



Inclusion is at the heart of our trust

Long Term/Curriculum Plan

School: **Crosshill School**

Subject: **Design Technology - Inspire**

Curriculum Planning

at Oak Learning Partnership



Long Term Plans

(Year/Pathway Group Overviews)

- Curriculum content on what students will learn about the subject content and about the logical order for teaching the content.
- Clear five/three year progression through the curriculum, which includes: key topics, termly knowledge and skills.
- Each year group/pathway individually broken down with unit overviews.
- Details around prior learning required.
- Clear end points and assessment information.
- Adaptations and key concepts mapped out.



Medium Term Plans

(Unit of Work for Each Year Group/Pathway)

- Each unit broken down by individual lessons.
- Specific pedagogical choices detailed, with links to appropriate resources.



Phase Lesson Plans

Lesson by lesson planning, using all of the above to achieve curriculum aims, adapted for class needs.

Curriculum Leadership	Katie Phillips – Science and Technology Lead
School Intent	<p>Upon entry to Crosshill School, students are assessed and placed within one of our three highly personalised pathways: Inspire, Explore and Discover. Within these pathways students needs are identified as formal, semi-formal and emergent learning styles. Each pathway has a bespoke curriculum and particular learning approach that enables all of our students to flourish. Throughout all pathways we build the curriculum around 6 main outcomes to ensure our students will:</p> <ul style="list-style-type: none"> • Know themselves • Possess functional skills • Be independent • Be good communicators • Be curious learners • Be prepared for adulthood <p>The outcomes above are personalised around the three identified pathways and leaders carefully craft personalised curriculum provision to meet the needs of the learners within the pathways. Students may transition into different pathways whilst they are at Crosshill. We recognise that as our young people develop and grow, so does their need for different skills, learning approaches and experiences. We are a responsive provision and review individual students' needs.</p>
Subject Intent	<p>At Crosshill, Design and Technology is a creative and practical subject that helps children become independent, curious, and confident learners. Our curriculum gives pupils the chance to design and make real, purposeful products, encouraging them to solve problems and think critically. We teach through an ongoing cycle of planning, making, evaluating, and improving, helping children to reflect on their work and build resilience. Pupils learn to use tools and materials safely, developing both technical skills and personal skills such as teamwork and communication. We link Design and Technology to real life and other curriculum areas, making learning meaningful and memorable. Through hands-on activities, children explore how things are made, how they work, and how they can make a positive difference in the world around them.</p>

Key Stage 2, National Curriculum Aims	KS1 Design: Make Evaluate Technical knowledge KS2 Design Make Evaluate Technical knowledge	Key Stage 3, National Curriculum Aims	KS3 links Design: -Use research and exploration to identify and understand user needs; develop and communicate creative ideas using annotated sketches, cross-sectional and exploded diagrams. Make: -Select from and use specialist tools, techniques, processes, equipment and machinery; work with a wider range of materials and components. Evaluate: -Analyse the work of past and present professionals; test, evaluate and refine their ideas and products. Technical Knowledge: -Understand and use mechanical and electrical systems in their products; apply understanding of computing and electronics; strengthen, stiffen and reinforce complex structures.
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Year 7	Year 8	Year 9	Year 11
Autumn			
Topic: Net <ul style="list-style-type: none"> - Purpose – to hold a Christmas Pudding - Product – 3D box - User – Supermarket shoppers 	Topic: Marble Run <ul style="list-style-type: none"> - Purpose – to design a game - Product – a marble run - User – a friend 	Topic: Purse <ul style="list-style-type: none"> - Purpose – to hold money - Product – purse with fastening - User – myself 	Topic: Designing and Modelling WJEC Design and Technology – Designing and Modelling 6220 Entry 2/3
Knowledge: By the end of this unit, pupils will know: Design -That a net is a 2D shape that can be folded to make a 3D object. -That products are made for a purpose and user -That we can plan a design by drawing and choosing materials. Make -That paper and card can be folded, cut, and joined to make 3D forms.	Knowledge: By the end of this unit, pupils will know: Design -That a marble run must be designed with a clear purpose - to move the marble through a track successfully using gravity. -That we can plan complex ideas using diagrams, labels, and step-by-step thinking. -That the design must consider the speed, direction, and structure of the marble's journey. Make	By the end of this unit, pupils will know: Design -That products are designed for a user and a purpose (e.g. a purse to hold coins securely and be easy to use). -That a design criteria helps guide decisions about size, shape, materials, and fastening. -That detailed plans (including labelled diagrams) support accurate making. Make -That different fabrics have different properties. -That joining fabric requires sewing techniques such as running stitch or over-stitch.	Knowledge: By the end of this unit, pupils will know: -how to research features of a product suitable for design work. -the different types and forms of research. -how to present research. -how to identify key features: weight, shape, colour, material, texture size etc. -how to create a design brief and specification. -how to present design ideas. -how to review given briefs.

<p>-That tabs, glue, and tape can be used to fix and assemble parts.</p> <p>-That decorations can be used to improve a product's appearance and appeal.</p> <p>Evaluate</p> <p>-That designers look at what works well and what could be improved.</p> <p>-That we can evaluate our product against the design ideas and purpose.</p> <p>Technical Knowledge</p> <p>-That some materials (e.g. paper, card) are better suited for making light structures.</p> <p>-That we can create freestanding structures by folding and joining.</p> <p>-That simple 3D shapes can be built from flat nets.</p>	<p>-That different materials have different strengths and are suited to different parts of a construction.</p> <p>-That gravity makes the marble move, and a slope must be used to help it travel.</p> <p>-That we can improve a model by testing and adjusting parts as we go.</p> <p>Evaluate</p> <p>-That good products are both functional and appealing.</p> <p>-That we can evaluate our product against our original criteria.</p> <p>-That reviewing and discussing what worked or didn't helps us learn for next time.</p> <p>Technical Knowledge</p> <p>-That a marble run uses forces to make things move.</p> <p>-That slopes, turns, and barriers affect how fast and smoothly a marble travels.</p> <p>-That reinforcing structures improves strength and stability.</p> <p>-That good joining techniques help materials hold together securely.</p>	<p>-That a simple fastening mechanism (e.g. button, Velcro, press stud) can improve usability.</p> <p>Evaluate</p> <p>-That a finished product can be judged against original intentions (function, fit, appearance).</p> <p>-That feedback helps identify strengths and areas for improvement.</p> <p>-That testing helps check whether the purse is durable and secure for holding coins.</p> <p>Technical Knowledge</p> <p>-That textile products can be assembled using stitches rather than glue or tape.</p> <p>-That different stitches serve different purposes (e.g. running stitch for seams, over-stitch for strength/finish).</p> <p>-That fabric edges can be neatened or strengthened to prevent fraying.</p>	<p>-how to write and present a design brief for their own product.</p> <p>- how to review and analyse various design specifications from various products.</p> <p>-simple presentation techniques.</p> <p>-how to present the key features of a product.</p> <p>-how to draw in 2D/3D</p> <p>- how to select colour enhancement to improve the quality of their developing design ideas.</p> <p>-how to develop designs which are realistic within their time scale and ability.</p> <p>-develop a range of ideas using their own creative thought and from their initial research/specifications.</p> <p>-an awareness of the importance of size and scale before designing.</p>
<p>Skills:</p> <p>Design Skills</p> <p>-Draw simple design ideas with labels for materials and decorations.</p> <p>-Choose from a range of materials which one will be most suitable considering the design brief</p> <p>Making Skills</p> <p>-Cut along lines mostly accurately using scissors.</p> <p>-Fold paper/card to create 3D shapes from flat nets.</p> <p>-Use glue or tape to assemble the net into a 3D shape.</p> <p>-Add simple decorations</p> <p>Evaluating Skills</p> <p>-Talk about what they like about their design.</p>	<p>Skills:</p> <p>Design Skills</p> <p>-Develop ideas based on real-life examples and peer discussion.</p> <p>-Sketch a design that includes features like ramps, turns, tunnels, and barriers.</p> <p>-List materials and sequence steps needed for the build.</p> <p>-Consider user experience: Should it be fast? Tricky? Fun?</p> <p>Making Skills</p> <p>-Measure, cut, and shape materials (cardboard, straws, tubes) with accuracy and safety.</p> <p>-Assemble a working slope using angles and supports.</p> <p>-Join parts using glue, tape, and tabs with increasing control.</p>	<p>Skills:</p> <p>Design Skills</p> <p>-Generate ideas with the end-user in mind (e.g. shape, size, closure for ease of use).</p> <p>-Draw and label a purse design, showing shape, stitching line, decoration, and closure.</p> <p>-Choose suitable fabrics, fasteners, and decorative elements.</p> <p>Making Skills</p> <p>-Measure and cut fabric to a given size/shape accurately.</p> <p>-Thread a needle and use running stitch or over-stitch to join two pieces of fabric.</p> <p>-Attach a fastening (e.g. sew on a button, apply Velcro, stick/sew on a popper).</p> <p>-Add simple decoration using felt shapes, sequins, or fabric pens.</p> <p>Evaluating Skills</p>	<p>Skills:</p> <p>See MTP for skills breakdown</p>

<p>-Say one thing they could change or do better next time.</p> <p>-Compare their finished product to their plan.</p> <p>Technical Skills</p> <p>-Handle materials safely and correctly.</p> <p>-Experiment with folding and joining to understand how flat shapes become 3D.</p> <p>-Identify strong/weak parts of their structure.</p>	<p>-Reinforce structures for stability (e.g. triangle braces, folded card supports).</p> <p>-Adapt parts of the run while testing (e.g. adjust height/angle for better speed).</p> <p>Evaluating Skills</p> <p>-Test and refine the run to ensure the marble travels smoothly from start to finish.</p> <p>-Record or discuss how well the design met its goal.</p> <p>-Suggest improvements to speed, safety, or complexity of the run.</p> <p>-Peer-assess another group's work and give supportive, specific feedback.</p> <p>Technical Skills</p> <p>-Use correct terminology: slope, friction, gravity, barrier, support, track, structure.</p> <p>-Experiment with incline angles to affect marble speed.</p> <p>-Use friction (e.g. rougher surfaces, tight corners) to slow or control movement.</p> <p>-Reinforce areas under strain or that wobble during testing.</p>	<p>-Test if the purse can hold coins securely and open/close easily.</p> <p>-Reflect on their work: What worked well? What would they change next time?</p> <p>-Compare their final product to their initial design and design criteria.</p> <p>Technical Skills</p> <p>-Name and use tools: needle, thread, pins, fabric scissors, fasteners.</p> <p>-Use basic hand-sewing techniques confidently (with guidance): running stitch, over-stitch.</p> <p>-Begin to use finishing techniques (e.g. trimming edges, neatening seams).</p> <p>-Know how to work safely with sharp tools and needles</p>	
Spring			
<p>Topic: Easter Card</p> <ul style="list-style-type: none"> - Purpose – to wish someone a happy Easter - Product – Easter Card with movable parts - User – friend or family 	<p>Topic: Cushion</p> <ul style="list-style-type: none"> - Purpose – a comfy cushion - Product – cushion - User – family member 	<p>Topic: Building a Bridge</p> <ul style="list-style-type: none"> - Purpose – to hold a weight - Product – bridge - User – class 	<p>Topic: Making a Product</p> <p>WJEC Design and Technology – Making a Product 6221 Entry 2/3</p>
<p>Knowledge:</p> <p>By the end of this unit, pupils will know:</p> <p>Design</p> <p>-That products can be made for a user and for a specific occasion</p> <p>-That we can design moving parts to make a card more fun or interesting.</p> <p>-That we can plan a product using a drawing and choose materials based on their purpose.</p> <p>Make</p> <p>-That simple mechanisms (e.g. sliders, levers, flaps) can be used to create movement.</p>	<p>Knowledge:</p> <p>By the end of this unit, pupils will know:</p> <p>Design</p> <p>-That products need to be designed for both function (e.g. comfort, durability) and aesthetics (e.g. shape, colour, decoration).</p> <p>-That designs can include measurements, seam allowances, and stitching details.</p> <p>-That symmetrical designs and patterns contribute to the visual appeal of textiles.</p> <p>Make</p>	<p>Knowledge:</p> <p>By the end of this unit, pupils will know:</p> <p>Design</p> <p>-That different bridge designs (beam, arch, truss, suspension) solve structural challenges in different ways.</p> <p>-That a successful structure must be fit for purpose (e.g. span a gap, hold weight, stay stable).</p> <p>-That designs must take into account the forces acting on structures – especially tension and compression.</p> <p>-That diagrams and annotations help plan complex builds, including measurements, materials, and reinforcement strategies.</p>	<p>Knowledge:</p> <p>By the end of this unit, pupils will know:</p> <p>-how to choose suitable materials – giving reasons for their choice</p> <p>-how to choose the most suitable and applicable materials/methods for the design.</p> <p>-different marking out methods.</p> <p>-how to use basic hand tools and equipment.</p> <p>-how to use machine tools with some degree of success.</p> <p>-how to prepare and apply a suitable finish.</p> <p>-the positives and negatives of their products</p> <p>Design.</p>

<p>-That paper, card, split pins and straws can be used to create these mechanisms.</p> <p>-That it's important to follow steps in the correct order to make a product.</p> <p>Evaluate</p> <p>-That a finished product can be compared to the original design idea.</p> <p>-That user feedback (can help us judge a product).</p> <p>Technical Knowledge</p> <p>-That a slider moves from side to side and a lever pivots.</p> <p>-That these mechanisms change the way things move in a card.</p> <p>-That strong joins and neat assembly help a product to work well.</p>	<p>-That accurate measuring, cutting and joining techniques are essential for a neat and functional finish.</p> <p>-That different stitches serve different purposes - running stitch for joining, backstitch for strength, and decorative stitching for aesthetics.</p> <p>-That stuffing a cushion evenly is important for shape retention and comfort.</p> <p>Evaluate</p> <p>-That products should be evaluated for their durability, appearance, and how well they meet the design criteria.</p> <p>-That we can refine our product based on testing and user feedback.</p> <p>-That we can compare our final product to professional products and our original design plan.</p> <p>Technical Knowledge</p> <p>-That fabric edges need to be secured or finished to prevent fraying.</p> <p>-That a seam is the place where two pieces of fabric are joined together.</p> <p>-That textile products can include both functional and decorative features.</p>	<p>Make</p> <p>-That bridges can be made from combinations of shapes (triangles, trusses, beams) to strengthen weak materials.</p> <p>-That testing during construction is essential to improve design and ensure reliability.</p> <p>-That accuracy in measuring, cutting, and joining materials impacts the final structure's performance.</p> <p>Evaluate</p> <p>-That evaluating products involves testing against specific criteria: e.g. weight capacity, span distance, symmetry, appearance.</p> <p>-That real engineers evaluate for function, safety, efficiency, and cost-effectiveness.</p> <p>-That a good design evolves through iteration, i.e. test > refine > improve.</p> <p>Technical Knowledge</p> <p>-That strong structures rely on effective joins and balanced weight distribution.</p> <p>-That triangles are the strongest shape for frames and help resist deformation.</p> <p>-That trusses distribute forces and increase load-bearing capacity.</p> <p>-That materials have different properties (e.g. paper is light but weak unless reinforced).</p>	<p>-how to make recommendations for improvement (verbal review, summative evaluations, testing their product, identifications of modifications/improvements and review of any stated specifications).</p>
<p>Skills:</p> <p>Design Skills</p> <p>-Generate ideas through discussion and sketching.</p> <p>-Draw and label a simple card design that includes a moving part.</p> <p>-Select suitable images or symbols to reflect the Easter theme</p> <p>Making Skills</p> <p>-Cut out shapes and images using scissors safely.</p> <p>-Create and assemble a slider or lever mechanism using card, straws, or split pins.</p> <p>-Follow a sequence of steps to construct their card.</p>	<p>Skills:</p> <p>Design Skills</p> <p>-Create detailed, labelled designs showing: size and dimensions of cushion, seam allowance, placement of decoration.</p> <p>-Choose fabrics and embellishments that suit both the purpose and the intended user.</p> <p>-Develop a simple pattern/template to cut fabric pieces accurately.</p> <p>Making Skills</p> <p>-Measure and cut two fabric panels with seam allowance using templates.</p> <p>-Pin fabric together accurately and securely in preparation for stitching.</p> <p>-Use running stitch, backstitch, and over-stitch with growing precision.</p>	<p>Skills:</p> <p>Design Skills</p> <p>-Research and compare different types of bridges and their uses.</p> <p>-Generate bridge design ideas with labelled diagrams and scaled measurements.</p> <p>-Select materials for purpose, considering strength, availability, and ease of use.</p> <p>-Create design criteria for their bridge based on the given brief.</p> <p>Making Skills</p> <p>-Accurately measure, cut, fold, and join materials such as card, wood, paper straws, and string.</p> <p>-Construct bridges using: trusses and triangular frames to increase strength and columns, beams, and braces to distribute weight</p>	<p>Skills:</p> <p>See MTP for skills breakdown</p>

<p>-Decorate the card using a variety of chosen materials</p> <p>Evaluating Skills</p> <p>-Talk about how well the mechanism works.</p> <p>-Compare their final card to their original design.</p> <p>-Suggest one improvement they could make next time.</p> <p>Technical Skills</p> <p>-Use and understand the names of basic mechanisms: slider, lever, and pivot.</p> <p>-Use split pins or straws to create simple movement.</p> <p>-Join card pieces securely using glue or tape.</p> <p>-Test and adjust the mechanism if it does not work smoothly.</p>	<p>-Sew seams around three sides, stuff the cushion evenly, then finish the final side.</p> <p>-Add simple decorative features.</p> <p>Evaluating Skills</p> <p>-Test the cushion for durability and comfort.</p> <p>-Reflect on whether the final product meets the design criteria.</p> <p>-Provide peer feedback and compare different design choices within the class.</p> <p>Technical Skills</p> <p>-Use textile vocabulary with confidence: seam, seam allowance, pattern, template, decorative stitch, appliqué.</p> <p>-Thread a needle and tie off ends independently.</p> <p>-Finish seams neatly to prevent fraying.</p> <p>-Use basic tools safely: fabric scissors, pins, needles, templates, embellishment materials.</p>	<p>-Experiment with joining techniques: tabs, slots, glue, folds, and strengthening overlays.</p> <p>-Safely use tools: scissors, glue guns, rulers, bench hooks and junior saws (if applicable).</p> <p>Evaluating Skills</p> <p>-Test bridge prototypes for load-bearing capacity, stability, and span.</p> <p>-Record test results and compare against original design criteria.</p> <p>-Evaluate own and peer designs for what worked well and what could improve.</p> <p>-Reflect on how the design evolved through testing and iteration.</p> <p>Technical Skills</p> <p>-Use technical vocabulary confidently: truss, beam, arch, tension, compression, load, span, distribute, reinforce.</p> <p>-Identify weak points in a structure and apply appropriate reinforcements.</p> <p>-Explain how specific design features (e.g. triangle shapes or spacing of columns) improve performance.</p> <p>-Understand and apply basic engineering principles: a wide base is more stable, forces must be distributed, weight affects balance.</p>	
Summer			
<p>Topic: Bookmark</p> <ul style="list-style-type: none"> - Purpose – to save my page in my reading book - Product – bookmark - User – myself 	<p>Topic: African Safari Buggy</p> <ul style="list-style-type: none"> - Purpose – to transport a Lego family across the desert - Product – buggy - User – Lego family 	<p>Topic: Buzz Wire Game</p> <ul style="list-style-type: none"> - Purpose – to create a challenge game - Product – buzz wire game - User – friends 	<p>Topic: Bunting</p> <ul style="list-style-type: none"> - Purpose – to create décor for celebration assembly - Product – bunting - User – School Community
<p>Knowledge:</p> <p>By the end of this unit, pupils will know:</p> <p>Design</p> <p>-That bookmarks are used to mark pages and should be flat, lightweight and functional</p> <p>-That designs can be personalised using decoration such as colour, patterns, initials, or pictures</p>	<p>Knowledge:</p> <p>By the end of this unit, pupils will know:</p> <p>Design</p> <p>-That products can be designed for challenging environments (e.g. buggies need to move over sand).</p> <p>-That a detailed design includes dimensions, materials, purpose, and specific functional features.</p>	<p>Knowledge:</p> <p>By the end of this unit, pupils will know:</p> <p>Design</p> <p>-That a product should be designed for a specific user and purpose (e.g. a game for younger children to practise hand-eye coordination).</p> <p>-That the layout and structure of a product affects how easy, safe, and fun it is to use.</p>	<p>Knowledge</p> <ul style="list-style-type: none"> • Understanding of materials • Production processes • Design communication • Safety and sustainability •

<p>-That we must design for a purpose and user, e.g. for yourself, a friend, or as a gift Make</p> <p>-How to select and use fabric and other materials appropriately (e.g. felt, thread, ribbon)</p> <p>-That fabric can be cut into simple shapes using a template</p> <p>-That sewing joins pieces of fabric together using needle and thread</p> <p>Evaluate</p> <p>-That products can be evaluated based on appearance, function, and quality of finish</p> <p>-That we can compare our product to our original design and suggest ways to improve</p> <p>Technical Knowledge</p> <p>-That running stitch is a basic hand stitch used to join fabric</p> <p>-That fabric frays, and stitches help hold fabric together</p> <p>-That decoration techniques like drawing, gluing, or stitching can be used on textiles</p>	<p>-That selecting materials and mechanisms should be based on the needs of the terrain (e.g. sand requires larger wheels, strong axles). Make</p> <p>-That an effective vehicle needs accurately measured and cut components to ensure smooth movement.</p> <p>-That different types of wheel and axle mechanisms (e.g. fixed vs free-moving axles) affect how a vehicle travels.</p> <p>-That friction, balance, and weight distribution influence how vehicles move on rough surfaces.</p> <p>Evaluate</p> <p>-That evaluating includes performance testing under different conditions (e.g. bumpy terrain, slopes).</p> <p>-That improvements should be based on design criteria and performance feedback.</p> <p>-That real-world vehicles are evaluated for both function and efficiency.</p> <p>Technical Knowledge</p> <p>-That wheels and axles must be aligned and fixed properly to ensure smooth travel.</p> <p>-That materials chosen for the chassis and wheels affect durability, movement, and load-bearing capacity.</p> <p>-That a buggy can be strengthened using reinforced joins, bracing, and symmetry in design.</p>	<p>-That planning for an electrical component involves including a power source, output, and switch/control mechanism. Make</p> <p>-That building an electronic game involves integrating a simple circuit into a stable structure.</p> <p>-That accuracy in shaping and joining materials (e.g. base, wire track) affects the performance of the game.</p> <p>-That combining materials (wood, card, wire, and electrical components) requires careful planning and assembly.</p> <p>Evaluate</p> <p>-That a successful product must meet criteria such as function, safety, sturdiness, and aesthetic appeal.</p> <p>-That user testing and feedback are important tools in refining a product.</p> <p>-That problems in prototypes (e.g. loose wires, unreliable buzzers) can be identified and solved through iterative testing.</p> <p>Technical Knowledge</p> <p>-How a simple electrical circuit works (battery + wire + buzzer/sound/light).</p> <p>-That a closed circuit allows electricity to flow, and an open circuit stops it.</p> <p>-That some materials are conductors (metal wire) and others are insulators (plastic, wood).</p> <p>-That joining different materials requires selecting appropriate tools and techniques (e.g. using crocodile clips or soldering for stronger connections).</p>	
<p>Skills:</p> <p>Design Skills</p> <p>-Generate ideas for bookmark shape and decoration based on user and purpose</p> <p>-Use simple templates or stencils to create consistent shapes</p> <p>-Draw labelled designs showing colour choices, personalisation and stitching lines</p> <p>Making Skills</p> <p>-Cut felt or fabric accurately using scissors and templates</p>	<p>Skills:</p> <p>Design Skills</p> <p>-Generate annotated designs showing chassis shape, axle positioning, and wheel type suited for sand.</p> <p>-Select materials with specific functions in mind (e.g. wide wheels for grip, cardboard for lightness).</p> <p>-Create design criteria based on the needs of a sandy environment</p> <p>Making Skills</p> <p>-Measure, mark, and cut accurately using rulers and templates.</p>	<p>Skills:</p> <p>Design Skills</p> <p>-Identify the purpose and audience for the buzz wire game (e.g. younger children, as part of a school fair).</p> <p>-Develop annotated designs showing: circuit layout (battery, buzzer, wire path), materials (base, handles, insulation), measurements and aesthetics</p> <p>-Use cross-sectional diagrams to show how components fit together.</p> <p>Making Skills</p>	<p>Skills</p> <ul style="list-style-type: none"> • Accurate practical construction • Creative design development • Independent planning • Critical evaluation

<p>-Thread a needle (with support) and use a running stitch to sew around the edges or for decoration</p> <p>-Add embellishments such as buttons, ribbon, names or shapes using glue or stitch</p> <p>Evaluating Skills</p> <p>-Talk about what went well and what could be improved in their bookmark</p> <p>-Compare the final product to the design plan and identify any changes</p> <p>-Give peer feedback on neatness, strength of stitching and creativity of design</p> <p>Technical Skills</p> <p>-Practise and apply running stitch to join fabric or decorate</p> <p>-Use pins or clips to hold fabric in place while sewing (with adult support)</p> <p>-Understand and apply safety rules: using scissors safely, handling needles carefully, and tying off threads securely</p>	<p>-Construct a strong chassis using card, dowels, and reinforcing techniques.</p> <p>-Assemble a working axle system using dowels, spacers (e.g. washers or straw), and wide wheels.</p> <p>-Ensure wheels rotate freely and parallel to one another.</p> <p>Evaluating Skills</p> <p>-Test the buggy on sand or textured surfaces for smooth movement and speed.</p> <p>-Identify and record areas for improvement.</p> <p>-Use performance feedback to suggest design refinements.</p> <p>Technical Skills</p> <p>-Use technical vocabulary confidently: chassis, axle holder, free-moving axle, friction, load-bearing, terrain.</p> <p>-Build structures that support movement without tipping, using symmetrical designs and even weight distribution.</p> <p>-Understand how changing variables (e.g. wheel size, axle spacing) affects performance.</p> <p>-Use tools safely and independently: saws (with support), glue guns, clamps, hole punches, measuring tools.</p>	<p>-Construct a working circuit using a battery, wires, and a buzzer or light that triggers when the handle touches the wire.</p> <p>-Shape and fix a steady wire path using thick wire (e.g. coat hanger wire) mounted securely into a base.</p> <p>-Create a handle with a metal loop that completes the circuit on contact.</p> <p>-Use safe handling techniques with tools (e.g. wire cutters, glue gun, screwdriver).</p> <p>-Assemble the base from wood, card or other appropriate materials using joins and adhesives.</p> <p>Evaluating Skills</p> <p>-Test whether the circuit works reliably and if the game offers an appropriate level of challenge.</p> <p>-Evaluate whether the final product meets design criteria (e.g. "Is it sturdy, engaging, and functional?")</p> <p>-Use peer and self-assessment to reflect on: construction quality, electrical reliability, aesthetic appeal</p> <p>-Suggest and implement design improvements</p> <p>Technical Skills</p> <p>-Build a closed circuit using components correctly and safely.</p> <p>-Identify and correct faults in simple circuits</p> <p>-Use DT/electrical vocabulary confidently: circuit, buzzer, conductor, insulator, connection, switch, output.</p>	
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