

Bendy Bones

Teacher Notes

Background

Bones are made of an amazing material. It needs to be strong but flexible. If they were brittle, like a piece of dry spaghetti, they would snap. If they were flexible, like an elastic band, they wouldn't support the body.

Bone is a composite material, which means it is made up of more than one chemical. Its strength comes from the mineral calcium phosphate, and its flexibility from an organic material, collagen.

Students can carry out an investigation to observe what happens when the calcium phosphate is removed from a chicken bone.

Equipment per group:

- Uncooked chicken bone. *These can be from the wing, thigh, or leg. The thicker the bone, the longer it will take for the experiment to work.*
- Distilled white vinegar.
- Plastic container with lid, or clingfilm to cover.
- Tongs or forceps to remove the bone from the vinegar.
- Plastic container filled with clean water. *This will be used to rinse the bone after the experiment.*
- Paper towels.

Health and Safety:

- Wash raw bones in hot soapy water before handling by pupils.
- Ensure good hygiene when handling raw bones, wash hands after use and avoid hand to mouth contact.
- Ensure that all participants are free from allergies to raw chicken.
- Ensure surfaces are cleaned with antibacterial wipes after activity.