

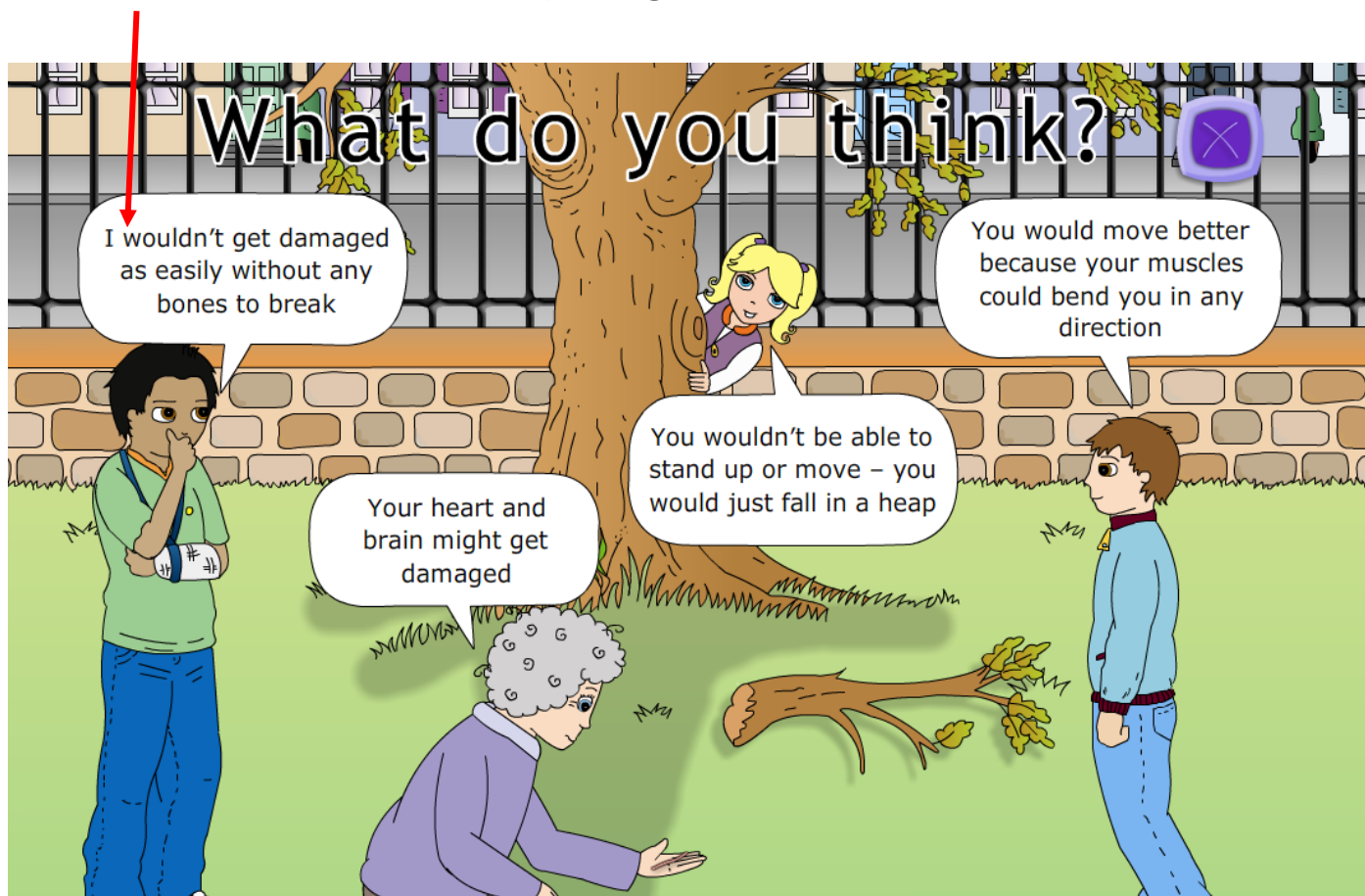
Canonbury Home Learning
Year 3 Science

Lesson 6

LO: identify that humans and some other animals have skeletons and muscles for support, protection and movement.

RECAP: Think back to last week's work on skeletons.

Ricky has broken his arm. Ricky says he would be better off without any bones: **Which of his friends do you agree with?**



We have skeletons to support and protect our body and to help it move.

If we didn't have bones, we would just be a floppy mess on the floor!

However, to move, we need **muscles**!



If you can, start by watching these clips all about muscles:

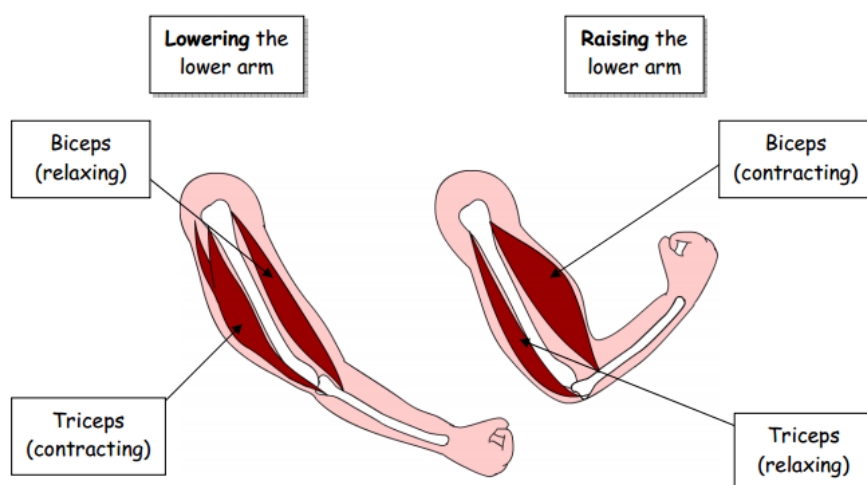
<https://www.bbc.co.uk/bitesize/topics/z9339j6/articles/zpbxb82>

<https://www.bbc.co.uk/bitesize/clips/zpp6n39>

Muscles are attached to bones by tendons and help them to move.

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When a muscle **contracts** (bunches up), it gets shorter and so pulls on the bone it is attached to. When a muscle **relaxes**, it goes back to its normal size.



Muscles can only pull and cannot push. Therefore **muscles have to work in pairs** to move a joint. One muscle will contract and pull a joint one way and another muscle will contract and pull it the other.

TASK: Make your own model to help understand how muscles work.

You will need:

- 4 elastic bands
- strips of thick, strong cardboard
- split pin (or another fastener that will rotate e.g. drawing pin with tape on end)
- stapler & scissors

1. Cut two equal lengths of card from thick strong card.



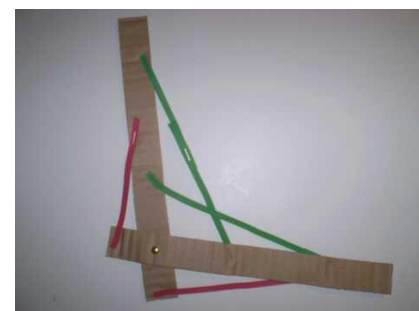
2. Place one strip of card on top of the other.



3. Push a split pin through both pieces of card. This must be no less than 5cm in from the edge.

4. Cut 4 elastic bands to length. Two will be short (red) and two will be need to be longer (green).

5. Staple the elastic bands in place. The two shorter ones will attach on the outside of the arm and the 2 longer bands will attach on the inside of the arm. Attach them all so they are tight but not pulling.



Now flex those muscles and watch how they work!