St Bernadette's Catholic Primary Voluntary Academy

Subject Medium Term Planning - KS1 Advent Term Cycle B - Topic Blast from the Past

Mechanisms - Axles and wheels	Learning Objective	Activity	Key Knowledge (By the end of the lesson)		Vocabulary (Tier 3)
			Substantive	Disciplinary	
Lesson 1	DT L.O. 5 To be able to explore and evaluate a range of existing products.	Explore a range of existing toy cars/other toy vehicles. Look at a range of pull back, push cars etc and talk about how you make them move. Discuss how they have been made, materials used.	• Know that there are different types of toy cars/vehicles • Know that toy cars can be made in different ways and of different materials.		Vehicle material Push/ pull
Lesson 2	L.O. 8 To be able to explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Mechanisms - what makes the cars work, not work. Take apart a simple toy cars/vehicles and discuss how it has been put together. What job does each part do? Look at several examples, made from different materials - different wheels, thicknesses, sizes etc Look at free axles and fixed axles. How do the wheels move? How are they fixed on? Explore with construction kits Assemble some wheel, axle and axle holder combinations. Labelling the parts of a wheeled product.	• Know the names of the parts of a simple wheeled mechanism - naming axle, wheel • Know the difference between a fixed and a freely moving axle.	• Be able to put together the parts of a simple wheeled mechanism	mechanism wheel Axle (free, fixed) axle holder chassis body cab assemble
Lesson 3	L.O. 2 To be able to generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and,	Children to make a toy car/vehicle by recycling materials, packaging etc.	• Know what design criteria are and can identify them for making a product	• Make a mock up of their design using paper/cardboard	product design design criteria purpose Mock up

	where appropriate, information and communication technology.	The purpose will be a Christmas present for a younger child. Discuss the design criteria needed to be successful (record these). Children to try our their design ideas by making a mock up of their vehicle using paper and cardboard.			
Lesson 4	L.O. 4 To be able to select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	Making vehicles – different stages and processes. Focus on selecting materials - remembering the purpose and that they need to meet design criteria.	• Know and select suitable materials needed to make a product.		dowel
Lesson 5	DT L.O. 3 To be able to select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].	Making vehicles – different stages and processes. Focus on selecting tools - remembering the purpose and that they need to meet design criteria. Safety - use of saw. Demonstration how to mark out, hold and cut dowel. Finishing techniques	• Know and select suitable tools needed to make a product.	• Use simple tools safely (including a saw)	saw vice join adapt
Lesson 6	DT L.O. 6 To be able to evaluate their ideas and products against design criteria.	Evaluation of their finished toy against the design criteria. Communicate in groups how their vehicle works. Did they have to make changes? What would do differently next time? Photographs as try out toy cars/vehicles.	• Know why evaluating is an important part of the design, make, evaluate process.	• Evaluate a finished product against design criteria.	Evaluate user