



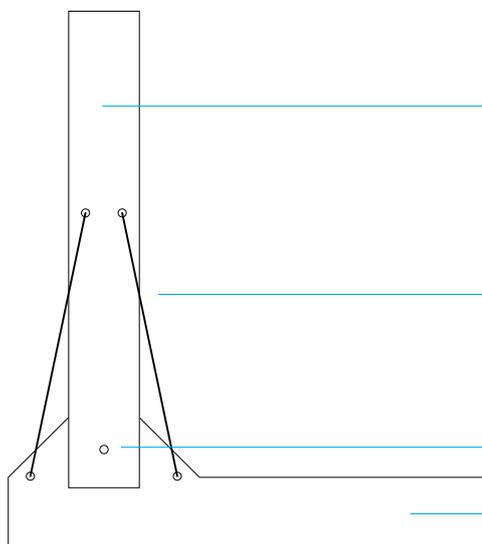
Exploring the body

Exploring movement

Where one bone meets another we have a joint; these are essential for movement. Where there are joints, muscles control the movement. However, muscles can only pull on a bone; they can't push it. They can only apply a force in one direction. In this activity you'll be making a model of the elbow joint and seeing how muscles make the lower arm both bend and straighten. When you've assembled the model arm, it will look like this:

Resources required:

- two pieces of stout card
- two pieces of elastic
- a paper fastener



Firm card, representing upper arm

Elastic, fed through hole in card and knotted, representing muscles

Paper fastener, working as joint.

Firm card, representing lower arm



1. You'll need the two shapes below cut out of card. Make holes where the black holes are.
2. Then put the pieces of card over each other so that the larger holes line up. Push the paper fastener through the holes and open up the tabs. You should now have a jointed arm.
3. Now push one of the pieces of elastic (a rubber band cut will work well) through one of the small holes and tie a knot so it can't come back out again. Then feed the other end through a hole in the other card (look at the picture of the completed arm to see which one) and tie a knot in the other end so it can't come out either. Repeat with the other piece of elastic. You might need to adjust the lengths so that both are gently taut.
4. Compare your model to a picture of the elbow joint. See what you have made and how it compares with the actual joint. Feel your upper arm and identify the bones and muscles in your own arms. Feel which muscles are tensed when you raise your lower arm and force your lower arm down.



Exploring movement - model arm

