



Design and Technology Knowledge Organiser

Year 1: Autumn Term – Structures

Freestanding Structures

Design, make and evaluate a playground structure for Mr Hazlehurst for suggestions to improve the school environment.

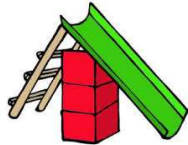


Key Knowledge

Learn this information

Freestanding Structures:

A freestanding structure stands on its own foundation or base without attachment to anything else.



Different materials:

A range of different materials can be used for 'junk modelling':



Designers:

Andrew Goldsworthy:

A British sculptor who uses natural materials such as sticks and stones.



Michelle Reader:

A British sculptor who reuses recycled materials to create unique colourful sculptures. She uses her art to make other people think about the environment and to recycle more and waste less.



Key Skills

Practise and perform these skills

Measure and draw:

Use a ruler to measure and draw structures.

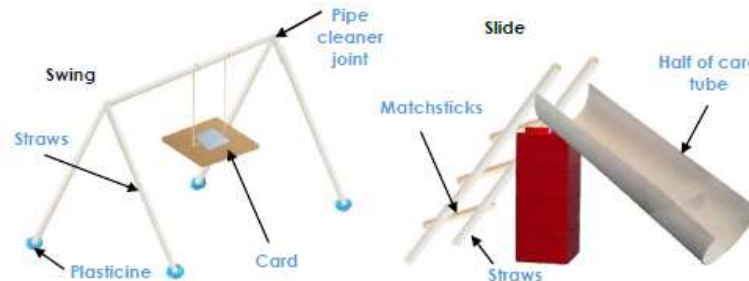


Cut accurately with scissors:

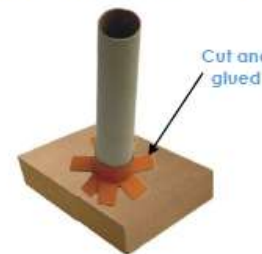
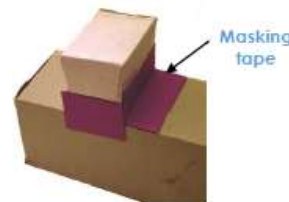
Cut with increasing accuracy.



Techniques for Assembling Freestanding Structures:



how children how to join sheet materials and reclaimed boxes together using different tapes and glues.



Key Vocabulary

Understand these key words

Vocabulary	Definition
Buttress	A structure added to a wall, tower or framework to make it more stable and to reinforce it.
Edge	The straight line where two surfaces meet.
Frame Structure	A structure made from thin components e.g. a tent frame
Freestanding Structure	A structure that stands on its own foundation or base without attachment to anything else.
Mock-up	3D representation of a product.
Shell Structure	A hollow structure with a thin outer covering.
Stable	The object does not fall over easily
Strong	It doesn't break easily.
Surface	The outside or any one side of an object.
Weak	It breaks easily.