Year 1 Medium Term Planning for the Learning Challenge Curriculum

Term: Autumn DT Project: Rolling Toy

Previous Learning	**New Knowledge /Consolidation**	**End of Project Outcome**	**Environmental Links**	**Key Inventors/People**	**Project Vocabulary**
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**	• 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	**To investigate how the size & position of wheels effects how effectively a toy moved.** Use a range of toy vehicles on the Beebot mats to investigate how easy they are to push. Discuss what toys were easier to move and why – look at wheel position, number of wheels and wheel size.
Plan	**2**	• 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.	**To use different emotions to create a design for their wheels. To consider the size and position of materials.** Use brushes on a pre-prepared Seesaw template to decorate their wheels (set size) as a face showing a chosen emotion. 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.

Make	**3**	• 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	**Make a rolling toy that is robust using different materials.** 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). 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.
Evaluate	**4**	• 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	**To compare what was planned with what was produced.** 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. **To consider what went well and what didn't.** Class discussion based around the statement "It is good because…" Where there any bad things (negatives) about the toy you produced? Mind map responses.