

Bendy bones

What you'll need:

- Two bones (e.g. chicken drumsticks)
- Vinegar

How you do it:

1. Soak one of the bones in vinegar for 2-3 days
2. Remove the bone from the vinegar using gloves and rinse well
3. Try to bend the normal bone and then try to bend the bone which has been soaked in vinegar – how do they compare?

The bones will be pre-soaked and rinsed so that they are ready to be handled by the children. One bone will be placed in a stoppered conical flask on the day of the event for demonstration purposes.

Ask the children to try and bend each of the bones.

Possible questions to ask:

- How do they feel?
- What might have happened?
- Do you know how many bones are in your body? 206
- Have you ever broken a bone?
- Do you know someone who has broken a bone?
- What it would be like if your bones were bendy?

How does it work?

Normally bones are strong, they do not break often and they do not bend. This is because they contain a very hard substance called calcium carbonate, which is made from calcium, carbon and oxygen. When bones are placed in vinegar, the calcium carbonate and the vinegar react and produce a gas called carbon dioxide. Can you see small bubbles on the surface of the bone in vinegar? This is the carbon dioxide being produced. Without calcium carbonate the bones become much softer - that's why we can bend them.

The handout explains that we get calcium from our diet and there will be a series of foods which contain calcium on display. Visitors can rank the foods in terms of calcium content on their handouts. There will be information cards in front of the foods which can be turned over to reveal the correct answers.