



| Key Vocabulary | | Definition | Examples of natural and man-made structures |
|----------------|---------------|---|--|
| 1 | Structure | A building or other object constructed from several parts. |   <p>Jacques Herzog and Pierre de Meuron Birds Nest Stadium, Beijing, China</p> |
| 2 | Support | Bear all or part of the weight of; hold up | |
| 3 | Weight | the heaviness of a person or thing | |
| 4 | Strong | able to withstand force, pressure, or wear. | |
| 5 | Rigid | unable to bend or be forced out of shape; not flexible | |
| 6 | Stable | (of an object or structure) not likely to give way or overturn; firmly fixed | |
| 7 | Base | the lowest part or edge of something, especially the part on which it rests or is supported. | |
| 8 | Materials | the matter from which a thing is or can be made. | |
| 9 | Layering | the action of arranging something in layers. | |
| 10 | Free-standing | Structures that can stand up without being attached to something else. Free-standing structures need to support their own weight and also the weight of the things/people using them. So that they can do this, freestanding structures need to be well-designed; strong, rigid and stable. | |

DESIGNING – What makes a strong, stable and rigid structure?

A structure that is stable is less likely to fall over.

- Structures are more stable when they have a wider base.
- Buttresses can also make a structure more stable. A buttress is something that is built against a structure to give it more stability.
- A structure that is strong and rigid is able to support more weight.
- Some materials are stronger and more rigid (stiffer) than others, e.g. card is stronger and more rigid than paper.
- Structures can also be made stronger and more rigid by making sure that parts and materials are properly joined together, e.g. with glue or tape.
- Folding and layering (adding an extra layer) of materials can also be used to strengthen and stiffen structures.



HEALTH AND SAFETY

Remove any jewellery and tie back long hair

Wear an apron and roll up your sleeves

Walk safely and calmly around the classroom

Keep your work area and floor area clean

Follow the teacher's cutting instructions

Washing your hands should be done before, during and after preparing food.

Finally, report all spillages and clean up properly after yourself, leaving the classroom tidy.