

Year 8 Homework 1

Structures: Materials and their Properties

From your classroom learning compare and contrast **Frame Structures** and **Shell Structures**. Use **Natural** or **Manmade** examples to show your understanding. One example for each category.

Draw or print the pictures on one sheet of A4 paper. **Annotate** (write notes) around the structural images.

Firstly, explain the difference between shell and frame structures, what are their uses?

Secondly, describe the properties and strength of the structures chosen and the material used (for example what is the material in a spider's web?) and explain where and why **reinforcement** might have been used, explain how it works.

Year 8 Homework 2

Forces

Investigate the following types of **Force** and explain how they work using picture and notes.

Draw or print the pictures on one sheet of A4 paper. **Annotate** (write notes) around the pictures.

- Compression
- Tension
- Torsion
- Shear

Year 8 Homework 3

The Work of Others: Designers

Investigate the work of the Italian designer **Ettore Sottsass**.

On A4 paper produce a **Mood board** using coloured drawings or a print out, a mood board is a collage of pictures/images showing his work and the work of the **Memphis** design group. In a **summary box** underneath the mood board write down a short paragraph about him and his most famous product.

Year 8 Homework 4

Identify **2 methods** for **'finishing'** timber. These methods should be used to protect and make the timber look more attractive.

On A4 paper using pictures and notes explain what **'finishes'** can be used; what sort of preparation is needed and how these finishes are applied to the timber. Pictures showing before and after finishing are very effective methods of responding to this task.