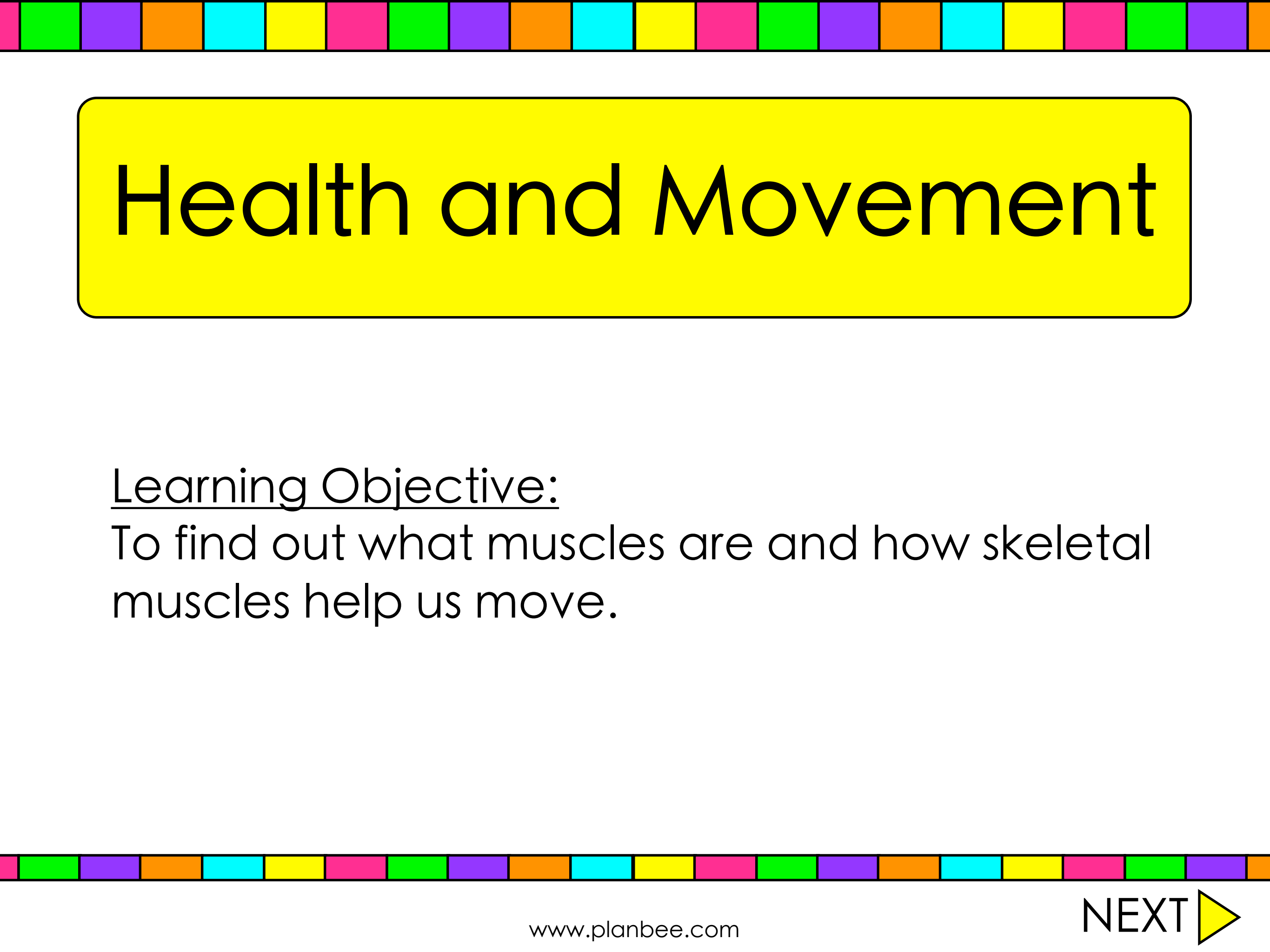




Health and Movement

Learning Objective:

To find out what muscles are and how skeletal muscles help us move.

We have already found out that we need the right amount and type of food to give us the energy to move, and that our skeletons help our bodies move too.

What else do we need to make us move?



We need **muscles** to be able to move. We have hundreds of different muscles in our bodies. Muscles are made of lots of small stretchy fibres grouped together. There are three different types of muscles:



Smooth muscles: these are the muscles that move without you controlling them, such as those in your digestive system.

Cardiac muscles: these are the muscles that control the heart and help to pump your blood around your body.

Skeletal muscles: these muscles are attached to bones and are the muscles that you can move when you want to. You can use your skeletal muscles to kick a ball, walk, hold a pen, and for lots of other things.

Each movement our body makes uses muscles, from blinking your eyelids to kicking our legs. We use our muscles thousands of times every day without even thinking about it.

Can you use your muscles to smile using just one side of your mouth?

Can you use your muscles to wink?

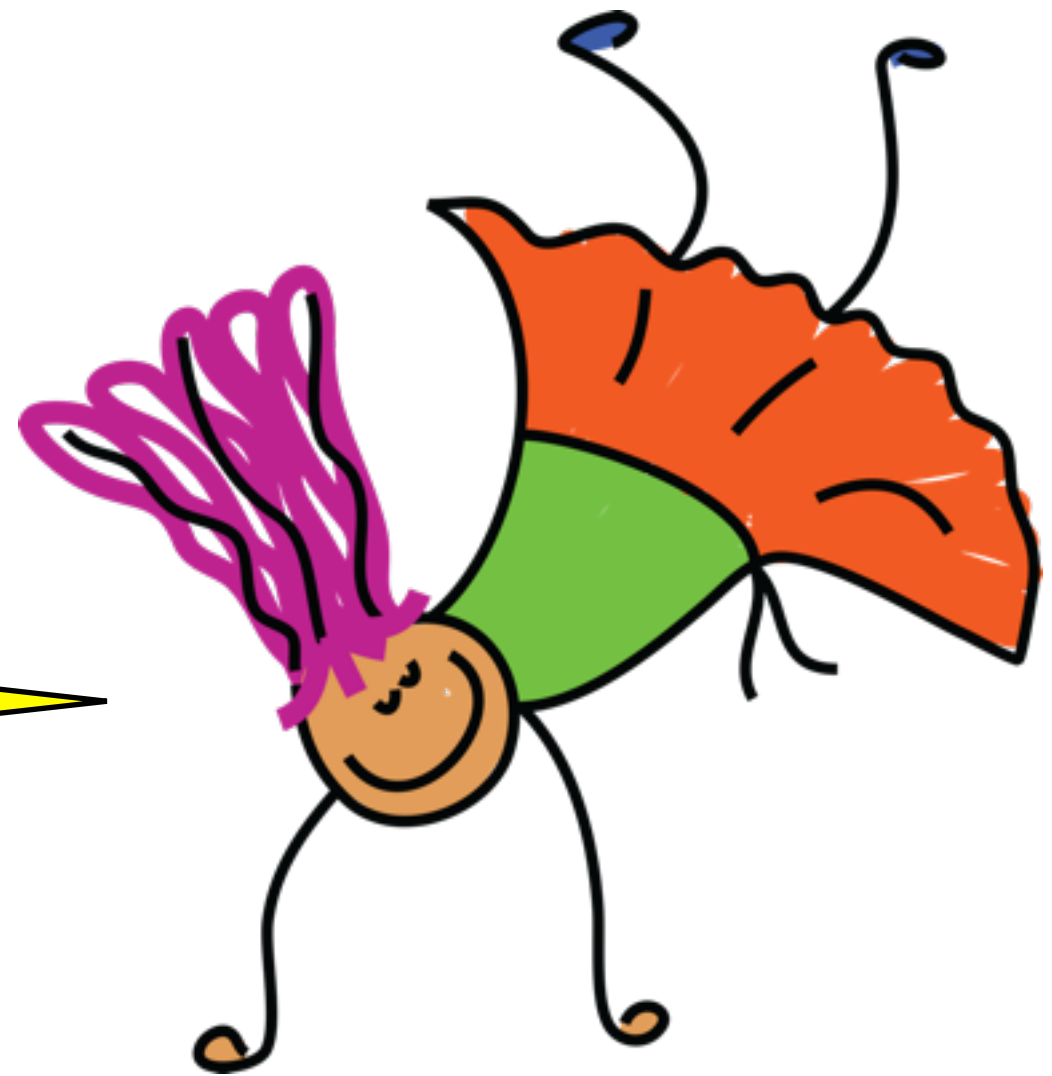
Can you use your muscles to move each of your fingers?

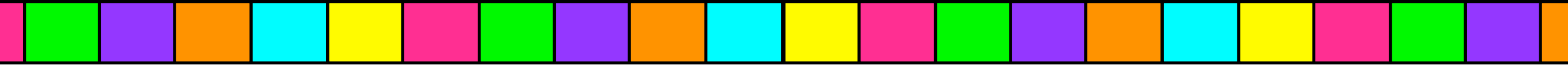


Did you know that the strongest muscles in your body are those you chew with?

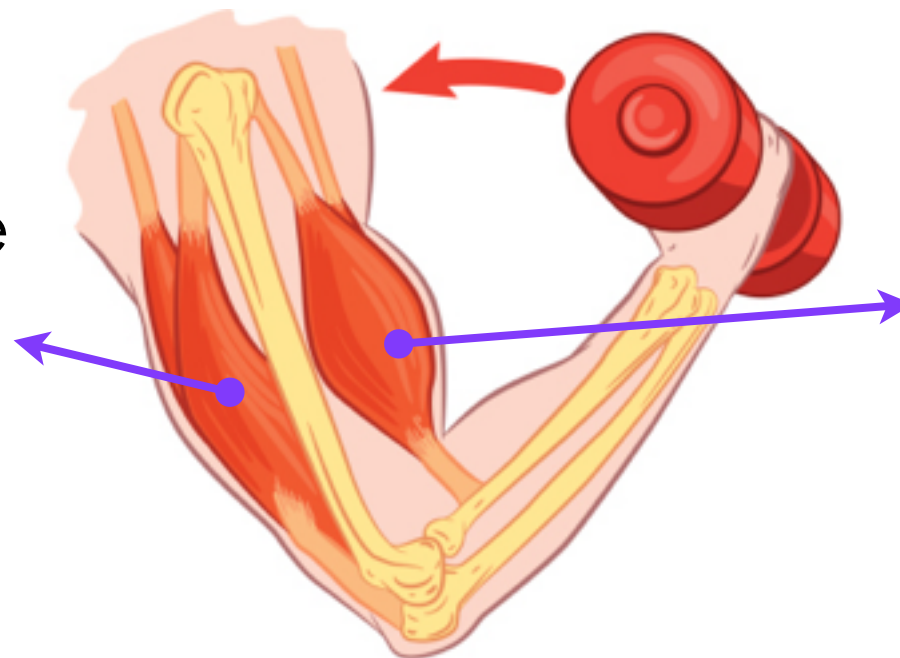
As well as using muscles for moving, we also need muscles for sitting still. Our muscles and skeleton work together to support us and keep us upright. If we had no muscles, our bodies would slump into a heap.

Whatever we are doing, we are using our muscles. Let's see how they work...



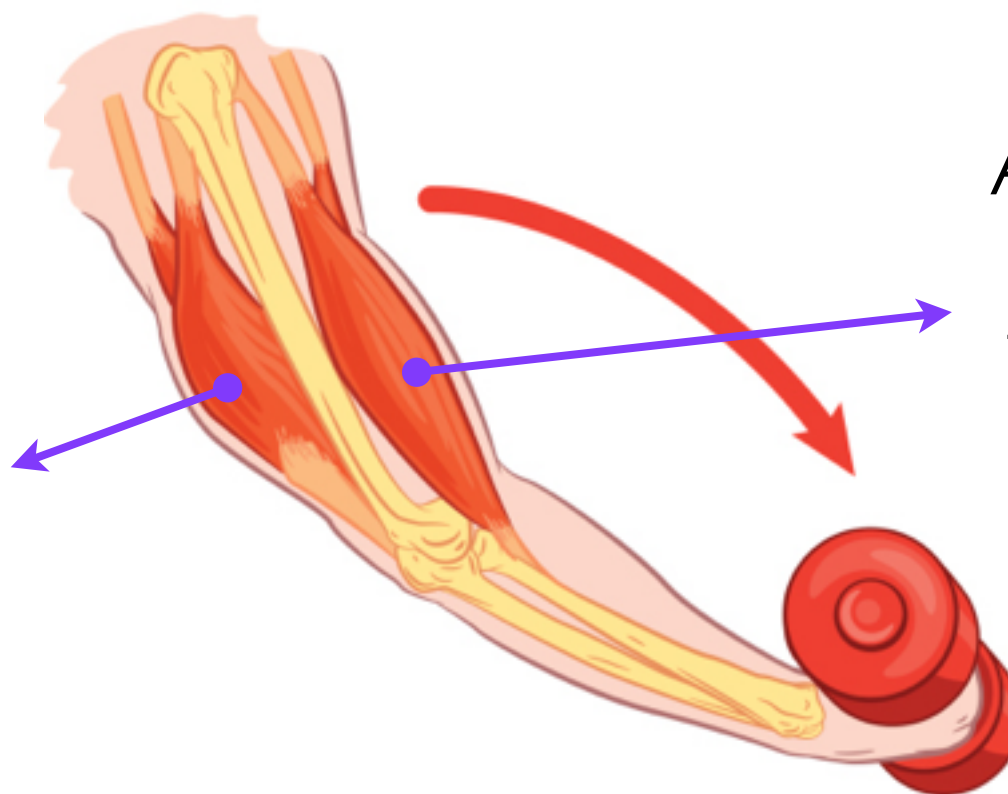


These diagrams show someone lifting a weight up and down.



This muscle is called the flexor. It contracts to make it smaller. As it is attached to the forearm, it pulls the forearm upwards as it contracts.

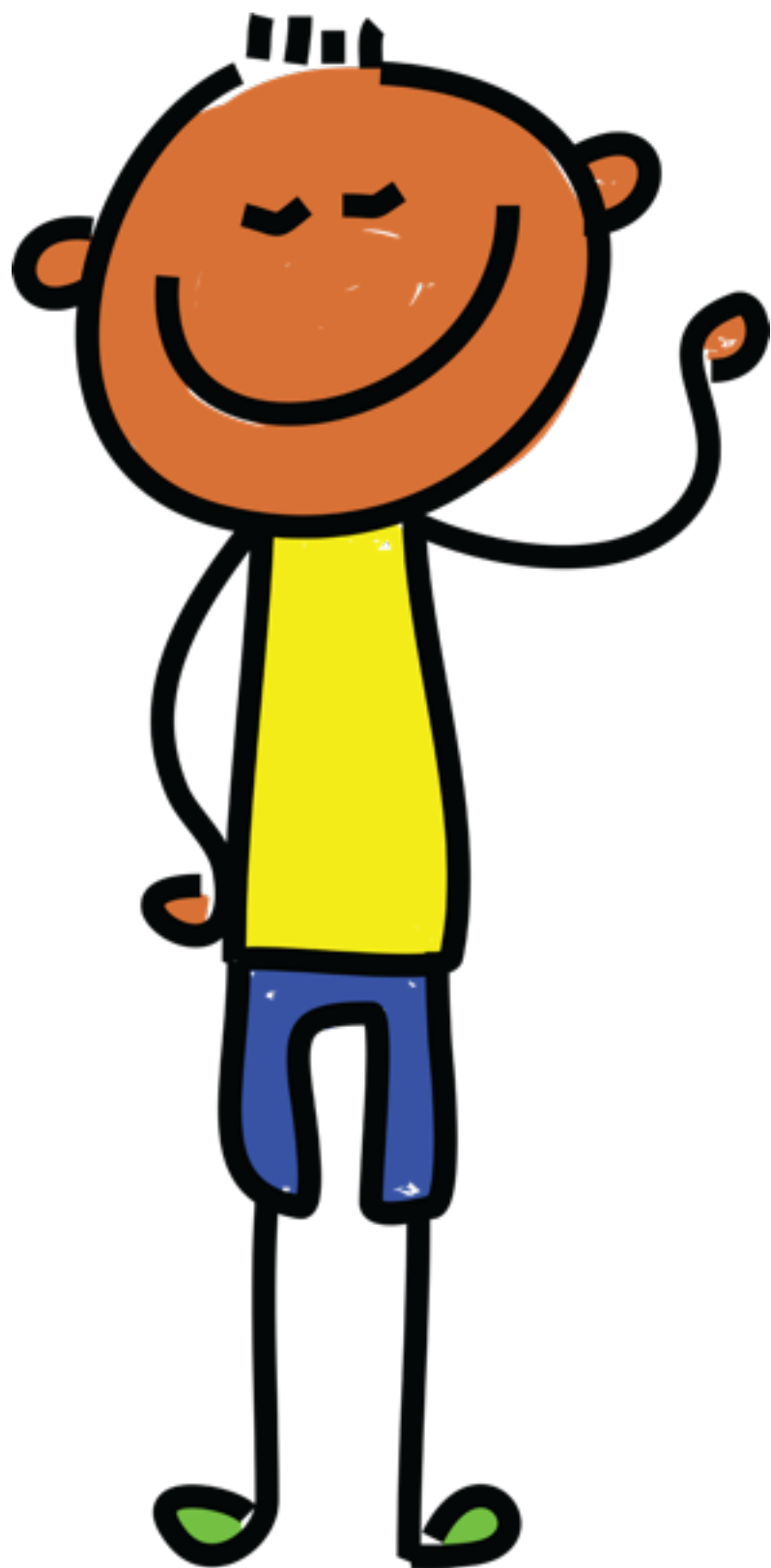
This muscle is called the extensor. As the flexor contracts, this muscle relaxes to allow the bone to move.



As this muscle relaxes, it gets longer. This allows the arm to move back down again.

This muscle contracts again as the flexor relaxes.





Use your hand to gently feel the muscles in your upper arm. These muscles are called biceps. Move your forearm up and down. What can you feel?

Your muscles get stronger the more you use them. If your muscles are used to being used, they get bigger and more flexible. If they are not used to being used and are suddenly used without being warmed up, your muscles can get tired and sore.



Dancers and gymnasts spend a long time stretching their muscles so they are flexible.



Bodybuilders and other sporty people build up their muscles so they are really strong.

Animals have lots of muscles too, just like we do.
Animals develop muscles that help them survive.



Cheetahs have strong leg muscles so they can run really fast to catch their prey.



Crocodiles have powerful jaw muscles so they can catch and kill their prey easily.



Eagles and other birds have powerful wing muscles so they can fly for long periods of time.