

User	Purpose	Functionality	Design decisions	Innovation	Authenticity
------	---------	---------------	------------------	------------	--------------



Year 5 Design Technology – Pulleys and Gears

Spring - Design, make and evaluate a moving vehicle for Reception children

Crucial Knowledge:

- Levers, gears and pulleys are all mechanisms that make jobs easier to do.
- Gears are toothed wheels that lock together and turn one another. The wheels are usually different sizes so that one gear speeds up to slow down the next gear. Gears are also used to change the direction of movement.
- Gears are found in: Cars (in the gearbox and many other places) Bikes (usually attached to the chain) Children's toys
- A pulley is a wheel with a grooved rim in which a drive belt can run.

Vocabulary:

Pulley: a grooved wheel over which a drive belt can run.

Motor: changes electrical energy into mechanical movement.

Spindle: the rod on the end of the motor onto which a gear or pulley is attached

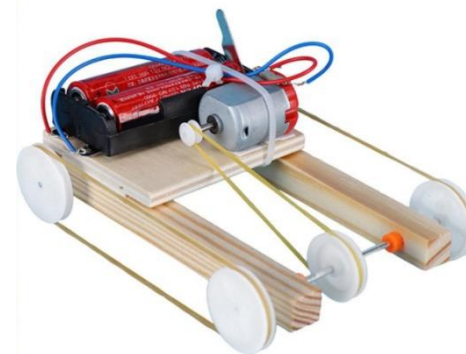
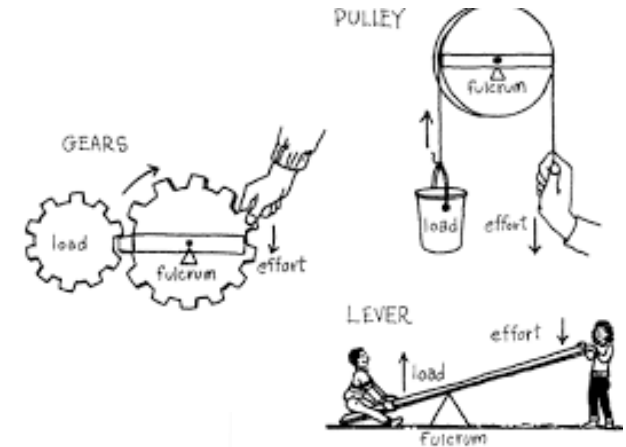
Axle: a shaped piece of rigid material used as a pattern for processes such as cutting out

Circuit: a complete path around which electricity can flow

Mechanical System: a set of related parts or components used to create movement.

We will be able to:

- Understand that mechanical and electrical systems have an input, process and an output.
- Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.



Driver Follower



The pulleys rotate in the same direction

