



Eden Park Primary School Knowledge Organiser



Prior Knowledge

During this enquiry, you will need to use your knowledge from Year 1, 2, 3 and 4 when you learnt about Designing, making and evaluating

Mechanisms and mechanical systems/structures


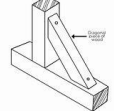


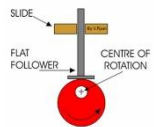


- Have an understanding of levers, pivots, wheels and axis.
- Be able to attach mechanisms to simple components.
- Be able to cut a slot
- Be able to join materials

The Powerful Knowledge we will take away from this Learning Enquiry (what will be learning)

- Whilst making structures we will understand how to strengthen, stiffen and reinforce them.
- We will investigate the use of mechanical systems and learn how a cam can be used to make moving parts
- We will research and analyse at many different moving toys to help to develop our own designs.
- We will communicate our ideas through discussion, annotated sketches, cross-sectional and exploded diagrams.
- We will make our toys using a wide range of tools, performing practical tasks such as sawing, glue gunning, shaping, joining and finishing.
- We will evaluate our final products against our design and how to make improvements.

Toy Story

Our Key Vocabulary

Word	Meaning	Image
analyse	To examine something in detail - look in detail at the cam toys and analyse how they work with the different parts.	
strengthen	To become stronger. Using triangles to strengthen corners of your structure - look at how and why triangles are a strong shape.	
mechanical	To be operated by a machine and the working parts of a machine.	
Cam, cog.	A rotating part in machinery, a toothed wheel that works with others. A wheel with a grooved ring.	
Linkage	A system of links - being accurate when making your toy to ensure that the cam links to the handle and the relationship between that and the moving part.	
Exploded diagram	Shows how a product can be assembled by showing all of the separate parts.	
Reinforce	strengthen or support (an object or substance), especially with additional material.	

Significant Stages

Analysing

Looking at and playing with toys that use cogs and cams to operate. Analysing how they work and why some are more successful than others.

Investigating

Looking at structures and what shapes have strength in buildings and bridges. Children to make their own structures using straws and blue tac - which is strongest and why?

Designing

Making CAM choices, background choices and figures to tell a story - linkages

Making

Measuring wood, sawing, hot glue-gunning corners with strengthening triangles, making cardboard cut outs of their chosen animals and backdrop, adding their chosen cam.

Evaluating

Evaluate their toy against others - compare with the other year 5 class

Focussed Literacy texts:

Inside the villains

Dragonology

Outcome:

Swap games with the year 5 class and evaluate

Share toys and iMovie with parents on teams - ask parents to fill in forms

If covid allows parents to come in (Date TBC)

