



Year group	One
Knowledge	<p>I can fold, tear and cut paper and card.</p> <p>I can cut along lines, straight and curved.</p> <p>I can use a hole punch.</p> <p>I can insert paper fasteners for card.</p> <p>I can begin to investigate how moving pictures are made using mechanisms.</p> <p>I can use a variety of materials to create a moving picture.</p>
Content	Investigate pop-up books which use a slide and or pivot mechanism. Using this research, design and create a moving image using a mechanism for a Christmas card.
End of topic expectations	<p>Children will create a simple mechanism using a template, card, hole punch and split pin.</p> <p>Children will be able to design a moving picture based on a theme.</p> <p>Children will be to use a simple mechanism of a slide or pivot.</p>
Key vocabulary	Mechanism, slide, pivot, split pin, template, moving, direction.

Year group	Two
Knowledge	<p>I can test out different axle fixings and discuss their strengths and weaknesses.</p> <p>I use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels.</p> <p>I can attach wheels to a chassis using an axle.</p> <p>I can use a wider range of tools to cut materials.</p> <p>I can use different methods to join materials e.g. glue and tape.</p> <p>I can create a vehicle which uses a mechanism of an axle.</p>
Content	Investigate how vehicles move/structure. Using this research, create a moon buggy that an Neil Armstrong used on his mission to the moon.
End of topic expectations	<p>Children will design and create their own model of a vehicle using an axle mechanism.</p> <p>Children will have expanded on different methods to cut and join materials.</p> <p>Children will be able to explain why they have used certain materials in their product.</p>
Key vocabulary	Mechanism, axle, chassis, wheels, hacksaw, bench hook, join.



Year group	Three & Four
Knowledge	<p>I can use mechanical systems such as levers and linkages.</p> <p>I can incorporate a circuit into a model and use ICT to control products.</p> <p>I can use electrical systems such as switches bulbs and buzzers.</p> <p>I can use linkages to make movement larger or more varied.</p> <p>I can create a mechanism of a lever or linkage to make something move.</p> <p>I can incorporate a circuit into a model.</p>
Content	<p><b>MECHANISMS:</b> Taking inspiration from rivers and mountains topic, create a model of the River Amazon and use levers and linkages to make fish move in the water.</p> <p><b>ELECTRICAL CIRCUITS:</b> Using research of existing products, children will design a toy with an electrical circuit which can be used at Christmas time.</p>
End of topic expectations	<p><b>MECHANISMS:</b> Children will use the mechanism of a lever and linkage to create a moving model from the area of study.</p> <p>Children will be able to discuss how a linkage and lever creates a different movement than previous studied mechanisms (a pivot or axle).</p> <p><b>ELECTRICAL CIRCUITS:</b> Children will design and create a toy for Christmas which uses an electrical circuit.</p> <p>Children will be able to discuss how to create a simple circuit using wires, batteries, bulb, switch and buzzer.</p>
Key vocabulary	<p>Mechanism, lever, linkage, movement, direction.</p> <p>Circuit, system, cell, battery, wire, bulb, buzzer, switch.</p>

Year group	Five & Six
Knowledge	<p>I can use a range of technical vocabulary appropriate to the project.</p> <p>I can use mechanical systems such as cams, pulleys and gears.</p> <p>I can program, monitor and control using ICT and use electrical systems such as motors.</p> <p>I can continue to use mechanisms to create a finished product.</p> <p>I can discuss my model and mechanism using technical vocabulary.</p> <p>I can use electrical systems to make my model move.</p>
Content	<p>Using research, create a moving model of a tropical storm in a rainforest. Use cams and pulley mechanisms and motor to make the model move.</p>

HOLY FAMILY CURRICULUM PROGRESSION – DESIGN AND TECHNOLOGY: MECHANISMS & ELECTRICAL SYSTEMS



End of topic expectations	Children will be able to discuss the mechanism used to make the model move. Children will be able to use a motor to make the model move.
Key vocabulary	Mechanism, pulley, cams, gears, movement, motor, electrical system.