



Year 1 Medium Term Planning for the Learning Challenge Curriculum

Term: Autumn

DT Project: Rolling Toy

<p><u>Previous Learning</u> Exploring the properties of materials with regard to how strong/heavy they are.</p>	<p><u>New Knowledge /Consolidation</u> Exploring new joining techniques (tabs & brackets) to increase the strength of a model.</p>	<p><u>End of Project Outcome</u> To create a simple structure or toy that used a cardboard tube securely joined to another component (i.e. wheel or base).</p>	<p><u>Environmental Links</u> Discuss the concept of reusing materials (tubes) and what can be recycled and what can't be recycled (Sellotape).</p>	<p><u>Key Inventors/People</u> N/A</p>	<p><u>Project Vocabulary</u> Explore, Compare, Risk & Safety Plan, Choose & Design Attach, Join & Cut Equipment & Tools Strengthen Tab & Bracket Change & Improve</p>
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Section	Lesson	Key Skills	Learning Objective & Activity
Explore	1	<ul style="list-style-type: none"> • Research similar existing products. • Talk about existing products considering: use, materials, how they work, audience, where they might be used • Talk about existing products, and say what is and isn't good 	<p><u>To investigate how the size & position of wheels effects how effectively a toy moved.</u> Use a range of toy vehicles on the Beebot mats to investigate how easy they are to push.</p> <p>Discuss what toys were easier to move and why – look at wheel position, number of wheels and wheel size.</p>
Plan	2	<ul style="list-style-type: none"> • Think of their own ideas and be able to explain what they want to do. • Explain what the product is for, and how it will work. • Use pictures and key words to design and explain. • Design a product with an awareness of the design criteria. • Begin to use simple ICT to design using previous experience. 	<p><u>To use different emotions to create a design for their wheels. To consider the size and position of materials.</u> Use brushes on a pre-prepared Seesaw template to decorate their wheels (set size) as a face showing a chosen emotion.</p> <p>Indicate whether they will use a thin (tin foil) tube or fat (kitchen roll) tube as the body of their “roller”. Indicate where the wheels will be positioned (level = runs straight, both wheels off to one side = ditherer, each wheel off to opposite sides = wanderer). Key words to be used on the template.</p>

<p>Make</p>	<p>3</p>	<ul style="list-style-type: none"> • Select tools and equipment to cut, shape, join & finish. • Measure, mark out, cut and shape, with support • Try to use finishing techniques to make product look good • Begin to measure and join materials, with some support • Describe differences in materials • Suggest ways to make material/product stronger • Explore and understand effective ways to join with a product. 	<p><u>Make a rolling toy that is robust using different materials.</u> Use developing cutting skills to cut out their wheels and resize the tube used for the body (focus on keeping work tidy if possible/finishing techniques). As a class, discuss the difference between using only glue to join the tube to the wheels and using brackets or tabs (strengthening techniques when joining).</p> <p>Use either brackets or tabs to join the components and use tape to further strengthen. Explore the use of different tapes and discuss the differences.</p>
<p>Evaluate</p>	<p>4</p>	<ul style="list-style-type: none"> • Talk about my work, linking it to what I was asked to do • Talk about things that other people have made • Begin to talk about what could make product better 	<p><u>To compare what was planned with what was produced.</u> Use a paper handout to compare how the finished toy moved and what it looked like in comparison with the choices they were made on the plan.</p> <p><u>To consider what went well and what didn't.</u> Class discussion based around the statement "I found .../easy ... because", in my opinion ... because...</p> <p>Where there any bad things (negatives) about the toy you produced? Mind map responses.</p>