



# Science

## Animals Including Humans

The background of the image is a detailed illustration of skeletal muscle tissue. It features numerous parallel, cylindrical muscle fibers in shades of red and pink. Each fiber is filled with fine, striated patterns representing myofibrils. Interspersed among the fibers are several clusters of myofibrils, showing their characteristic repeating units with Z-discs. The overall composition is dense and layered, creating a sense of depth and texture.

# Mighty Muscles

# Aim

- I know why we need muscles to move.
- I can set up a simple practical enquiry.
- I can record my findings.

# Success Criteria

- I can explain how muscles allow movement.
- I can identify pairs of muscles in the body.
- I can set up a simple practical enquiry.
- I can make modifications to a simple practical enquiry I have set up.
- I can write an explanation for my findings.
- I can write an explanation linking my findings with general scientific ideas.

# Movement

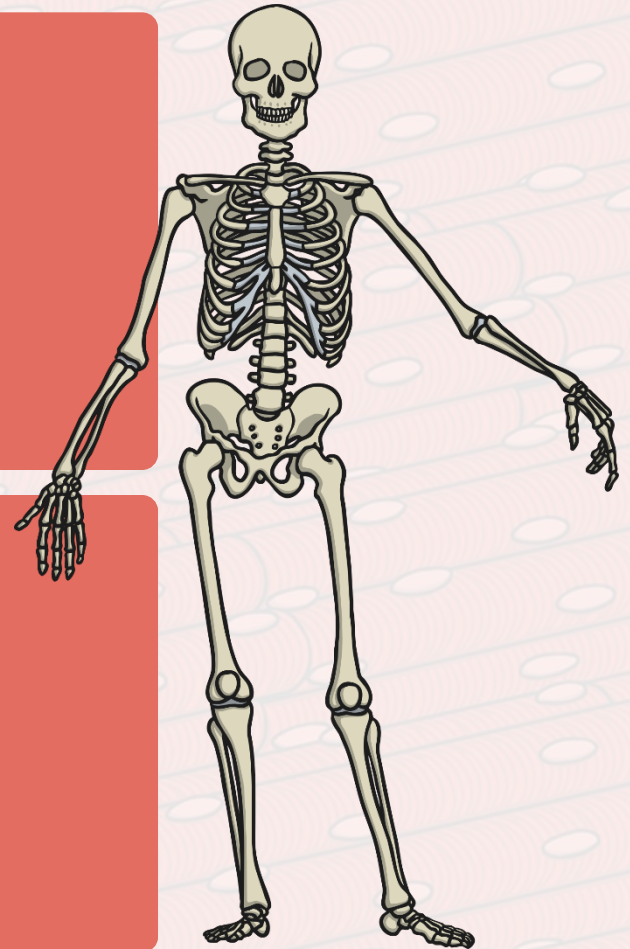


A

B

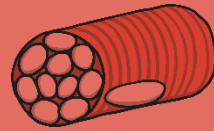
C

D



# What are Muscles?

Our bodies are made up of different types of cells



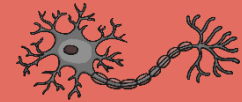
smooth muscle cell



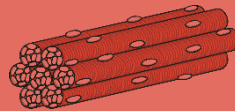
bone cell



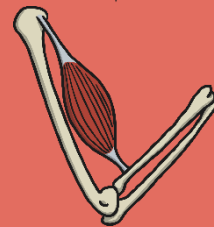
nerve cell



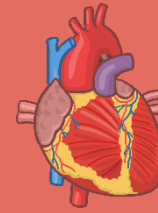
Cells form to make tissue



Skeletal muscles are made up of just muscle tissue



Organs are made up of more than one type of tissue



# Mighty Muscles



**A**

**C**

**B**

**D**

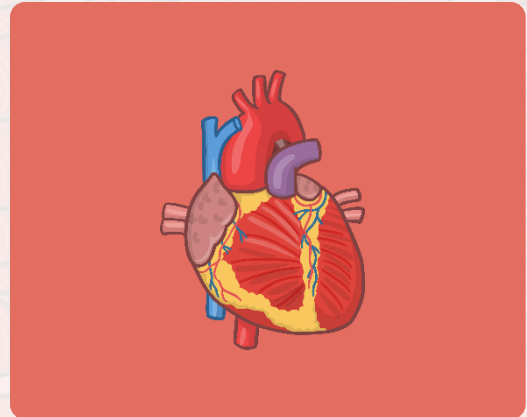
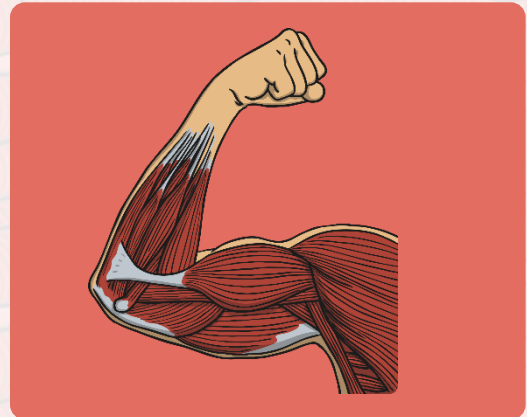
# Voluntary and Involuntary



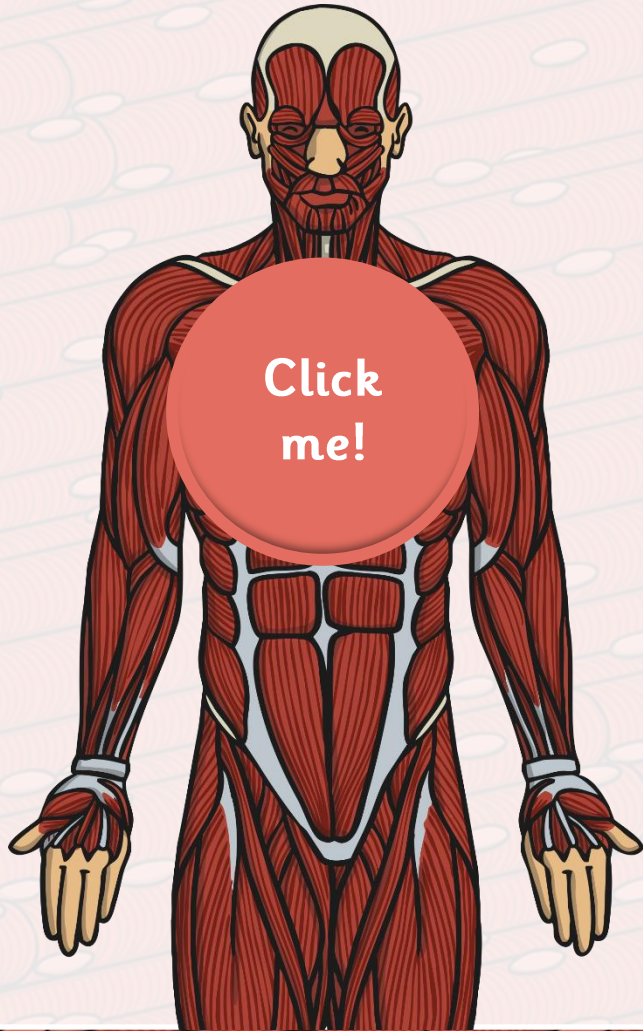
Some muscle movement is voluntary and we can control it. Other muscle movement is involuntary and we don't have control over it.

Look at the pictures to the right: Which shows voluntary muscle movement and which shows involuntary?

Discuss with your partner and explain why you made your choice.



# Two's Company



Click  
me!

Watch the following video  
and focus on the following:

1

How do muscles  
move?


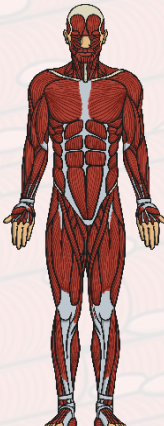

2

What words are used  
to describe the  
movement?

# Move Your Muscles



In groups you are going to do two different activities: You need to predict the muscles you think will be used before the activity. After the activity you will show the results of what you found.

Activity	Prediction (before the activity): Circle or highlight the muscles you <u>think</u> will be used.	Results (after the activity): Circle or highlight the muscles <u>you</u> used.
 An illustration of a young girl with spiky brown hair, wearing a yellow long-sleeved shirt, green leggings, and red sneakers. She is captured in a jumping pose with her arms raised and one leg bent.	 A detailed anatomical illustration of a male human figure from the front, showing the skeletal structure and muscle groups in red and white. The figure is standing with arms at its sides.	 An identical anatomical illustration of a male human figure from the front, showing the skeletal structure and muscle groups in red and white. The figure is standing with arms at its sides.

# Muscle Memory



Were your predictions correct? Why? Why not?



What have you learnt in this lesson about muscles?

Complete your Mighty Muscles Activity Sheet.



Remember to use the key vocabulary you have learnt in this lesson.

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