

Design and Technology

Medium Term Plan

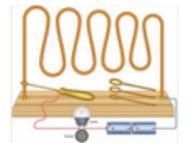
Y6- Structures and Mechanisms Autumn 2



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Class Text	Saga of Erik the Viking Saga of Biorn
Hook	Toys from the past- link to Y1 History metacognition
Topic Outcome	Children will design and create a 'steady hand' game
Topic Reflection	Children will design and produce a textile saga scene

Year Group	Learning
EYFS + KS1	Structures, systems and mechanisms Textiles Food Technology Design Make Evaluate
KS2	Structures, systems and mechanisms Textiles Food Technology Design Make Evaluate

Tier	Vocabulary
Tier 1	toy, game,
Tier 2	design, develop, evaluate, function
Tier 3	buzzer, circuit, system, conductor, switch



Previous Skills	Previous Knowledge	Previous Understanding
<p>Children will know how to use simple methods to fix wheels and axels to a product.</p> <p>Children can make simple mechanisms- pop up books, flap books</p>	<p>Children will know what wheels, axels and axel holders are.</p> <p>Children will know what a fixed and loose pivot are.</p> <p>Children can name simple commercial products that use wheels and axis to move.</p> <p>Children came name 2D and 3D shapes.</p>	<p>Children will understand the different between a pushing and pulling force</p>

Lesson	Strand of Learning	Learning Objective	Lesson Description	ARE Success Criteria	Opportunities for Deeper Learning
Lesson 1	Investigate past and present textile impact	LO: Create a design specification	Children will investigate different toys that use a circuit or buzzer system. They will evaluate the effectiveness of each design. They will use this knowledge to create a class design specification for a 'steady hand' game.	I can investigate systems and mechanisms. I can use prior knowledge to create a design specification.	I feel that this design should... For this design to be successful it must...
Lesson 2	Develop a technique	LO: Build a circuit	Children will learn how to build and test a buzzer circuit. Children will draw the circuit using technical symbols.	I can follow instructions to build a circuit. I can test variations on the circuit. I can draw a circuit using technical symbols.	Circuit, mechanism, buzzer, switch, conductor, insulator, crocodile clip, device, output
Lesson 3	Develop a technique	LO: Test a design	Children will design the aesthetics of their steady hand game—container, colour, shape, illustration and embellishment. Children will practise building paper nets to decide which fits the design specification.	I can design a game that will meet the design specification. I can build a variety of nets and test them against a design specification.	I believe that this design will appeal... The reason for choosing this net is...
Lesson 4	Design for a purpose	LO: Build a design	Children will build their steady hand game.	I can create a design and ensure it meets the design specification.	—
Lesson 5	Create to adapt	LO: Test and evaluate	Children will test and evaluate their steady hand game against the design specification.	I can objectively test my design against the design specification. I can give constructive opinion to other teams.	This steady hand game meets the design specification in these areas... I would improve upon this design by... In my opinion....

Knowledge:	Skills:	Understanding:
<p>Children will know that toys may contain mechanisms to make an effect- movement, sound, light up, spin.</p>	<p>Children will be able to build a circuit that includes a buzzer mechanism.</p> <p>Children will be able to design and build to a specification.</p> <p>Children will be able to test and evaluate a design against a design specification.</p>	<p>Children will understand the aesthetics of an item will have an effect on how appealing it is to a consumer/ user</p>