ALDER COPPICE PRIMARY SCHOOL UNIT INFORMATION

SUBJECT: DT		YEAR 4	FOCUS: Mechanics	AUTUMN TERM UNIT 1: Mechanics – cams/gears
Knowledge Focus	**Design**	**Make**	**Technical knowledge**	**Evaluate**
National Curriculum Knowledge	• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.	• select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, accurately. • select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities.	• apply their understanding of how to strengthen, stiffen and reinforce more complex structures. • understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages. • understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs, buzzers and motors. • apply their understanding of computing to programme, monitor and control their products. • be able to make links scientific knowledge to design by using pulleys, cams or gears • use technical vocabulary linked to the project.	• investigate and analyse a range of existing products. • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • understand how key events and individuals in design and technology have helped shape the world.
Year 4	What Pupils will Know: • To know what gears and cams are and how they work • To know what that mechanisms need an input of force to create the output of motion • To know how to create movement using cams • Know that a cam will change rotary motion into linear motion. • To know how different shaped cams produce different movements. • Know how to explain the relationship between a cam and a follower. • To name some different types of motion