



Whitley Abbey Primary School

Hand in hand we learn

DT Curriculum

Our Curriculum Drivers

Possibilities	Reading and Vocabulary	Wellbeing	Citizenship
Our curriculum is designed to promote aspirations; to allow pupils to make connections between what is learnt in the classroom and open-up possibilities for them in later life. Teachers support children in making links between their learning in the classroom and careers and opportunities in adult life.	Our curriculum is designed to meet the needs of the children we serve placing great emphasis on the development of tier 2 and tier 3 vocabulary and fluency in reading. At Whitley Abbey we recognise that vocabulary development helps children to communicate effectively and to understand what they hear. Reading enables pupils to develop independent learning skills – skills that will serve them well in later life.	Our curriculum is designed to promote pupil's wellbeing and resilience through the Thrive approach and Whitley Character Values. Research suggested that better emotional wellbeing is associated with higher achievement in primary school. When pupils feel safe they are able to better access learning in the classroom.	Our curriculum is designed to prepare the children to take their place successfully in a changing world. It focuses on the importance of citizenship on a local and global scale through the development of the core transferable skills of collaboration, communication, resourcefulness and reflection. Through learning and understanding the school values of friendship, kindness, courage, resilience, gratitude and honesty alongside the British Values children are better prepared to become successful citizens.



Intent

The Design Technology curriculum is designed to develop creative, curious learners who have the ability to critically evaluate their work and the work of others. Through the teaching of DT, we hope that children will develop the capacity to problem solve by stimulating creativity and imagination through the production of quality products that solve real and relevant problems within a variety of contexts, considering their own and others' needs. We aim to, wherever possible, link work to other disciplines and topics to make learning relevant.

EYFS	
<p>In the Foundation Stage, the learning and development of DT is taught throughout all areas of the curriculum as and when it compliments existing learning opportunities and more specifically through expressive arts and design. For example DT may be taught through providing pupils opportunities to create props for role play, create an junk modelled item or build with lego as inspired by a story or challenge set by the teacher.</p> <p>ELG: Creating with Materials Children at the expected level of development will: - 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.</p>	
Key Stage 1	Key Stage 2
<p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].</p> <p>When designing and making, pupils should be taught to:</p> <p>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</p> <p>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</p> <p>Evaluate ♣ explore and evaluate a range of existing products ♣ evaluate their ideas and products against design criteria</p> <p>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.</p>	<p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:</p> <p>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</p> <p>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</p> <p>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</p> <p>Technical knowledge</p> <p>♣ 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.</p>

Implementation

New Curriculum organisation:

In the academic Year 2021/22 pupil numbers have led to the necessity to combine classes in Year 1 and 2 and Year 4 and 5 for their foundation subject teaching. School has retained a one form entry model for the delivery of English and Maths teaching. This significant change has resulted in a whole school review of the planned curriculum. Leaders have developed an aspiration curriculum which meets the needs of the unique teaching set up. Pupils in Year 1 and 2 and 4 and 5 will be taught in a two year rolling curriculum program to ensure full curriculum coverage with the exception of science where key objectives have been identified for each curriculum year group.

Teachers will retain the autonomy to decide whether each DT topic should be taught weekly or block taught and make this judgment based upon the merits of each approach and the intended outcomes.

Resources

We use resources from Kapow to support the teaching of DT throughout the school however, we have made some adaptations to the design brief in order to make stronger links to other areas of the curriculum.

Assessment:

At Whitley Abbey Primary School, assessment is carried out in accordance with our Assessment Policy. Ongoing teacher assessment ensures that skills are developed and progress is made in the area of DT. Key assessment questions are planned for in the curriculum, at the end of each unit of work.

Monitoring:

- Books scrutiny to check coverage of content, skills, quality and evidence of key computing vocabulary being taught in all topics.
- Pupil voice
- Teacher observations
- Evidence of continuous assessment
- Pupil final products and skill development
- Pupil evaluations and presentations

Work-life balance:

The schemes of work support staff by providing lessons plans and resources to support the teaching of the DT curriculum.

EYFS

Our EYFS curriculum is planned but may be adapted to be responsive to pupil's interests

Example - Teacher Led experiences

Nursery

~ Provide children with a range of materials for children to construct with. Encourage them to think about and discuss what they want to make. Discuss problems and how they might be solved as they arise. Reflect with children on how they achieved their aims.

Through guided play teach children to -

Design invitations

Create wrapping paper

Create a musical instrument

Design and make gingerbread men

Reception

~ Teach children different techniques for joining materials, such as using adhesive tape and different sorts of glue, taking care not to introduce too many new things at once.

~ Provide children with a range of materials for children to construct with. Encourage them to think about and discuss what they want to make. Discuss problems and how they might be solved as they arise. Reflect with children on how they achieved their aims.

Build a range of different shelters

Example -Enhanced Provision opportunities linked to DT

Develop:

- Cutting skills during funky finger activities
- Threading skills
- Joining techniques
- Experiment with different joining materials
- Pretend cooking in the home corner
- Playdough activities
- Mud kitchen activities
- Small and large construction
- Junk modelling

Create junk models based upon a topic Create Easter cards Make pancakes				
Vocabulary Apron, Bead, Cello tape, Build, Chop, Button, Glue stick, Make, Cut, Fabric, Masking tape, Equipment, Felt, Paper Clip, Fork, Scissors, Plasticine, Knife, Ruler, Mix, Straws, Spoon		Assessment questions Can children describe what they have made? Can children describe the purpose of their creations? Can children talk about how they made their creation? Can children choose appropriate materials to join? Can children say what they like and dislike about their creations?		
Year 1				
	Term	Autumn	Spring	Summer
DT	Deliberate Practice (Skills)	<ul style="list-style-type: none">design purposeful, functional, appealing products for themselves and other users based on design criteriagenerate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technologyselect 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 characteristicsexplore and evaluate a range of existing productsevaluate their ideas and products against design criteriabuild structures, exploring how they can be made stronger, stiffer and more stableexplore and use mechanisms [for example, levers, sliders, wheels and axles], in their products <div>Deliberate practise vocabulary: evaluate, evaluation, product, design, suitable, suitability, investigate, design criteria, function</div>		
	Knowledge Assessment questions:	Puppets <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/textiles-puppets/assessment-dt-y1-puppets/ <ul style="list-style-type: none">Can the children explain what a joining technique is?Can the children identify and name the simple equipment they need to make a puppet?Can the children explain what a template is?Can the children describe a fabric using simple adjectives?Can the children explain the importance of a design idea?	Structures – a throne for the Queen <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/structures-baby-bears-chair/assessment-dt-y2-baby-bears-chair/ <ul style="list-style-type: none">Can the children explain what a structure is?Can the children identify a man-made material/object?Can the children identify a natural material/object?Can the children differentiate between strong and weak structures?Can the children explain if a structure is stable or unstable?	Smoothies Ainsley Harriet <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/fruit-and-vegetables/assessment-dt-y1-fruit-and-vegetables/ <ul style="list-style-type: none">Can the children identify a variety of fruits and vegetables?Can the children differentiate between a fruit and a vegetable?Can the children say how certain vegetables and fruit are grown and where?Can the children explain how a blender is used to create a smoothie?Can the children cut food safely?Can the children select the correct tool to complete a task?

		<ul style="list-style-type: none"> Can the children develop and communicate their ideas through talk, drawings and mock-ups? Can the children select the tools they need for the job? 	<ul style="list-style-type: none"> Can the children explain the function of the product they have made? 	
	Vocabulary	<i>Design, glue, decorate, model, hand puppet, safety pin, staple, stencil, template</i>	<i>Function, man-made, stiff, stable, strong, structure, natural</i>	<i>Blender, fruit, vegetable, seed, root, ingredients, peel, peeler, smoothie</i>
Year 2				
	Term	Autumn	Spring	Summer
DT	Deliberate Practice (Skills)	<ul style="list-style-type: none"> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology 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 explore and evaluate a range of existing products evaluate their ideas and products against design criteria 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 <div> Deliberate practise vocabulary: evaluate, evaluation, product, design, suitable, suitability, investigate, design criteria, function </div>		
	Knowledge Assessment questions:	Homes (grand houses Abbey/ Castle) Clay Assessment Questions https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/ks1-y1-design-and-technology-constructing-windmills/assessment-dt-y1-windmills/ <ul style="list-style-type: none"> Can the children what a structure is? Can the children can explain who a client is and why they are important? Can the children explain what design criteria is and why it is important? Can the children evaluate their product saying that they like and dislike about their design? Can the children explain what the term stable means and make changes to their design to ensure it is stable? Can the children offer ways to make their structure stronger? 	Wraps Assessment Questions https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/food-a-balanced-diet/assessment-dt-y2-a-balanced-diet/ <ul style="list-style-type: none"> Can the children explain where some of the ingredients come from? Can the children explain what a balanced diet is and what foods may/may not appear? Can the children say what a refrigerator is used for and what foods you may find in one? Can the children say what nutrients are and why they are good for the body? 	Fairgrounds Assessment Questions https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/mechanisms-fairground-wheel/assessment-dt-y5-fairground-wheel/ <ul style="list-style-type: none"> Can the children explain what a structure is? Can the children explain what a mechanism is? Can the children explain what the word stable means? Can the children explain how the Ferris Wheel spins? Can the children explain what strong and weak means and give examples of this? What happens when a structure is strong or weak? Can the children distinguish between fixed and freely moving axles? Can the children give examples of materials which are strong and weak? Which materials are the most and least suitable for their structure? Can the children list the main parts of the Ferris Wheel and explain what each part does?

	Vocabulary	<i>Strong, stable, structure, client, design criteria, structure, test, weak, strong, features</i>	<i>Carbohydrate, dairy, fat, sugar, fruits and vegetables, protein, diet, balanced diet, nutrients, ingredients, healthy, unhealthy</i>	<i>Axle, mechanism, stable, strong, test, waterproof, weak, strong, Ferris Wheel, Ferris Wheel pod, base</i>
Year 3				
	Term	Autumn	Spring	Summer
DT	Deliberate Practice (Skills)	<ul style="list-style-type: none"> use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design 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 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. <div>Deliberate Practise Vocabulary: evaluation, product, design criteria, suitable, suitability, constructive criticism, test, audience, annotated diagram, prototype, functional</div>		
	Knowledge Assessment questions:	Static Electric Game Assessment questions https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/electrical-systems-static-electricity/assessment-dt-y3-electrical-systems-static-electricity/ <ul style="list-style-type: none"> Can the children discuss what design criteria is? Can the children explain what constructive criticism is and why it is important in the design process? Can the children discuss the importance of feedback as part of the design process? Can the children explain what electro-static is and why it occurs? Can the children explain what attract and repel means in the context of their game? Can the children test their game and discuss whether this was successful? 	Cushions Assessment questions https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/textiles-cushions/assessment-dt-y3-textiles-cushions/ <ul style="list-style-type: none"> Can the children explain what a joining technique is and which ones they have used? Can the children explain what a template is and how one is used? Can the children show an example of applique? Can the children show an example of a running stitch? Can the children use a simple running stitch to join two pieces of fabric together? Can the children show an example of a cross stitch? Can the children explain what a seam is? 	Pneumatic Toy/ Tarts- Hero of Alexandria Assessment questions https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/mechanical-systems-pneumatic-toys/assessment-dt-y3-mechanical-systems-pneumatic-toys/ <ul style="list-style-type: none"> Can the children explain what a mechanism is? Can the children explain what a pneumatic system is? Can the children explain what an exploded diagram is? Can the children say what motion is and how the motion has occurred? Can the children explain what a paper net is? Can the children explain what function means? <p>Can the children say how drawings and designs help designers create a finished product?</p>
	Vocabulary	<i>Attract, component, design criteria, electro-static, feedback, evaluation, motion, repel, audience, test</i>	<i>Accurate, applique, cross-stitch, decorate, detail, fabric, patch, running stitch, seam, stencil, stuffing, target audience, template</i>	<i>Exploded diagram, function, input, lever, linkage, mechanism, motion, net, pivot, output, pneumatic system,</i>
Year 4				

	Term	Autumn	Spring	Summer
DT	Deliberate Practice (Skills)	<ul style="list-style-type: none"> use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design 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 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. <div> Deliberate Practise Vocabulary: Evaluation, target audience, target customer, suitability, prototype, aesthetics, innovative, annotated sketch </div>		
	Knowledge Assessment questions:	Pavilions <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/structure-pavilions/assessment-dt-y4-structure-pavilions/ <ul style="list-style-type: none"> Can the children explain their design criteria? Can the children explain what is meant by aesthetics and why this is important? Can the children explain the function of cladding? Can the children explain what a pavilion is? Can the children explain the function of their product? Can the children explain how to make their structure more stable? Can the children explain how to make their structure more stable? Can the children evaluate their product for both their appearance and purpose? 	Fastenings <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/textiles-fastenings/assessment-dt-y3-textiles-fastenings/ <ul style="list-style-type: none"> Can the children explain what the term 'accurate' means? Can the children identify and explain what a seam is? Can the children describe what is meant by a fastening? Can the children identify a zipper, toggle and press stud and explain where they are most suitably used? Can the children define what a prototype is? Can the children us annotated sketches to communicate ideas? Can the children evaluate their product for both their appearance and purpose? 	Slingshots – mechanisms Biscuits – food <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/mechanical-systems-making-a-slingshot-car/assessment-dt-y4-mechanical-systems-slingshot-car/ <ul style="list-style-type: none"> Can the children explain what a mechanism is? Can the children explain what an exploded diagram is and why they are useful? Can the children explain what is meant by aesthetics and why this is important? Can the children explain what air resistance is? Can the children explain what a template is and why they are important? Can the children explain why it is important to test and evaluate a product? <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/food-adapting-a-recipe/assessment-dt-y4-food-adapting-a-recipe/ <ul style="list-style-type: none"> Can the children describe the importance of the method in a recipe? Can the children explain how to keep safe when handling hot food? Can the children explain how to improve a recipe? Can the children use appropriate equipment to combine ingredients?

	Vocabulary	Aesthetic, cladding, design criteria, evaluation, frame structure, reinforce, stable, structure, target audience, target customer, texture, structure	Aesthetic, assemble, design criteria, evaluation, fabric fastening, running stitch, stencil, target audience, target customer, template	Air resistance, design criteria, function, kinetic energy, mechanism Adapt, budget, evaluation, ingredients, method, prototype, quantity, recipe, unit of measurement
Year 5				
	Term	Autumn	Spring	Summer
DT	Deliberate Practice (Skills)	<div><ul style="list-style-type: none">use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsgenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design joining and finishing], accuratelyselect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesinvestigate and analyse a range of existing productsevaluate their ideas and products against their own design criteria and consider the views of others to improve their workunderstand how key events and individuals in design and technology have helped shape the world Technical knowledgeapply their understanding of how to strengthen, stiffen and reinforce more complex structuresunderstand 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]<p>apply their understanding of computing to program, monitor and control their products.</p></div> <div>Deliberate Practise Vocabulary: product analysis, target audience, design decisions, authentic, design specification, prototype, mock up, functionality, final product, formulate, research</div>		
	Knowledge Assessment questions:	Stuffed animal – Teddy Roosevelt <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/textiles-stuffed-toys/assessment-dt-y5-textiles-stuffed-toys/ <ul style="list-style-type: none">Can the children explain what a fastening is?Can the children explain what fabric is and name some different kinds?Can the children say what a template is?Can the children identify a blanket stitch?Can the children identify applique?Can the children identify a cross stitch?Can the children explain what an objects form is?	Greeting cards – Light up Food Bolognese <u>Assessment questions - card</u> https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/electrical-systems-electronic-greetings-cards/assessment-dt-y5-electrical-systems-electronic-greeting-cards/ <ul style="list-style-type: none">Can the children explain what a greetings card is and give examples?Can the children explain what product analysis is?Can the children draw and make a series circuit with an LED, battery and two wires?Can the children name and identify an LED, wire, buzzer, battery (the components)?Can the children discuss the importance of Roland Hill in developing the postal system? <u>Assessment questions – Bolognese</u> https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/food-what-could-be-healthier/assessment-dt-y5-food-what-could-be-healthier/	Bridges – Isambard Kingdom Brunel <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/structure-bridges/assessment-dt-y5-structures-bridges/ <ul style="list-style-type: none">Can the children name some tools which are used in a workshop?Can the children say what some of the tools are used for?Can the children name some different kinds of bridges?Can the children say where some of these types of bridges are found?Can the children identify some materials bridges are made from?Can the children identify the suitability of some materials for making bridges?Can the children recall some key facts about Isambard Kingdom Brunel and why he is significant to bridge building? <p>Can the children critically evaluate their finished product</p>

			<ul style="list-style-type: none"> Can the children explain what the term 'technique' means? Can the children explain what a balanced diet means and give examples of this? Can the children explain what the method of a recipe is? Can the children explain what cross-contamination is? Can the children explain what welfare is with regards to farm animals? Can the children amend a recipe to create their own bolognese sauce? Can the children follow a method to make a Bolognese sauce? 	
	Vocabulary	Accurate, annotate, blanket stitch, appendage, design criteria, detail, evaluation, fabric, sew, shape, stuffed toy, form, stuffing, template	Battery, buzzer, circuit, component, conductor, copper, design criteria, function, innovative, LED, modify, series circuit, switch, target audience, test, wire Cross contaminations, beef, diet, ethical, farm, healthy, ingredients, method, nutrients, packaging, recipe, research, substitutes, supermarket, vegan, welfare	Beam bridge, arch bridge, compression, evaluation, file, force, measure predict, reinforce, research, right angle, shape, strong, structure, suspension bridge, test, truss, weak, strong

Year 6

	Term	Autumn	Spring	Summer		
DT	Deliberate Practice (Skills)	<ul style="list-style-type: none">use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groupsgenerate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design joining and finishing], accuratelyselect from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualitiesinvestigate and analyse a range of existing productsevaluate their ideas and products against their own design criteria and consider the views of others to improve their workunderstand how key events and individuals in design and technology have helped shape the world Technical knowledgeapply their understanding of how to strengthen, stiffen and reinforce more complex structuresunderstand 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.			<div>Deliberate Practise Vocabulary: product analysis, target audience, design decisions, authentic, design specification, prototype, mock up, functionality, final product, formulate, research questionnaire</div>	
	Knowledge Assessment questions:	Steady Hand Game <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/electrical-systems-steady-hand-game/assessment-dt-y6-electrical-systems-steady-hand-game/	Design a waistcoat <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/textiles-waistcoats/assessment-dt-y6-textiles-waistcoats/ <ul style="list-style-type: none">Can the children explain what an objects form is?	Air-raid shelter/preparing light meal <u>Assessment questions</u> https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/structure-playgrounds/assessment-dt-y6-structures-playgrounds/		

		<ul style="list-style-type: none"> • Can the children analyse a product? • Can the children identify a series circuit and name the components within it? • Can the children name and identify an LED, buzzer, wire, battery pack? • Can the children say what the term 'fit for purpose' mean? 	<ul style="list-style-type: none"> • Can the children say what a template is and why it is important for making a garment? • Can the children say what fabric is and name some different types of fabric? • Can the children explain the suitability of fabrics for different purposes? • Can the children describe the properties of some fabrics? • Can the children explain the importance of being accurate when measuring to make a garment? • Can the children explain what is meant by a target audience? • Can the children join two pieces of fabric together to create a seam? • Can the children offer advice to others making a waist coat? 	<ul style="list-style-type: none"> • Can the children suggest ways to make a structure stronger? • Can the children explain why making a prototype is so important? • Can the children describe the properties of some common materials? • Can the children explain the importance of modifying a prototype to make improvements? <p>Can the children work safely with a variety of tools?</p>
	Vocabulary	<i>Assemble, battery, battery pack, bulb, bulb holder, buzzer, circuit, circuit symbol, component, conductor, copper, design criteria, evaluation, function, insulator, LED, magnetic field, net, drawing, plan, prototype, series circuit, steady hand, target audience, test, top view, wire cutters</i>	<i>Accurate, adapt, annotate, design criteria, detail, fabric, fastening, knot, properties, running stitch, seam, sew, shape, target audience, template, thread, waist coat, waterproof</i>	<i>Adapt, design, design brief, cladding, evaluation, feedback, landscape, mark, measure, materials, planning, prototype, reinforce, strong, structure, texture, weak, strong, corrugated</i>