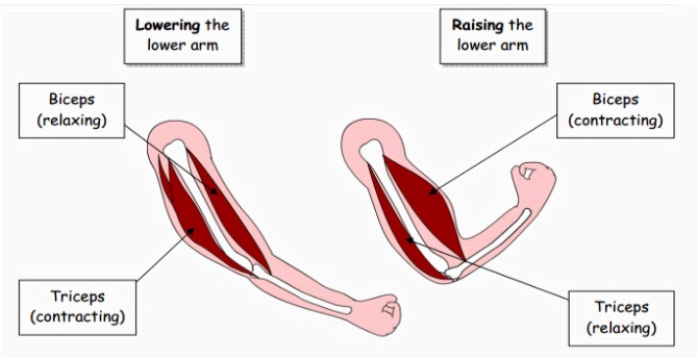
Knowledge Organiser - Science: Animals and Humans

What? (key Knowledge)

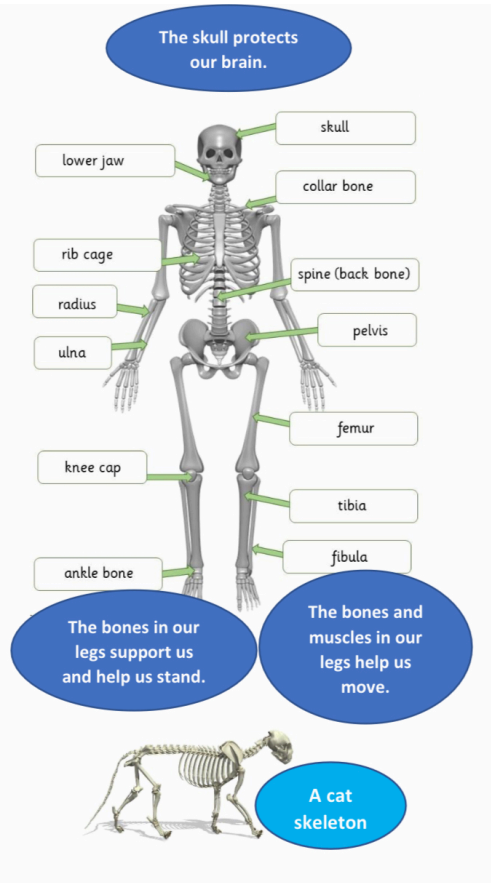
Muscles

Skeletons move because bones are attached to muscles.
When a muscle contracts (bunches up), it gets shorter and so pulls up the bone it is attached. When a muscle relaxes, it goes back to it's normal size.



Skeleton

Skeletons do three important jobs
1) Protection - The skull/cranium protects the brain and eyes, the rib cage protects the heart, the vertebral column protects the spinal cord, etc.
2) Support - The skeleton supports the body and enables its shape and keeps vital organs in their place.
3) Movement - Bones along with joints enable actions like jumping, holding a pencil, rotating arms, etc.



What? (key Vocabulary)

Spelling	Definition/Sentence
skeleton	keeps the body in shape, helps movement and protects organs
skull	a bone that protects the brain
ribcage	a bone that protects the heart
heart	muscle that pumps blood around the body
joints	area where two bones meet
muscle	attached to the bone and is responsible for movement
posture	the position that a person sits in
nutrients	substances that help plants and animals to grow
organ	tissues in the body that perform functions
digest	when food in the stomach is broken down
tendon	a strong cord in a person or animal's body which joins a muscle to a bone

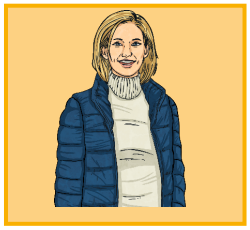
Types of Skeleton

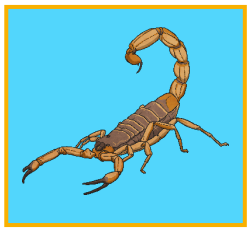
A further classification of skeletons comes from if an animal has a skeleton and where it is.

All vertebrates have an endoskeleton. However invertebrates can be divided again between those with an exoskeleton and those with a hydrostatic skeleton.

vertebrate → **endoskeleton**

invertebrate → **exoskeleton**, **hydrostatic skeleton**





Living Things

Living things need food to grow and to be strong and healthy.
Plants can make their own food, but animals cannot.
To stay healthy, humans need to exercise, eat a healthy diet and be hygienic.
Animals including humans need food, water and air to stay alive.