



# Year 4 - Autumn - Design & Technology - Shell Structures

## What I already know...

Children will have had experience of using different cutting, joining and finishing techniques with paper and card.

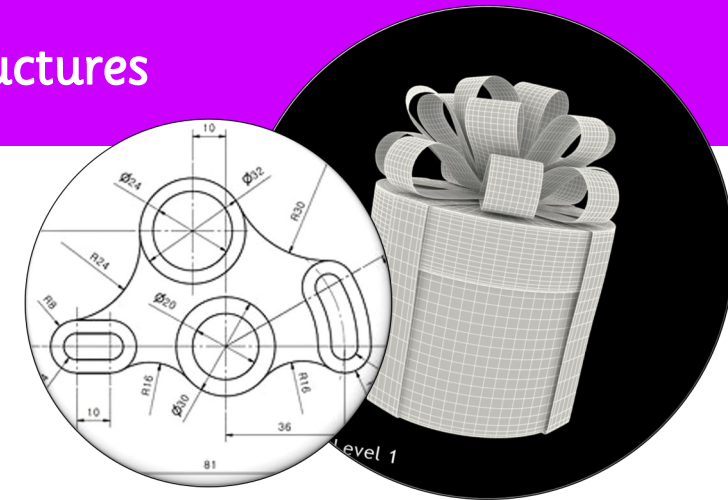
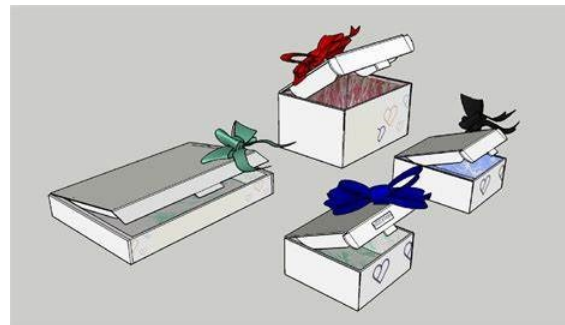
They will have a basic understanding of 2D and 3D shapes.

## Key Vocabulary

Shell structure	An outer box or packaging
net	A 2D shape which can be folded to make a 3D shape
scoring	Marking over lines to help create sharp neat folds.
CAD	Computer Aided Design. - using computers to design a product
accuracy	Measuring, cutting and working carefully to ensure the product works and is

## What I will learn...

- How to use a computer design programme to create nets.
- How nets can be used to create 3D shapes
- How to strengthen and stiffen the boxes.
- To evaluate a range of existing box and packaging designs.
- To help to create a design brief.
- To design a box which fulfills a design brief.
- To use CAD to help to create a product.
- To use scoring and cutting techniques.
- To evaluate their own product.



## Making a difference at The Merton

Children continue to consider how machines help us and start to think about how more complex machines work.

They will develop a greater understanding of the role of designers and engineers and the careers that are associated with these skills.

## Making a difference at home

Can you find out more about machines? Maybe try watching 'Grace's Amazing Machines' and see whether you spot any machines that use pneumatics?

Have you got any broken machines at home that you could take to pieces and look at how they work? (Check with an adult that you are allowed and that it is safe to do this first)