

Structures - Constructing a castle

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| 2D shapes | Flat objects with 2-dimensions, such as square, rectangle and circle. |
| 3D shapes | Solid objects with 3-dimensions, such as cube, oblong and sphere. |
| Structure | Something which stands, usually on its own. We will be focusing on buildings throughout this unit. |
| Design criteria | A set of rules to help designers focus their ideas and test the success of them. |
| Evaluation | When you look at the good and bad points about something, then think about how you could improve it. |
| Façade Fac | The front of a structure. |
| Feature | A specific part of something. |
| Stiff | A material that is stiff does not bend or move without force (a metal rod). |
| Net | A 2D flat shape, that can become a 3D shape once assembled. |
| Recyclable | Material or an object that, when no longer wanted or needed, can be made into something else new. |
| Scoring | Scratching a line with a sharp object into card to make the card easier to bend. |
| Stable | Object does not easily topple over. |
| Strong | It doesn't break easily. |
| Man-made | It is made by humans (buildings, sculptures, etc). |
| Tab | The small tabs on the net template that are bent and glued down to hold the shape together. |
| Weak | It breaks easily. |

Key facts

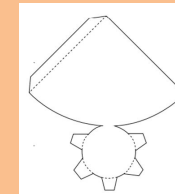
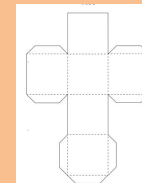
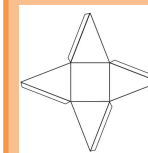
We will be testing our structures to see whether they will be well adapted to the extreme weather conditions (like those seen in Antarctica).

We will be testing the structures on whether they can withstand:

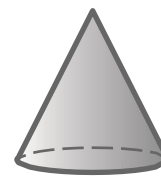
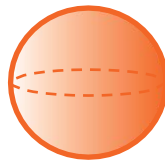
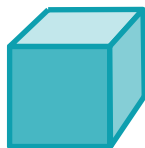
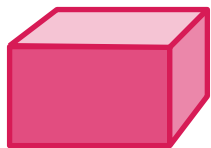
- Heavy snowfall (putting them under a weighted pressure).
- An earthquake (shaking the table to see if it remains stable).
- Strong winds (using a fan to test if it stays in one place).



We will also be using nets and recycled materials, to see what is most suited to building a structure.



Basic
3D
Shapes



Did you know?

Many buildings in Antarctica are on stilts. This allows snow to be blown beneath them, making it less heavy on the building.

