



Year 2 Design and Technology - Structures: Freestanding Structures (DMEA)

Vocabulary:

Freestanding structure - a structure that stands on its own foundation or base without attachment to anything else

Frame structure - a structure made from thin components eg tent frame

Stable - in relation to a freestanding structure, how likely it is to fall over if force is applied

Buttress - a structure added to a wall, tower, or framework to make it more stable or to reinforce it

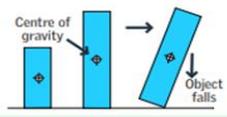
Brick bonding - a way of arranging bricks in a wall to make it stronger

Design criteria - what a project must have in order to be successful

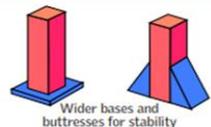
Mock-up - 3-D representation of a product

Strong - not easily broken, knocked over or damaged

Stiff - not easily bent



As a freestanding structure becomes taller its centre of gravity rises. Stability in a structure can generally be increased by making the base wider, making the base heavier or adding buttresses.



Ask the children to build and explore a variety of freestanding structures through focused tasks. Use a range of construction kits.

Year 2 Groblox:

Design

DT2S1: I can explain what I could make based on my own experiences and simple design criteria.

Make

DT2S4: I can select and use tools, skills and techniques and explain why I chose them.

Evaluate

DT2S5: I can discuss how well my product works, thinking about the purpose, the user and whether it meets the original design criteria.

Technical knowledge and understanding

DT2S6: I know how to make free standing structures stronger, stiffer and more stable.

Previous Groblox:

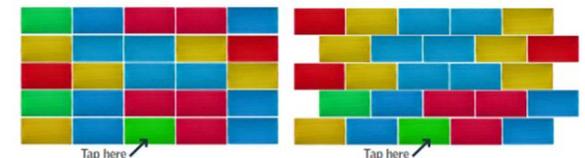
DTRS2: I can use a range of construction toys to build walls and towers.

Groblox Assessment

Code	Date	Traffic Light	Teacher	Date	Traffic Light	Teacher
DT2S1						
DT2S4						
DT2S5						
DT2S6						

Technical knowledge and understanding

Build walls with these different patterns. Tap away the centre brick in the bottom row of each wall in turn. What happens? Which wall is the strongest?





Year 2 Design and Technology - Textiles: Templates and Joining

Vocabulary:

Template/pattern - a shape drawn on paper to help cut the same shapes from fabric

Accurately - without mistakes or errors

Pin - a small, sharp piece of metal that is used to fasten things together

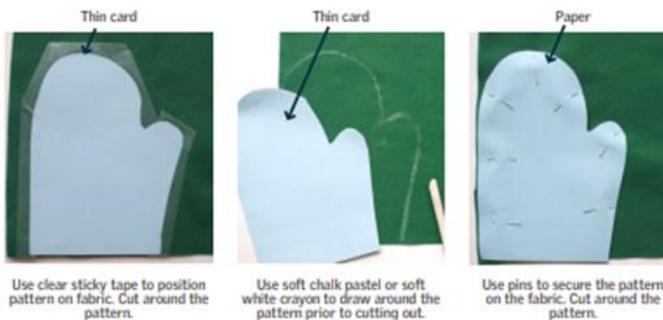
Needle - a small, sharp piece of metal with a hole in it for thread to pass through, used for sewing

Thread - a thin cord used for sewing

Sew - to join pieces of fabric together with stitches

Seam - a row of stitches joining two pieces of fabric

Three alternative ways of using templates and simple pattern pieces



Use clear sticky tape to position pattern on fabric. Cut around the pattern.

Use soft chalk pastel or soft white crayon to draw around the pattern prior to cutting out.

Use pins to secure the pattern on the fabric. Cut around the pattern.

Year 2 Groblox:

DT2T1: I can pin a template/pattern to fabric and mark around it.

DT2T2: I can accurately cut around a marked line.

DT2T3: I can join fabrics using running stitch

DT2T4: I know and can explain some technical vocabulary eg template/pattern, mark out, join, embellish.

Previous Groblox:

DT1T2: I can use fabric pens/paints, sequins and glue to embellish a product.

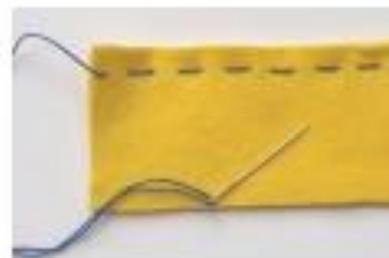
DT1T3: I can talk in simple terms about when it would be best to use the techniques of gluing, stapling and lacing.

Groblox Assessment

Code	Date	Traffic Light	Teacher	Date	Traffic Light	Teacher
DT2T1						
DT2T2						
DT2T3						
DT2T4						



Pinning



Sewing





Year 2 Design and Technology - Mechanisms: Wheels and Axles

Vocabulary:

Vehicle - a machine that transports people or goods from one place to another

Practical - making or doing something rather than only writing about it

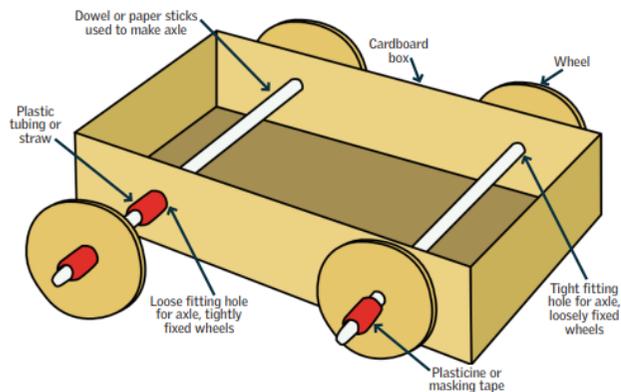
Components - are parts of something

Chassis - the frame or base on which a vehicle is built

Axle - a rod or bar that connects a wheel or wheels and allow them to rotate

Rotate - to turn or spin around a point in the middle

Two different ways to fix wheels



Year 2 Groblox:

DT2M1: I can make a vehicle with an axle and wheels.

DT2M2: I can perform practical tasks such as cutting and joining, using a range of tools and equipment, to allow movement.

DT2M3: I can choose from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.

DT2M4: I know and can talk about the purpose of wheels, axles and axle holders.

Previous Groblox:

DT1M3: I can select and use appropriate tools to cut, shape and join paper and card.

DT1M5: I know that different mechanisms produce different types of movement.

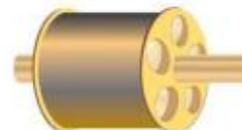
Types of wheels



Wood/card/MDF



Plastic



Cotton reels

Groblox Assessment

Code	Date	Traffic Light	Teacher	Date	Traffic Light	Teacher
DT2M1						
DT2M2						
DT2M3						
DT2M4						

