

MTP – DT – Autumn 2

Topic	How have people like Rosa Parks helped to make the world a better place? (DT Kapow: Kapow Mechanisms, Making a moving Monster)				
N.C Learning Objectives	<p>Design</p> <ul style="list-style-type: none"> Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking and drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> Explore and use mechanisms (for example, leavers, wheels and axles) in their products Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria 				
Vocabulary	<p>Mechanism A Mechanism is a collection of parts that work together to create a movement when a force is exerted on it</p>	<p>Linkage Linkages are an essential part of many mechanisms. They can be used to change direction, alter speed and change the timing of moving parts.</p>	<p>Levers Levers are an essential part of many mechanisms. They can be used to change the amount, the strength and the direction of movement.</p>	<p>Pivot A pivot is a shaft or pin on which something turns.</p>	<p>Axle An axle is a shaft or pin on which something turns.</p>
	LEARNING OBJECTIVE	STICKY KNOWLEDGE FACT	CORE LEARNING		
Lesson 1	We are learning to look at objects and understand how they move	Levers and linkages are used to create and sometimes alter movement.	<ul style="list-style-type: none"> Children understand that mechanisms are a collection of moving parts that work together in a machine Children know that there is always an input and output in a mechanism Children can identify mechanisms in everyday objects Children understand that a lever is something that turns on a pivot 		

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			<ul style="list-style-type: none"> • Children understand that a linkage is a system of levers that are connected by pivots
Lesson 2	We are learning to look at objects and understand how they move	An input is the energy that is used to start something working and an output is the movement that happens as a result of the input.	<ul style="list-style-type: none"> • Children understand that mechanisms are a collection of moving parts that work together in a machine • Children know that there is always an input and output in a mechanism • Children can identify mechanisms in everyday objects • Children understand that a lever is something that turns on a pivot • Children understand that a linkage is a system of levers that are connected by pivots
Lesson 3	We are learning to explore different design options	Using a design keeps you focused. It shows the steps you need to take from the beginning of the process, through to the making, implementation, and finally the evaluation.	<ul style="list-style-type: none"> • Children understand that linkages use levers and pivots to create motion • Children think of two of their own points to add to the class Design Criteria • Children draw two moving monster designs that meet all points of the Design Criteria • Children includes the linkage that will be used to make a moving monster
Lesson 4	We are learning to make a moving monster	It is important for a designer to test and evaluate their finished product to make sure that the product is fit for purpose.	<ul style="list-style-type: none"> • Children make linkages by connecting levers and pivots • Children select the appropriate materials according to their characteristics • Children evaluate how functional my monster is and whether it meets the Design Criteria