Exploring the body

Resources required:

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

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.

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?

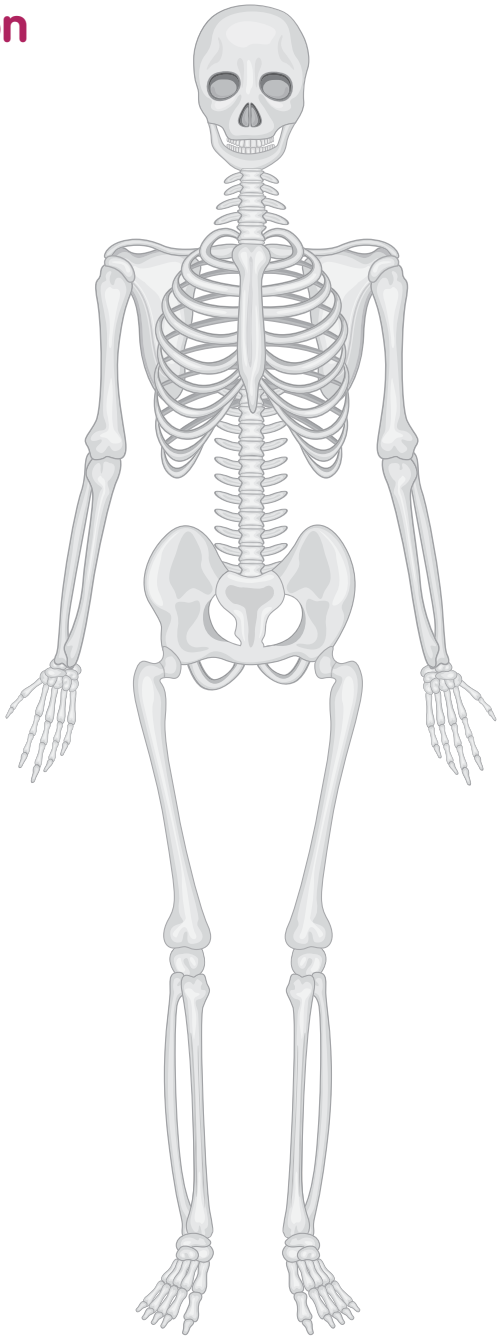
2. **When you've made a structure, the class can then test and compare them.**

- Look at the structures that were more successful – what seemed to be true about them? What features did they have which 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 the 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?