



Year 4 Design and Technology - Textiles: 2D Shape to 3D Product (DMEA)

Vocabulary:

Pattern pieces - a shape drawn on thin card or paper to an exact shape and size to help with marking and cutting out the fabric

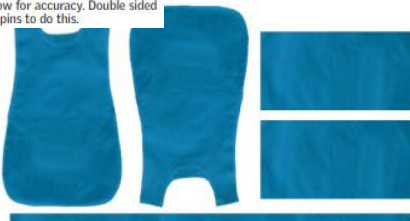
Functional properties - the qualities that are designed to be useful or practical, rather than attractive

Wastage - losing fabric that could have been used if the pattern pieces had been placed more efficiently

Seam allowance - extra fabric allowed for joining together two pieces of fabric - it is usually 1.5cm



Ensure template is secured to fabric to allow for accuracy. Double sided tape can be used instead of pins to do this.



Place pattern pieces carefully to avoid wastage.

Year 4 Groblox:

Design

DT4T1: I can produce annotated sketches, prototypes and pattern pieces.

Make

DT4T2: I can select fabrics according to their functional properties.

DT4T4: I can join fabrics along a seam allowance.

Evaluate

DT4T5: I can test my product against the design criteria and with the intended user.

Technical knowledge and understanding

DT4T6: I understand and can discuss the need for patterns and seam allowances.

Previous Groblox:

DT3T1: I can thread a large-eyed needle.

DT2T3: I can join fabrics using running stitch.

Groblox Assessment

Code	Date	Traffic Light	Teacher	Date	Traffic Light	Teacher
DT4T1						
DT4T2						
DT4T4						
DT4T5						
DT4T6						



Year 4 Design and Technology - Mechanisms: Pneumatics

Vocabulary:

Analyse - to look at something closely and understand how its parts work together

Pneumatic - a system that works using gases (air)

Syringe - a tube with a nozzle and plunger for sucking and blowing air or liquids

Compressed - something that is squashed, such as air in a tube

Pressure - the force used on an object or surface

Inflate - fill something with air or a gas to make it swell up

Deflate - remove the pressurised air to allow an object, like a balloon, to shrink

System - a set of related components used to create an outcome. Systems have an input, process and output. In a pneumatic system, the 'input movement' is where the user pushes or pulls a syringe or pump. The 'output movement' is where the object at the end of the tube moves.

Year 4 Groblox:

DT4M1: I can investigate and analyse, books, videos and products with pneumatic mechanisms.

DT4M2: I can generate realistic ideas and my own design criteria through discussion, focusing on the needs of the user.

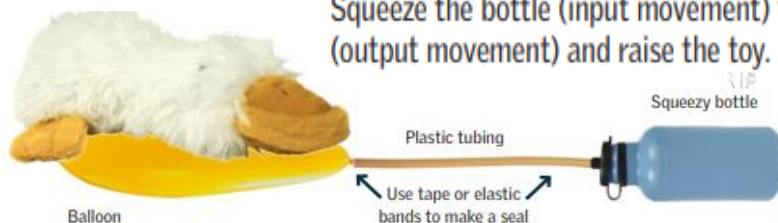
DT4M3: I can select and use appropriate tools with increasing accuracy to measure, cut and join materials such as tubing, syringes and balloons.

DT4M4: I understand how simple pneumatic mechanisms work.

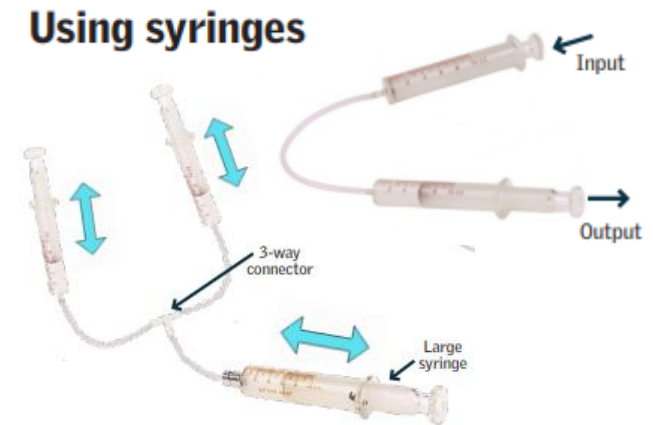
Previous Groblox:

DT3M3: I can order the main stages of making my product

Groblox Assessment						
Code	Date	Traffic Light	Teacher	Date	Traffic Light	Teacher
DT4M1						
DT4M2						
DT4M3						
DT4M4						



Squeeze the bottle (input movement) to inflate the balloon (output movement) and raise the toy.





Year 4 Design and Technology - Structures: Shell Structures

Vocabulary:

Collaboratively - working with others to achieve a shared goal

Cuboid - a solid body with rectangular faces

Face - a surface of a geometric shape

Edge - where two surfaces meet at an angle

Vertex - used to refer to the corners of a solid geometric shape, where edges meet

Prism - a solid geometric shape with ends that are similar, equal and parallel

Net - the flat or opened-out shape of an object such as a box

Scoring - cutting a line or mark into sheet material to make it easier to fold

Shell structure - a hollow structure with a thin outer covering

Aesthetic - relating to whether or not something looks pleasing

Year 4 Groblox:

DT4S1: I can work collaboratively through discussion to generate realistic ideas and design criteria, focusing on the needs of the user and purpose of the product.

DT4S2: I can explain my choice of materials according to functional properties and aesthetic qualities.

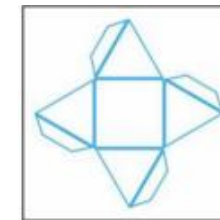
DT4S3: I can use appropriate tools to measure, mark out, cut, score shape and assemble with growing accuracy

DT4S4: I have a knowledge of nets and can create nets of cubes and cuboids

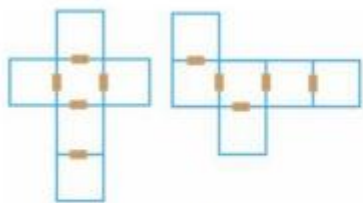
Previous Groblox:

DT3M4: I can select and use appropriate tools with some accuracy to cut, shape and join paper and card.

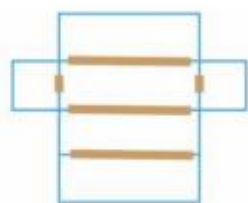
Groblox Assessment						
Code	Date	Traffic Light	Teacher	Date	Traffic Light	Teacher
DT4S1						
DT4S2						
DT4S3						
DT4S4						



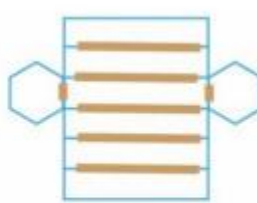
Add tabs, glue your paper net onto card and cut out



Nets for cubes



Cuboid net



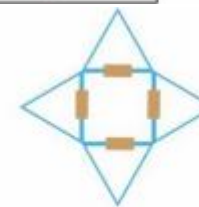
Hexagonal prism net



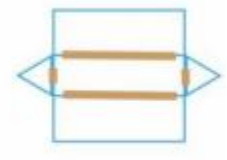
Tetrahedron net



Hexagonal based pyramid net



Square based pyramid net



Triangular prism net