



Exploring the body

Exploring Support

One of the functions of the skeleton is to provide support. In this activity you're going to be finding out how a structure can support a load effectively.

You will need to work in a small team. Your team will be provided with the resources listed above. These can be varied but should be the same for all teams.

Resources required:

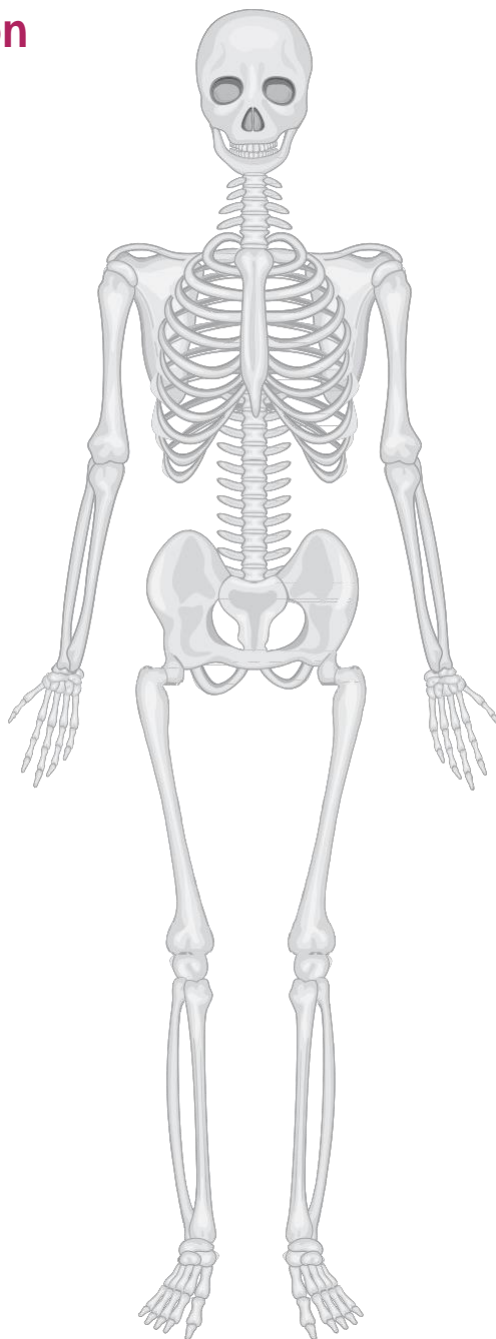
- a tennis ball (or similar)
- ten sheets of A4 paper (recycled is fine)
- a metre of sellotape



1. **Your task is to design and construct a structure that will support the ball as high above the table top as possible. The structure should be stable and may not be fixed to the table.**
 - What kind of structure do you think will work well?
 - How can you use the materials to produce something strong?
 - How can you make it stable?
2. **When you've made a structure, the class can then test and compare them.**
 - Look at the structures that were more successful - what seemed to be true about them? What features did they have that worked well?
 - Did they use tubes?
 - Was the structure broader at the top where it supports the ball?
 - How was it made stable?
3. **Now look at pictures of a skeleton and identify what makes bones such as legs, pelvis and backbone effective at support. Think about these features:**
 - Tubular structure (such as the backbone) being light and strong
 - Broader structure (such as pelvis and feet) providing stability



The human skeleton



Extension:

Is building a structure like this a good way of seeing how a skeleton provides support?

- In which ways was your structure trying to do the same thing as a skeleton does in supporting a weight?
- In which ways was your structure not working as a skeleton does?