

MTP – D&T – Autumn 1

Topic	Why are humans not like tigers? (Kapow: Y1 Mechanisms wheels and axels)				
N.C Learning Objectives	<ul style="list-style-type: none"> ● Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. ● Explore and evaluate a range of existing products. ● Design purposeful, functional, appealing products for themselves and other users based on design criteria ● Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and technology ● Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately ● Evaluate their ideas and products against design criteria 				
Vocabulary	Wheel A circular object that turns round. It can be fixed to a vehicle like a car or bicycle to allow the vehicle to move easily over the ground.	Axle A long straight rod which connects to a rotating part (e.g. the wheel of a car).	Mechanism Parts of an object that move together to make something work.	Axle holder The part of a mechanism which holds the axle steady.	Chassis The body of a car.
	LEARNING OBJECTIVE	STICKY KNOWLEDGE FACT	CORE KNOWLEDGE		
Lesson 1	We are learning to understand how wheels move.	To move, wheels need to be round and balance the body of the vehicle.	How do wheels move? After investigating how wheels move on a variety of different objects, create a simple version of a wheel mechanism, including an axle, wheel and axle holder		
Lesson 2	We are learning to identify what stops wheels from turning.	Wheels need to be attached to an axle and the axle needs to fit inside the axle holder, but must not be attached to the axle holder, otherwise the wheels will not turn properly.	Fixing broken wheels. Show examples of wheels that do not work and use problem-solving skills to diagnose the issue		
Lesson 3	We are learning to design a moving vehicle.	A design is used to plan for something. It can be made, drawn or written.	Designing a vehicle Learn about the different components of a vehicle with moving wheels and design a moving vehicle		

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Lesson 4	We are learning to build a moving vehicle.	Testing is when you find out if something works as it should.	Wacky races Using designs, build and then test vehicles
Outcome	Children will have created their own moving vehicle which they can race.		