



Design and Technology- Mechanisms

Year group	product	Vocab	Skills spiral	Knowledge	Famous Technologist	Assessment
See EYFS curriculum plans for links to Mechanisms in Reception and Nursery.						
Y1	Moving parts card	sliders, levers, pivot, slot, guide, straight, curved, forwards, backwards design, make, evaluate, user, purpose, ideas	Generate ideas explaining what they can do. Develop, model and communicate their ideas through drawings and mock ups with card and paper. Plan by suggesting what to do next. Evaluate their card by discussing how well it works in relation to purpose and user. Select and use tools, explaining their choices to cut, shape and join paper and card. Use simple finishing techniques for their card.	Explore a range of existing books that use simple slides and levers. Know what sliders and levers are and know that it produces different types of movement.	N/A	
Y2	Moving vehicle	wheels, axles, vehicle, axle holder, fixed/free mechanisms, pegs, wooden wheels, plastic wheels, card triangles, paper straws, plasticine	Generate ideas through talking and using own experiences. Develop and communicate ideas through drawings and playing. Select from and use a range of tools and equipment to perform practical tasks. Select from and use a range of materials and components according to their characteristics.	Explore and evaluate a range of vehicles with wheels and axles. Know how to use wheels, axles and axle holders. Know the difference between fixed and free moving axles.	N/A	



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		design, make, evaluate, purpose, user	Evaluate their vehicle against the user and purpose.			
Y3	Moving mascot	pneumatics, components, attaching, tubing, syringes, pneumatic mechanisms, input movement, output movement, pressure, inflate, deflate, seal, air- tight user, purpose, function, prototype, design criteria, evaluate, annotated sketch	Generate realistic ideas and a class design criteria, focusing on the needs of the user. Use annotated sketches to develop and communicate ideas. Order the main stages of making. Select from and use appropriate tools with some accuracy. Select from and use finishing techniques suitable for their mascot. Evaluate their mascot against the design criteria and their user.	Find out about pneumatics mechanisms through videos, toys and balloons. Know the movements created by pneumatic mechanisms.		
Y5	Moving toy	snail cam, off centre, egg cam, follow, axle, shaft, crank, handle, frame structure, linear motion, rotary motion,	Generate innovative ideas by carrying out research using web- based resources. Develop simple design criteria. Develop and communicate ideas through discussion, annotated and exploded diagrams.	Investigate James Dyson and his inventions. Know that mechanisms have an input and output movement. Know how cams can produce different types of	James Dyson	



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		slider, follower, mechanism innovative, design criteria, design brief, design decision, functional, exploded diagram	Produce step by step plans and detailed lists of tools, equipment and materials. Select from and use a range of tools and equipment to make moving toys that are accurately assembled. Evaluate their toy against their design criteria. Test their moving toy with the user in mind and critically evaluate the quality of the design and function. Consider the views of others to improve their moving toy.	movement and change direction of movement.		
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