



Claremont Primary and Nursery School Design and Technology Curriculum



Year 1: Memory Box – Make a fairground ride – How can we build a fairground ride that moves?

NC Link: Mechanisms

Objectives:

- Be able to explore and evaluate an existing product – toy fairground models
- Be able to explore how to use a slider
- Be able to explore how to use a lever
- Be able to explore how to use a wheel mechanism
- Be able to design a fairground ride for Goose fair and use an annotated sketch to share decisions about product design
- Be able to use mechanisms to make a fairground ride move
- Be able to evaluate my fairground ride against the design criteria

Substantive Knowledge:

Design

- Design a purposeful, functional and appealing product
- Talk about their ideas.
- Generate ideas for products by drawing on their own experiences.
- Use pictures and words to convey what they want to make.
- Explain which materials they will use for their product

Make

- Make a product with construction materials
- Select from and use construction materials, according to their characteristics.
- Select from and use tools to help them make their product.

Evaluate

- Say what they like about their product and why
- Say whether the product does what it is meant to do

Technical knowledge

- Build structures and explore how they can be made stronger and more stable.
- Explore and use mechanisms to make the windmill turn

Disciplinary knowledge (Think like a designer):

- Safe use of simple tools to punch to cut and make holes materials
- Joining 2D and 3D materials- gluing, sticking
- Tying, fixing with split pins
- Creating basic hinges
- Creating levers and sliders
- Understanding simple mechanisms that allow movement – sliding mechanisms
- Know about and apply basic finishing techniques e.g. collage, painting, colouring to match a design brief.

Key Vocabulary:

purpose, design, draw, aesthetic, product, materials, parts, movement, wheels, axels, sliders, levers, stiffer, stronger, make, create



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Year 1: Great Fire of London – Create a boat to carry people to safety – What material will make the strongest boat?

NC Link: Structures

Objectives:

- Be able to evaluate a product’s ability to do a job well – in the context of evaluating different boats (toys and models)
- Be able to investigate and evaluate existing products
- Be able to explore different materials and decide which will be useful for making my product
- Be able to design a boat to carry people to safety – in the context of The Great Fire of London
- Be able to select tools and equipment to make a boat
- Be able to test my boat and evaluate it
- Be able to suggest improvements to my boat then retest and evaluate it

Substantive Knowledge:

Design

- Design a purposeful, functional and appealing product
- Talk about their ideas.
- Generate ideas for products by drawing on their own experiences.
- Use pictures and words to convey what they want to make.
- Explain which materials they will use for their product

Make

- Make a product with construction materials
- Select from and use construction materials, according to their characteristics.
- Select from and use tools to help them make their product.

Evaluate

- Say what they like about their product and why
- Say whether the product does what it is meant to do

Technical knowledge

- Build structures and explore how they can be made stronger and more stable.
- Explore and use mechanisms to make the windmill turn

Disciplinary knowledge (Think like a designer):

- Safe use of simple tools to punch to cut and make holes materials
- Joining 2D and 3D materials- gluing, sticking
- Understanding of structures and how these can be made stronger and more stable
- Know about and apply basic finishing techniques e.g. collage, painting, colouring to match a design brief.

Key Vocabulary:

purpose, design, draw, aesthetic, product, materials, parts, stiffer, stronger, make, create



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Year 1: Grow your own – Make a healthy sandwich – What do I need to make a healthy sandwich?

NC Link: Cooking and Nutrition

Objectives:

- Be able to name different fruit and vegetables
- Be able to explain where some food grows
- Be able to explain why we need to eat fruit and vegetables
- Be able to explore and evaluate existing products
- Be able to design a healthy sandwich for the school dinner menu
- Be able to prepare a healthy sandwich
- Be able to evaluate a product – did it meet the design brief?

Substantive Knowledge:

Design

- Design a purposeful, functional and appealing product
- Talk about their ideas.
- Generate ideas for products by drawing on their own experiences.
- Use pictures and words to convey what they want to make.
- Explain which ingredients they will use for their product

Make

- Select from and use tools to help them make their product.
- Understand what makes a healthy diet.
- Prepare a simple dish.

Evaluate

- Say what they like about their product and why

Technical knowledge

- Prepare ingredients safely and hygienically to produce simple dishes without using a heat source
- Understand what makes a healthy diet- e.g food groups
- Know that we should eat 5 portions of fruit or veg a day

Disciplinary knowledge (Think like a designer):

- Basic food handling, hygienic practices and personal hygiene, including how to control risks
- Safe use of a variety of tools and equipment to peel, cut, grate, mix and mould food
- The nutritional value of food stuffs in a balanced diet

Key Vocabulary:

purpose, design, aesthetic, product, ingredients, hygiene, healthy diet, portion, peel, cut, grate, mix, make, create