

Design and Technology.

3D SKYLINE

Urban landscape mill town-cotton mills and housing

Part 1 – Investigate.

Objectives:

Children should learn:

- the names and the main features of mill buildings.
- to observe carefully and draw simple shapes.
- to be able to recognise and name mathematical shapes in the context of cotton mill buildings and houses.

Activities -

- take the children for a walk in the local environment to observe and discuss mill buildings and housing, or show them a good selection of photographs. (DVD-ROM)
- ask the children to draw examples of different types of mills and houses they have seen and label the main features, eg. doors, windows, chimneys, walls, roof and relate the main features to basic mathematical shapes, eg. walls-rectangles. They should include any specialist words they have learned.
- discuss the types of houses and mills they observed. Mention the names for houses, eg. Terraced, detached. similarities/differences? What are they made from, why?

Outcomes -

- recognise and name some of the main features of cotton mills and houses.
- show, through drawings, the main features of mill buildings and houses with a sense of proportion and perspective.
- recognise and name mathematical shapes, eg. square, rectangle, triangle, circle in the context of buildings.

Part 2 – Practical Tasks

Objectives:

Children should learn:

- joining techniques for 3D modelling using glues and masking tape.
- to make simple hinges.
- how to make structures stable.
- to use construction kits to aid modelling.

Design and Technology.

Urban landscape mill town-cotton mills and housing

Activities -

- explain how designers use models to communicate their ideas to others and develop their design.
- investigate and develop techniques for joining sheet materials and 3D containers with masking tape or glue. Discuss other fastenings.
- ask the children to try different ways of making hinges. Discuss the different methods.
- build rectangular frames using appropriate construction kit components. Show them to the children and ask them to explore making the frames more stable, eg. By adding further parts, by having a wider base or by constructing walls in different configurations. Discuss the outcomes with the children.
- the children could create hinges by scoring and bending card and joining a second piece with masking tape.

Outcomes -

Children:

- join 2D and 3D materials effectively in different ways.
- make effective hinges.
- understand how they can make their structures more stable.
- use construction kits to help develop their ideas.

Part 3 – Constructing the model.

Objectives:

Children should learn:

- to use their own experiences when developing ideas.
- to clarify their ideas through discussion.
- to make suggestions as to how to proceed.
- to assemble, join and combine 2D and 3D materials into a model.
- to use tools safely.
- to evaluate products they have made, commenting on the main features.

Design and Technology.

Urban landscape mill town-cotton mills and housing

Activities -

- discuss the different mill buildings and surrounding housing seen and encourage the children to think about which one they might make.
- show the children the materials available and ask them to discuss their ideas.
- ask the children to select the materials and join and combine them to construct a mill building or house choosing appropriate techniques.
- encourage the children to add finish and detail to the mill or house using paint and/or collage materials.
- encourage the children to talk about their finished mill/house and the main features they have added. Discuss strengths and areas for development. Highlight specific learning points drawn from the children's work.

Outcomes -

Children:

- apply what they have learned in parts 1 and 2 in their designing and making.
- explain how they are going to make their model.
- construct a model by joining and combining 2D and 3D materials in appropriate ways.
- use tools safely and effectively.
- talk about their finished model of a mill building or house saying what they have done well, what they are particularly pleased with, and which parts might have been done better.
- create a 3D industrial landscape using all the models and take photographs from different perspectives, paying particular attention to skylines and aerial shots.
- make a display of their work.

THIS 3D DISPLAY COULD BE COMBINED WITH THE PHOTOS AND ARTWORK PRODUCED IN THE ART AND DESIGN SCHEME : MILL TOWN.