

Year 5



Knowledge Organiser: D&T - Mechanisms

Project ideas; Toys, flags

Key Vocabulary			Key Learning
Mechanical system	Gear	Pulley	Understand that mechanical and electrical systems have an input, process and an output.
Lever	Cogs	Force	Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.
Drive belt	Driver	Follower	Know and use technical vocabulary relevant to the project.
Motor spindle			



In Year 3, you learnt:

Understand and use lever and linkage mechanisms.

Distinguish between fixed and loose pivots.

Know and use technical vocabulary relevant to the project.

Overview - Mechanisms

Gears are toothed wheels (cogs) that lock together and turn one another. When one gear is turned the other turns as well.



The wheels are usually different sizes, so that one gear speeds up to slow down the next gear. They therefore increase the power of a

turning force.

Pulleys are like gears, but the wheels do not lock together. The wheels are instead joined together by a drive belt. Pulleys can be used to affect the speed, direction or force of a movement.



Skills		
Design	Make	Evaluate
.Generate innovative ideas through research including surveys, interviews and questionnaires and discussion with peers to develop a design brief and criteria for a design specification. Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. and, where appropriate, computer-aided design	Produce detailed lists of equipment and fabrics relevant to their tasks. Write a step-by-step plan, including a list of resources required. Select from and use, a range of appropriate utensils, tools and equipment accurately to measure and combine appropriate ingredients, materials and resources.	Investigate and analyse products linked to their final product. Compare the final product to the original design specification and record the evaluations. Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. Consider the views of others to improve their work

An example of a mechanical system is...

Gears and pulleys are used to...

