



## Year 1 Medium Term Planning for the Learning Challenge Curriculum

Term: Autumn

DT Project: Rolling Toy

<u>Previous Learning</u>	<u>New Knowledge /Consolidation</u>	<u>End of Project Outcome</u>	<u>Environmental Links</u>	<u>Key Inventors/People</u>	<u>Project Vocabulary</u>
Exploring the properties of materials with regard to how strong/heavy they are.	Exploring new joining techniques (tabs & brackets) to increase the strength of a model.	To create a simple structure or toy that used a cardboard tube securely joined to another component (i.e. wheel or base).	Discuss the concept of reusing materials (tubes) and what can be recycled and what can't be recycled (Sellotape).	N/A	Explore, Compare, Risk & Safety Plan, Choose & Design Attach, Join & Cut Equipment & Tools Strengthen Tab & Bracket Change & Improve

Section	Lesson	Key Skills	Learning Objective & Activity
Explore	1	<ul style="list-style-type: none"> <li>Talk about &amp; explore existing products, identifying what is good or could be improved.</li> <li>Express personal opinions on products.</li> <li>Begin to identify individual features that affect how products work (e.g., wheel size or position).</li> </ul>	<p><b><u>To investigate how the size &amp; position of wheels effects how effectively a toy moved.</u></b></p> <p>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"> <li>Generate simple ideas through talking, drawing, or ICT.</li> <li>Represent ideas using basic drawings or models.</li> <li>Consider the purpose of a design (e.g., a bag to carry toys).</li> <li>Recognise different materials and their basic properties.</li> </ul>	<p><b><u>To use different emotions to create a design for their wheels. To consider the size and position of materials.</u></b></p> <p>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>
Make	3	<ul style="list-style-type: none"> <li>Begin to join materials using simple techniques.</li> </ul>	<b><u>Make a rolling toy that is robust using different materials.</u></b>

		<ul style="list-style-type: none"> <li>• Use familiar tools and equipment safely.</li> <li>• Create a fixed axel to create a rolling movement.</li> </ul>	<p>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).</p> <p>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>
<b>Evaluate</b>	<b>4</b>	<ul style="list-style-type: none"> <li>• Talk about own work, linking to what went well.</li> <li>• Identify simple ways to improve a product.</li> <li>• Express opinions about the work of others.</li> </ul>	<p><b><u>To compare what was planned with what was produced.</u></b></p> <p>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><b><u>To consider what went well and what didn't.</u></b></p> <p>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. Compare how different people approached the problem – what worked well?</p>