

# Muscles and moving

## Learning Objectives

**SGM4A7A** - that animals with skeletons have muscles attached to the bones

**SGM4A7B** - that a muscle has to contract (shorten) to make a bone move

**SGM4A7C** - that muscles act in pairs

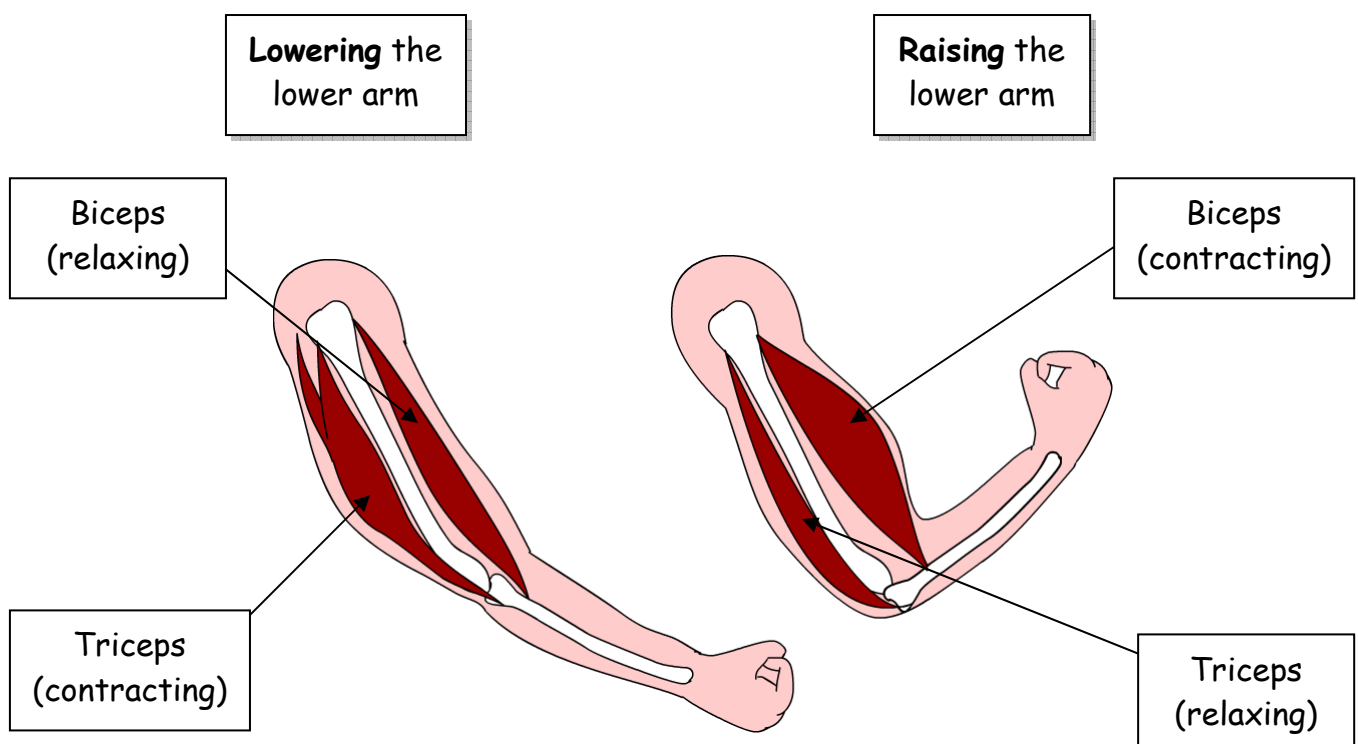
Although the bones in your arms are not flexible, you can still bend your arms. This is because each arm contains more than one bone and you can bend them where the bones meet. The places where the bones meet are called **joints**. Your knees and elbows are joints.

**Muscles** are parts of your body that move the other parts of your body. All your bones have muscles connected to them; it is the muscles that move the bones. Muscles work in pairs and can only pull the bones - they cannot push them. The arm has a muscle that flexes (bends) the lower arm called the **biceps**, and a muscle that extends (straightens) it called the **triceps**.



When the muscle **contracts** (pulls), it gets fatter, shorter and harder.

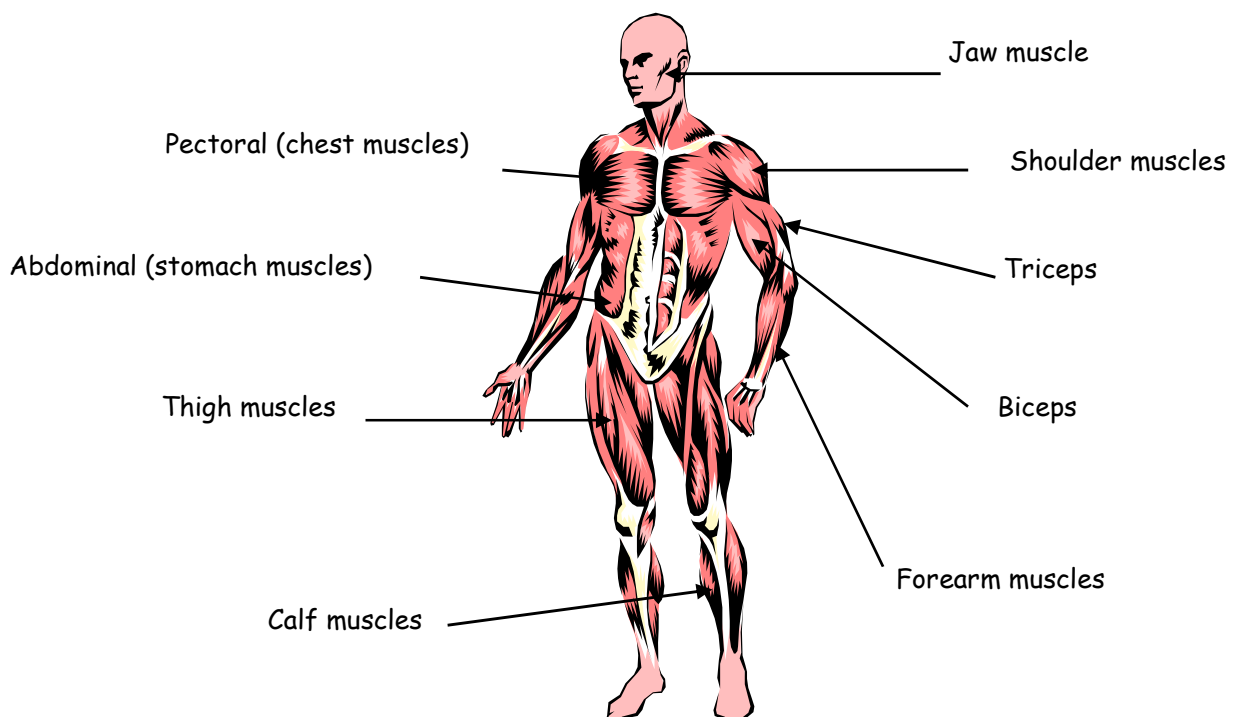
Move your arm up and down by flexing and relaxing the triceps and the biceps. See if can feel and observe these muscles flexing and relaxing. Copy the diagram below into your books to show how the biceps and triceps move your lower arm.



For muscles to work properly, they need a good supply of **oxygen**. The **heart** pumps blood, which carries oxygen to the muscles. The harder your muscles work, the more blood and oxygen they need. The heart pumps faster and you breathe much more quickly when you are exercising.

- 1) Write down the name of the joints in your arms and in your legs.
- 2) What do all muscles do?
- 3) What do muscles connect to?
- 4) Name the two muscles that bend and extend the lower arm.
- 5) What do muscles need for them to work properly?
- 6) What happens to the muscles during exercise?
- 7) Investigate the muscles you use every day by completing the chart on the next page.

### Some of the body's main muscle groups



Exercise/activity	Muscles used
Walking	
Having a drink	
Playing tennis	
Eating lunch	
Swimming	
Standing up	
Picking something up	