TechCard Move-it Kit

Curriculum	Topics & Knowledge	The view from TechCard
Design & Technology KS1	Design purposeful, functional appealing products.	As a design and make resource, TechCard combines well with a wide range of materials and its accurate perforated grid makes models with working mechanisms achievable.
	Use a range of tools and equipment to perform practical tasks like cutting, shaping, joining and finishing.	Used on its own or combined with other materials using TechCard develops these important skills.
	Explore and use mechanisms for example, levers, sliders, wheels and axles.	The TechCard Move-it Kit investigates simple mechanisms such as wheels and axles, pulleys, cams and cranks. Pupils discover how these mechanism can be used to change the forces applied to them to make them more useful.
KS2	Understand and use mechanical systems in their products.	Pupils can more successfully incorporate mechanical components in their own products using TechCard elements to align wheels, axles, pulleys and cams etc.

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Science KS1	Develop scientific knowledge and conceptual understanding through specific disciplines including physics.	The TechCard Move-it Kit explores simple mechanisms and through these pupils encounter physics in action in the form of mechanics and devices that can change the forces applied to them. They also discover that the important force of friction is needed for many mechanisms to operate but also causes mechanisms to be less efficient.
	To enable pupils to experience and observe phenomenon including in the humanly constructed world around them.	The mechanical components used in the TechCard Move-it Kit are deliberately simple so that it is easy to see what's going on and why. Pupils discover that the complicated machines that we encounter in our daily lives are in fact combinations of these simple mechanisms.
KS2	Working Scientifically	Working scientifically is a key element of the curriculum. Working with TechCard, following instructions, working methodically and then, through the 'Follow' the Force' section, observing, testing and measuring are all important aspects of scientific method.
	Forces Understand the forces of gravity, air resistance and friction and that mechanisms can change the forces acting on them.	Using TechCard gives pupils the opportunity to investigate these important concepts in an engaging hands-on way. While pupils encounter all of these phenomenon working with the TechCard Move-it Kit, the kit is particularly focussed on how mechanisms can alter the speed, direction and power of the forces applied to them.

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Maths KS1	Measurement Compare, describe, measure and record distance, weight and time.	Assembling the models in the TechCard Move-it Kit develops measuring skills and an understanding of measurement. The kit explores mechanisms that can change the speed of a force. Exploring their models through the 'Follow the Force' section of the instructions, involves pupils in measuring and recording distances travelled in relation to time.
	Recognise two and three dimensional shapes.	Following the illustrated instructions pupils are introduced to the relationship between drawn two dimensional shapes and their drawn three dimensional representations. Furthermore, they see the relationship between these and the real three dimensional shapes they represent. This knowledge is extended as pupils form the rigid three dimensional shapes from the two dimensional elements supplied in the kit.
	Describe position, direction and movement.	Pupils investigate and describe their models in relation to the position, direction and movement of various key elements as they carry out the 'Follow the Force' section of the instructions.
KS2	Ratio & Proportion Solving problems involving the relative sizes of similar shapes and quantities.	Pupils investigate a range of mechanisms that proportionately change the forces acting on them. For example, increasing the speed of a force by a ratio of 2:1 by using a large pulley wheel to drive a smaller pulley wheel.