



Curriculum

Year 4 Scheme of Work for Design Technology

Term: Spring 2

Topic: Structures: Constructing Hadrian's Wall

Key Skills and Knowledge:

Key Skills

Developing, planning and communicating ideas

- Designing a castle with key features to appeal to a specific person/ purpose.
- Drawing and labelling a castle design using 2D shapes.
- Designing and/ or decorating a castle tower on CAD software.

Working with tools, equipment, materials and components

- Creating special features for individual designs.
- Making facades from a range of recycled materials.
- Constructing a range of 3D geometric shapes using nets.

Evaluating processes and products

- Evaluating own work and the work of others based on the aesthetics of the finished product and in comparison to the original design.
- Suggesting points for modification of the individual designs.

Key Knowledge

To know:

- To understand that wide and flat based objects are more stable.
- To understand the importance of strength and stiffness in structures.
- To know the following features of a castle: flags, towers, battlements, turrets, curtain walls, moat, drawbridge and gatehouse- and their purpose.
- To know that a façade is the front of a structure.
- To understand that a castle needed to be strong and stable to withstand enemy attack.

Reading and Writing Opportunities (Long and Short Activities)

Creative Ideas and Hooks

Research Opportunities

- How many forts are built along Hadrian's Wall? Can you name them?
- What shapes can you see within the forts? Can you use this knowledge to help you build your own?
- What materials are the forts made from? Why do you think this?

Writing Opportunities

- Provide a fact sheet about Hadrian's wall
- Progress report about the end product

Hooks

- Build a fort/ castle using different mathematical equipment- 2D/ 3D shapes. Can you name the different shapes you've used?

Links to PSHCE, Equality and British Values Work

Democracy

The children must take the views and opinions into account but still have the right to make their own choices.

The Rule of Law

- To understand the importance of safety rules when using tools.

Individual Liberty

- To understand that they are able to listen to others but can use their own ideas and design choices.
- To understand that many great design ideas originate from other cultures.

Mutual Respect

- To listen to and consider the ideas and opinions of others even if they differ from your own.
- To offer supportive comments in evaluations that will improve learning outcomes in a way that is objective but sensitive to the listener.

Previous Knowledge:

- Do I know how to make structures strong?

Key Vocabulary:

2D shapes , 3D shapes , Castle
Design criteria , Evaluate,
Façade , Feature , Flag, Net,
Structure, Tab, Recyclable
Scoring, Stable , Weak

Resources Available / Visits/Visitors

CAD software, rulers, 2D shapes, 3D shapes, scissors,
glue sticks, blu tac, tape, kitchen roll/ toilet roll tubes,
packaging, squared grid paper, materials for structure
(card), A3 coloured card materials/ textiles printed e.g.
stones, natural materials

Useful Websites:

<https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/structures-constructing-a-castle/>