a circuit component that converts electrical energy into rotational movement that turns the axle. Providing examples of motorised products justified by explaining how the motor could power and turn certain parts of the product.</p> <p>Carrying out their duty by disassembling and rebuilding the Doodler in their team and switching the configuration to amend the form or function of the Doodler. Explaining in their investigation report each of the changes that were made by themselves and others in the team and the effect this had on the Doodler's ability to draw scribbles (function) and appearance (form), with reference to factors such as stability. Predicting what would happen before elements were changed with the Doodler, justified by what they have learned during the investigation.</p> <p>Developing design criteria that clarifies who the target user is, the purpose of their Doodler, key functions, and the Doodlers form with regards to the final appearance and ease of use (e.g. bright, easy to switch on or off). Explaining why their Doodler has a certain configuration based on the findings of the investigation (e.g. I used four pens to improve the stability of my Doodler). Creating a functional Doodler that utilises a switch.</p> <p>Identifying and listing each of the required materials, tools and circuit components required to build a Doodler, including where necessary information about them. Explaining in greater detail the steps to take to assemble a Doodler as part of a set of instructions (or storyboard). Writing instructions to build a functional electrical circuit, and explaining potential areas for error and ways to troubleshoot if the product is not functional (check that each of</p>

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		the connections between the crocodile clips and components is secure). Providing constructive criticism to improve a set of peer's instructions after testing how effective they are at guiding someone.
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Mechanical Systems – Making a pop up book		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Producing a suitable plan for each page, naming each type of mechanism, input and output and understanding that structures use the movement of the pages to work and mechanisms control movement</p> <p>Producing the structure of the book and beginning to draw and assemble the components necessary for the first structures/mechanisms</p> <p>Assembling the components for all the required structures/mechanisms and hiding the relevant parts of the mechanisms with more layers using spacers where needed</p> <p>Using a range of mechanisms and structures to illustrate the story and making it interactive. Using layers to hide mechanical elements and illustrating the story through the use of appropriate materials and captions</p>	<p>Producing a suitable plan for each page, naming each type of mechanism, input and output accurately, including more complex linkage systems and understanding that structures use the movement of the pages to work and mechanisms control movement</p> <p>Using more demanding mechanisms/structures. Producing a product of exceptionally high quality – neatly and accurately cut and assembled</p> <p>Assembling the components for all the necessary structures/mechanisms and hiding the relevant parts of the mechanisms with more layers using spacers where needed. Producing more demanding mechanisms/structures and work is of exceptionally high quality (neatly and accurately cut and assembled)</p> <p>Including a wider range of more sophisticated mechanisms and structures. High quality making and sophistication of the surface decoration</p>

Cooking and Nutrition – Developing a recipe		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Identifying the ingredients in spaghetti bolognese; understanding how beef gets from the farm to our plates; presenting the subject of their poster with clear and relevant information.</p> <p>Stating preferences when tasting bolognese sauces; naming a few unique ingredients that could be found in different bolognese recipes; making simple changes to a basic bolognese recipe to enhance it.</p> <p>Using a nutrition calculator to find out the nutrient information of ingredients; comparing the nutritional values of two ingredient lists; choosing an ingredient list to turn into a recipe based on its nutritional value.</p> <p>Cutting resistant foods like onions using the bridge and claw method; demonstrating understanding of working with hot food by holding the handle and taking care when stirring; matching ingredients to the correct coloured chopping board to show an understanding of cross-contamination.</p> <p>Measuring accurately and constructing a rectangle; creating a label that includes relevant colour choices, ingredients and the jar's contents; using a checklist to evaluate someone else's design.</p> <p>Preparing the right quantities of ingredients using measurements where necessary; selecting the right equipment to prepare foods in the way they intended; explaining a recipe, how they adapted it and why it is unique.</p>	<p>Considering the ethical issues around food production.</p> <p>Planning an adaptation of a basic bolognese recipe and considering and explaining their choices of ingredients.</p> <p>Reasoning beyond the nutrition calculator and providing knowledge of vitamins and minerals to justify choices in the recipe.</p> <p>Cutting foods to a specific size and shape; observing the changes in foods as they cook and providing suggestions of how they have changed.</p> <p>Explaining their reasons for design choices through annotated diagrams; using unfamiliar measuring equipment accurately</p> <p>Explaining that measurement is important so that nutritional information can be gathered; determining the most efficient techniques to use to prepare an ingredient.</p>

DT End Points of Learning - Assessment (for Insight)

Textiles - Waistcoats		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Considering a range of factors in their design criteria and creating a waistcoat design based on this, annotating the designs</p> <p>Using a template to mark and cut out the panels for the waistcoat, neatly and accurately</p> <p>Using a strong running stitch to join fabric to make a functional waistcoat and tying strong knots to secure the thread in place</p> <p>Attaching a secure fastening, and decorative objects and evaluating the final product</p>	<p>Designing a waistcoat to reflect the personality or theme they have chosen with detailed annotations</p> <p>Using a template to mark and cut out the panels for the waistcoat, with greater neatness and accuracy, adapting the shape as necessary</p> <p>Using a strong running stitch to join fabric to make a functional waistcoat, with small neat stitches, following the edge of the fabric. Tying strong knots to secure the thread in place</p> <p>Using secure, neat stitches to attach a fastening and detailed decoration to the waistcoat as well as evaluating the final product thoroughly, highlighting areas of success but also giving suggestions for how it could be developed</p>

Structure - Playgrounds		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Communicating five apparatus designs, applying the design criteria and making suitable changes after peer evaluation</p> <p>Making roughly three different structures from their plans using the materials available</p> <p>Completing their structures, improving on the quality of making from the previous lesson and applying cladding to a few areas</p> <p>Securing the apparatus to a base and making a range of landscape features from a range of materials which enhance the apparatus</p>	<p>Clearly communicating a wide range of imaginative ideas and more sophisticated use of structures in the designs, using own experiences and peer evaluation to improve them</p> <p>Making roughly three accurate, well joined, complex structures from their designs, explaining what they will do in the next lesson</p> <p>Completing their structures to a high standard; building more complex structures with sophisticated cladding techniques.</p> <p>Showing imaginative use of materials in their landscape creation and securely attaching the apparatus</p>

Digital World – Navigating the Worlds		
<i>Working Towards</i> Age-Related Expectations	<i>Working at</i> Expected Age-Related Expectations	<i>Greater Depth</i> Exceeding Age-Related Expectations
	<p>Highlighting key information that directly describes the request such as 'multifunctional' and 'compact', with a simple explanation for selecting them. Writing a design brief, that includes some of the information gathered from the client's letter. Completing points three and six of the design criteria with given choices (pedometer, light or thermometer functionality).</p> <p>Writing a program that displays an arrow to indicate cardinal compass directions, with an 'On start' loading screen. Can suggest where there are errors (bugs) in the code and ways to fix(debug) them by comparing their program to a finished example or by retracing steps. Explaining in basic terms, the functions of the program and how they will be useful as part of a navigation tool. Including an additional function such as those prescribed in the extension program or on previous Digital world units as linked above.</p> <p>Considering material choices carefully when deciding on what they would recommend their navigation tool be made out of and explaining why they made that decision. Developing a product concept that includes some annotated features based on information pulled from the client's (Aria's) letter. Self and peer evaluating a product concept against a list of design criteria with basic statements.</p> <p>Explaining key industries that use 3D CAD modelling and why. Recalling and describing the name and use of key tools used in Tinkercad (CAD) software. Combining more than one object to develop a finished 3D CAD model in Tinkercad.</p> <p>Completing a product pitch plan that includes key information (such as functions of the program, materials chosen) drawn from the rest of the project (unit link). Reading their answers from a planned list of questions to the audience including some detail as to how their product meets the design brief for Adventure Awaits Co. Using visual references on their pitch poster to describe their Micro:bit program and 3D CAD model.</p>	<p>Highlighting key information that directly and indirectly lends itself to a design solution, such as 'outdoor equipment' and justifying their selections with a detailed explanation 'the product will need to be durable and waterproof'. Writing a design brief from scratch, basing their structure on the bullet points provided and including information gathered from the client's letter. Completing points 3 and 6 of the design criteria with ambitious choices that they will solve by tinkering in the 'Micro: bit Make Code editor'.</p> <p>Writing a program that displays an arrow to indicate cardinal compass directions, with an 'On start' loading screen. Can identify where there are errors (bugs) in the code and ways to fix (debug) them. Explaining in detail the functions of the program and how they will be useful as part of a navigation tool. Including an additional function that they have developed and can justify by tinkering in the 'Micro: bit Make Code editor'.</p> <p>Considering material choices carefully when deciding on what they would recommend their navigation tool be made out of and explaining why and how their decision is sustainable for the planet. Developing a product concept that includes detailed annotated features based on information pulled from the client's (Aria's) letter. Self and peer evaluating a product concept against a list of against a list of design criteria including constructive criticism to improve the concept.</p> <p>Explaining key industries that use 3D CAD modelling and why, including ones that they feel could find it useful. Recalling and describing the name and use of key tools used in Tinkercad (CAD) software. Combining more than one object to create a replica finished 3D CAD model of their product concept in Tinkercad. Including additional features on their product concept directly in Tinkercad.</p> <p>Completing a detailed product pitch plan that includes key information (such as functions of the program, materials chosen) drawn from the rest of the project (unit link). Recalling their answers from planned questions to the audience detailing how</p>

DT End Points of Learning - Assessment (for Insight)

		their product meets the design brief for Adventure Awaits Co. Answering additional unexpected questions with confidence. Using visual references on their pitch poster to describe and explain their Micro:bit program and 3D CAD model.
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