



# Pinner Wood School



Year Group	5	Term	Autumn 1	Subject	D.T.	Topic	Mechanisms
						Key Question	KQ: How to create a well using a pulley system
Prior Learning and other Curriculum Links	<p>Year 2: I can safely measure and cut materials and components using a Coping Saw. I can build structures and discuss how they can be made stronger, stiffer and more stable.</p> <p>Year 3: I can strength frames using diagonal struts I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes</p> <p>Year 4: I can strength frames using diagonal struts I can create designs using annotated sketches, cross-sectional diagrams and simple computer programmes</p>					Skills Statements	<ul style="list-style-type: none"> <li>I can create prototypes to show my ideas.</li> <li>I can produce step by step plans to guide my making, demonstrating that I can apply my knowledge of different materials, tools and techniques.</li> <li>I can make detailed evaluations about existing products and my own products whilst considering the views of others to improve my work.</li> <li>I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger or more stable</li> <li>I can understand how to use more complex mechanical systems (gears, pulleys, cams, levers and linkages)               <ul style="list-style-type: none"> <li>I can build more complex 3D structures and apply my knowledge of strengthening techniques to make them stronger or more stable</li> </ul> </li> </ul>
Fundamentals	I can create prototypes to evaluate my design and, to inform step by step plans for my final product; showcasing my knowledge of different materials, tools and techniques.					Key Facts/Sticky Knowledge	<p>A pulley is a simple machine that makes it easier to lift or move a heavy object.</p> <ul style="list-style-type: none"> <li>A lever have a long arm and a fulcrum, which is where the arm pivots (a turning point).</li> <li>A load is the the object being lifted.</li> </ul>

	I can understand how to use more complex mechanical systems (gears, pulleys, cams, levers and linkages)		<ul style="list-style-type: none"> <li>- The effort is the force you need apply to that load through the arm to make the object move</li> <li>- A simple pulley consists of a wheel with two raised edges so that a string or rope will run around the wheel without falling.</li> <li>- Gears are wheels with teeth that slot together. When one gear is turned the other one turns as well.</li> </ul>
<b>Our Curriculum Journey</b>	<p><b>Journey:</b> The children will start their journey by looking at issues facing the Mayan in their environment. They will then look at different systems of extracting water from beneath the ground. Then will design a pully system to help the Mayan gather water from below the ground (a well). The children will then use different matierals to build the wells. They must ensure that the materials are suitable.</p>		
<b>Key Vocabulary (revisited)</b>	<p>Appliqué Design Embroider Evaluate Fray Glove puppet Mock-up Seam Sew Template</p>	<b>Key Vocabulary (new)</b>	<p>Compression Tension Mock-up Specification Pully Lever Gears</p>