

Year 3 - DT Knowledge Organiser

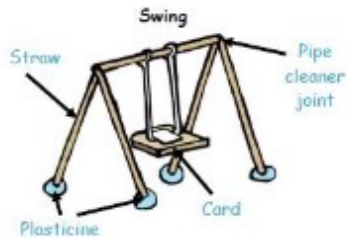
Construction Iron Age House



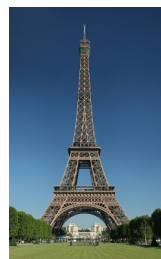
What I remember from Year 2...

- How to join a cardboard base together using glue, paper clips and masking tape.
- How to attach a dowel axle to a chassis using straws, plasticine or masking tape.

Key Knowledge...

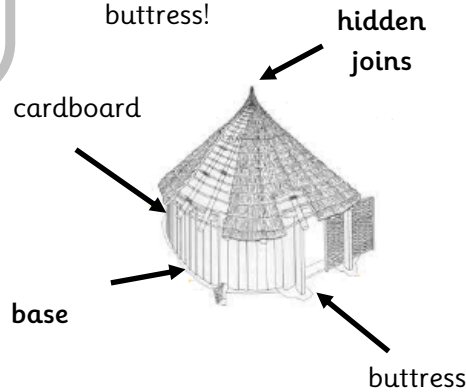


Examples of free standing structures in the world.



Design...

Build a free standing structure supported by a buttress!



A free standing structure is a structure that stands on it's own base without being attached to anything else.

Ludwig Miles Van de Rohe

A German-American architect. He became famous for designing the Barcelona chair.



Health and Safety...

Remember to keep your hand behind the edge of your ruler when you are scoring with your scissors.



Key Vocabulary...

Rigid - Unable to bend or be forced out of shape.

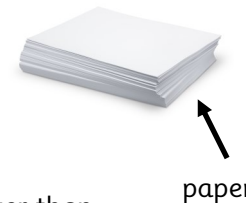
Hidden join - A join of 2 or more materials together which cannot be seen by others.

Mock up - A demonstration or practice of a technique or part of a product.

Score - A line cut or scratched into a surface of the material to help with folding.

Stability - When a structure stands or does not fall down.

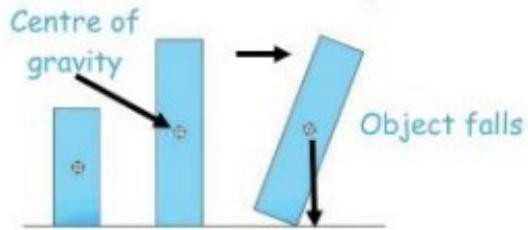
Base - The bottom of something considered as it's support.



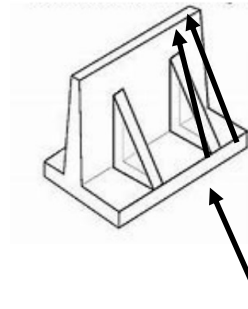
Some materials are better than others when creating a free standing structure because they are stronger and more **rigid**. E.g. cardboard is stronger than paper.

Key Knowledge...

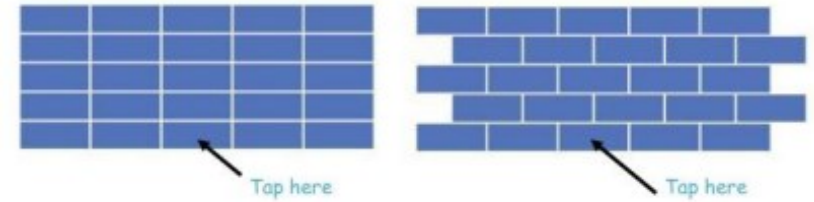
As a free standing structure becomes taller, its centre of gravity rises.



A buttress is a structure added to a wall, tower or framework to make it more stable and / or stronger.

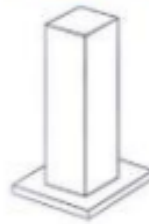


A buttress supporting a wall.

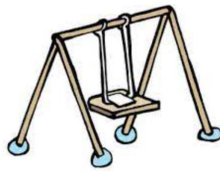


The arrangement of bricks in a wall improve the performance of the structure.

The wider the base, the stronger the structure.



Build some **mock up** free standing structures!



Evaluating..

Does it stand up on it's own?

What materials will you use?

How will you make it strong and stable?

Did it turn out how you wanted it to?

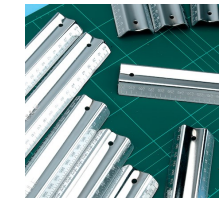
glue



sellotape



double sided tape



Use a metal ruler to draw accurate cutting lines.

Use scissors to **score** materials so that they can be folded more easily and accurately.

stapler



Different materials can be used to join sections of a free standing structure but only some create hidden joins.

Key Skills...