Wood Farm Primary School

'Be outstanding'

Project Summary

Phase: KS1, Year 2 **Term:** Summer 2

Project Title:	The Toyshop
Main curriculum area	STEM
Secondary curriculum area(s)	Science/DT

Project purpose:

In this project, the children will learn about, explore and create 3 mechanisms – lever, slider, and wheel and axle. They will understand what each mechanism is for and why they are helpful in everyday life. Children will then design a toy incorporating one of the mechanisms. They will consider who the toy is for, what the function of the mechanism will be and finally, how to make it appealing to the buyer. Children will go through the design cycle of ask, imagine, plan, create, test, improve. After making a prototype, children will evaluate it and consider adaptions that need to be made in order to improve its functionality, appeal and purpose. To complete their toy, children will paint, make packaging and price the item, ready for the toyshop.

Building on Prior Learning:	Preparing for future learning:	Connections to other curriculum areas:
In year 1, children constructed a statue for the King's coronation.		**Science** – Materials **Maths** – Money **Art** – product appeal using paint

Planning stages overview:

Engage	Develop	Innovate	Express
Show children a video of Miss Payne and Miss Key exploring different objects at home and wondering how they move. What did they notice? What questions did they have? Through discussion children will conclude that these are mechanisms which make things easier. Explain that this term we are going to become a toyshop and make toys with 'mechanisms'.	Teach children each mechanism separately – lever, slider, wheels and axels. Give chn the opportunity to make each mechanism. What do they find easy/difficult? What would they improve next time?	Children will individually design a toy using one of the 3 mechanisms they have learnt, thinking about its purpose, function and appeal. Once they have made their toy, they will evaluate it and be given another opportunity to adapt it, in order to improve it.	Children will paint their toys in order to make it more appealing and add cosmetic features to fulfil its function. They will package their toys in boxes with a cellophane window and price it accordingly.

Wood Farm Values

Opportunities for ambition:	Opportunities for beauty	Opportunities for connection
Children will create their very own toy to take home. Children will use tools in order to develop their mechanisms. Toy will be packaged and priced like a real shop.	Children will design and construct an appealing toy using paint and cosmetic additions.	Children will consider their target market before designing their toy – thinking about others and their wants and needs. Children will evaluate one another's work – children will learn how to deliver constructive feedback thoughtfully.

Knowledge and skills aims (taken from WFS 'I can' Progression document)

I can explore and use mechanisms (for example, levers, sliders, wheels and axels)

Design

- Design purposeful, functional, appealing products for themselves and other users based on design criteria
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable
- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.