

CYCLE A D.T YEAR 3/4 OVERVIEW

Term	Half-term	Focus Area	Project / Outcome	Linked Artist / Designer / Inspiration	Relevant KS2 NC Objectives
Autumn	Autumn 2	DT	Materials - Mechanics Make mechanical toys inspired by the circus	Focus sculptor: Karel Grod Focus Text: Leon and the place between	● Use research and develop design criteria to inform the design of innovative and functional products. ● Generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes. ● Understand and use mechanical systems in their products (for example levers and linkages).
Spring	Spring 1	DT	Textiles Make and evaluate a Roman coin purse	Focus Text: Escape from Pompeii Historical study of Romans	● Select from and use a wider range of materials and components, including textiles, according to their functional properties. ● Use a range of tools and equipment to perform practical tasks accurately (e.g. measuring, cutting, joining and sewing). ● Evaluate their ideas and products against their own design criteria and consider the views of others.
Spring	Spring 2	DT	Sculpture Make a sculpture of a volcano.	Focus: When the giant stirred Geographical study of volcanoes	● Use research and develop design criteria to inform the design of functional and appealing products.

					● Select from and use a wider range of materials and components according to their characteristics. ● Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
Summer	Summer 2	DT	Designing A designed, built and evaluated prototype of an improved everyday product, inspired by the design process of James Dyson.	Focus designer: Jason Dyson	● Use research and develop design criteria to inform the design of innovative, functional and appealing products. ● Generate, develop, model and communicate ideas through annotated sketches and prototypes. ● Evaluate their ideas and products against their own design criteria and consider how to improve them.

Autumn 2 — DT: Materials & Mechanics — Mechanical toys inspired by circus

Theme/Context: The Circus

Text: Leon and the Place Between by Angela McAllister

Knowledge Statements:

I know that mechanical systems use parts such as levers, pivots and linkages to create movement.

I know that designers and sculptors can combine movement and structure to make interactive pieces.

I know that Karel Grod creates sculptures inspired by movement and imagination.

I know that strong structures need reinforcement to hold moving parts securely.

I know that different materials have different properties which affect how well they move and join together.

Skills Statements:

I can explore and investigate how levers and linkages create movement.

I can design a mechanical product based on a circus theme.

I can select and use materials suitable for movement and stability.

I can measure, cut and join materials accurately.

I can test and adapt my mechanism to improve movement.

I can evaluate how effective my final design is.

Final Outcome:

A moving circus-inspired mechanical model using levers and linkages.

Vocabulary:

Mechanism, lever, linkage, pivot, slot, movement, reinforce, structure, design, evaluate, stability, join

Spring 1 — DT: Textiles — Roman Coin Purses

Theme/Context: Romans

Text: Escape from Pompeii

Knowledge Statements:

I know that textiles can be joined together to create useful products.

I know that the Romans used purses and pouches to carry coins and small items.

I know that sewing techniques can affect the strength and appearance of a product.

I know that different fabrics have different properties for different purposes.
I know that decoration can make a product more appealing and personal.

Skills Statements:

I can design a coin purse for a purpose and user.
I can measure and cut fabric accurately.
I can use basic stitches such as running stitch and backstitch.
I can join fabric pieces securely.
I can add decorative features inspired by Roman patterns.
I can evaluate my finished purse for strength and function.

Final Outcome:

A sewn Roman coin purse designed, made and evaluated for practical use.

Vocabulary:

Fabric, stitch, seam, thread, needle, template, measure, cut, join, decorate, functional, durable

Spring 2 — DT: Structures — Volcano Model

Theme/Context: Volcanoes

Text: When the Giant Stirred

Knowledge Statements:

I know that structures need to be strong and stable to stand safely.
I know that volcanoes have layers and shapes that can be recreated using different materials.
I know that strengthening techniques can make models more durable.
I know that materials can be shaped and combined in different ways.
I know that models can help us understand real-world geographical features.

Skills Statements:

- I can design a volcano model using sketches and plans.
- I can shape materials to create the form of a volcano.
- I can join and assemble materials securely.
- I can strengthen and reinforce my structure.
- I can test my model for stability.
- I can evaluate how well my model represents a volcano.

Final Outcome:

A 3D volcano model showing shape, structure and key volcanic features.

Vocabulary:

Structure, reinforce, strengthen, stable, assemble, model, layer, crater, erupt, shape, design, evaluate

Summer 2 — DT: Designing — Everyday Product Innovation

Theme/Context: Innovation and Problem Solving

Focus Designer: James Dyson

Knowledge Statements:

- I know that good design solves problems and improves everyday life.
- I know that design engineers use research, sketching and prototypes to develop ideas.
- I know that James Dyson created thousands of prototypes before finalising his designs.
- I know that testing and evaluating are important parts of the design process.
- I know that products can be improved through feedback and redesign.

Skills Statements:

- I can analyse an existing product and identify strengths and weaknesses.

I can create annotated sketches to communicate design ideas.
I can design an improved product for a specific purpose and user.
I can build a prototype using suitable materials.
I can test and evaluate how well my product works.
I can suggest improvements for future designs.

Final Outcome:

A designed, built and evaluated prototype of an improved everyday product inspired by James Dyson.

Vocabulary:

Prototype, engineer, innovate, evaluate, function, design brief, user, purpose, sketch, adapt, improve, test