KS2 D.T: MECHANISMS KNOWLEDGE ORGANISER

Overview

Mechanisms are the parts that make something work.

Mechanisms are all around us. A set of related mechanisms used to create movement is called a mechanical system.

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.

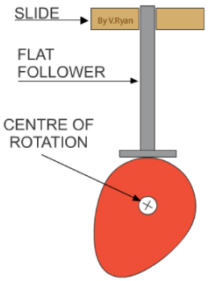
Pulleys are like gears, but the wheels do not lock together. The wheels are instead joined together by a drive belt. Pulleys can be used to affect the speed, direction or force of a movement.

A cam is a sliding or rotating part of irregular profile that contacts another part and makes that part move in a backward and forward motion.

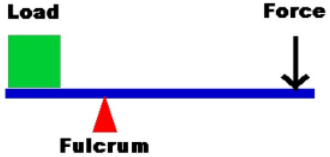
Example mechanisms

	Flagpole	The rope or belt pulled by the user fits into a groove in wheels at the top and bottom of the flagpole. This switches the direction of the force needed to lift/ lower the flag up and down the post.
	Can opener	When you turn the handle, it turns a small, round, metal traction gear. The notches in the gear allow it to grip onto the lip of the can. As the wheel moves around the rim of the can, the cutting wheel on the other side of the lip opens the can.
	Bicycle gears	The size of the gears (and number of teeth) determines how many times the rear wheel turns for every pedal stroke. A lower, easier gear (small chain ring, big cog) helps the user to accelerate faster, whilst a higher, harder gear (big chain ring, small cog) helps the user slow down.

Key Vocabulary		Golden Vocabulary
prototype	mechanical system	linkage
gear	cam	input
pulley	force	output
lever	follower	fulcrum
axel	slide	pivot
load	teeth/tooth	design
cog	drive belt	mechanism



Cam



Lever

Pulley

Gears