YEAR 3/4
SPRING

Design and Technology

MECHANICAL SYSTEMS

Mechanisms

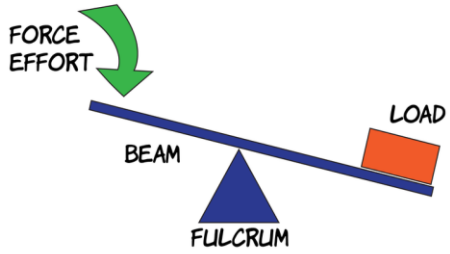
WHAT SHOULD I ALREADY KNOW?

- I know how to design products with a purpose.
- How to use a range of tools and materials to make my product.
- How to evaluate my product by identifying the strengths/ weaknesses and by assessing how closely it meets the success criteria.
- Build simple structures and understand mechanisms such as levers, sliders and wheels.

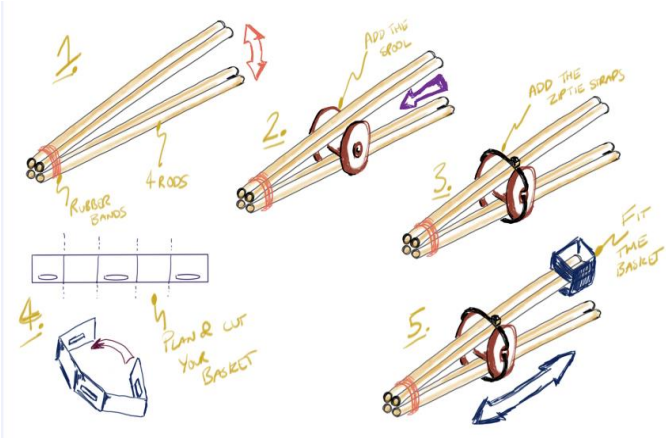
VOCABULARY

Lever	A simple machine that reduces the effort needed to lift a load.
Simple machine	A device used to make work easier.
Load	The load in our project is a clay ball or wooden ball. However, the load could be a stone or cannon ball. As the load is ejected from the catapult it becomes a projectile.
Rods	Wooden or metal long cylindrical sticks.
Spools	Cylindrical device on which things can be wound or can pivot.

A LEVER IS A SIMPLE CATAPULT



A lever is simply a beam or plank that rotates on a pivot called a Fulcrum. This doesn't change the amount of effort needed, but does make the 'work' easier because it spreads it out the effort/force over a longer distance- the length of the beam.



WHAT WILL I LEARN?

- Design – I will be able to develop a clear plan with an idea of the material and equipment that I will use, and take inspiration from similar products for my design.
- Skills – I will be able to use appropriate tools/ techniques to create a catapult to launch a load.
- I will be able to show my ideas to others using pictures and diagrams.
- Evaluate – I will be able to evaluate my work using tests to see if the product fulfils the success criteria.