# Skeletons, Muscles and Nutrition



Glossary		
1	bone	a hard white material making up the skeleton
2	carnivore	an animal which eats only meat (other animals)
3	cartilage	a flexible material found in parts of the body
4	endoskeleton	a hard skeleton found on the inside of a body
5	exoskeleton	a hard skeleton found on the outside of a body
6	food chain	the chain of nutrition from animal to animal which always starts with a green plant
7	herbivore	an animal which eats only plants
8	invertebrate	an animal without a vertebral column or backbone
9	joint	a place where two bones meet and are able to move
10	ligament	straps two bones together and holds them in place
11	movement	the act of moving
12	muscle	tissue in the body which is able to contract and relax
13	nutrition	the process of providing the body with what it needs
14	omnivore	an animal which eats both meat and plants
15	protection	to prevent something from being damaged
16	skeleton	the human skeleton is a framework of bones
17	support	to hold something in place
18	tendon	attaches muscle to bone
19	vertebrate	an animal with a vertebral column or backbone







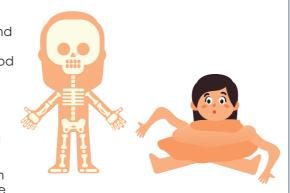
## What is a skeleton and why do we need one?

The adult human skeleton is a framework of 206 different bones. We have a skeleton for three main reasons: support, protection and movement

Our skeleton protects our vital organs (such as our heart, lungs and brain) from being damaged. We need to keep our organs safe because they perform very important jobs. Our heart pumps blood all around our body and our lungs allow us to breathe in oxygen from air.

Our skeleton supports our bodies by maintaining our shape and allowing us to stand up straight. If we did not have a skeleton we could end up looking this is picture here. We would have nothing supporting our skin and organs.

Our skeleton also works with our muscles to allow us to move from one place to another. Without our skeleton we would not be able to move any parts of our body such as our arms, legs, fingers, toes, jaw and hips. We would not be able to run, jump or pick things up.



## What is a muscle?

A skeletal muscle is a type of tissue that works with the bones in our skeleton to allow us to move. Muscles and bones are joined together by tendons and as the muscle contracts and relaxes, the bone it is attached to will move at the same time.



### What are animal skeletons like?

Animals can either be a vertebrate or an invertebrate. A vertebrate has a vertebral column. A human is an example of a vertebrate. An invertebrate does not have a vertebral column. Insects are invertebrate.

Another way to group animal skeletons is to decide whether they have an endoskeleton or an exoskeleton.

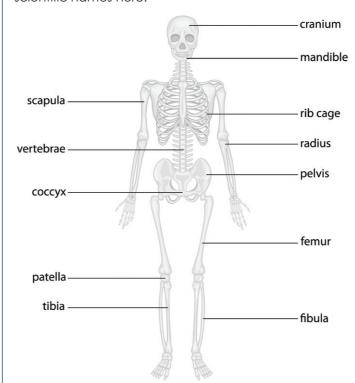
An endoskeleton is on the inside of the body and an exoskeleton is on the outside of the body.

This crab here has an exoskeleton. It is a hard shell on the outside of its body.



#### Which bones make up the human skeleton?

The human skeleton is made up of a range of different bones. You can see those bones and some of their scientific names here:



### What is nutrition?

Nutrition is the process of giving our body what it needs in order to work properly. We usually do this by eating food and it is important to eat the right balance of foods because our bodies need lots of different things.

They need proteins, fats, carbohydrates, vitamins, minerals and fibre. We can get all of these things by eating the right amounts of different foods including fruits and vegetables, bread, fish, cereals, meats and beans. If you do not eat meat then you can often get what you need by eating different vegetables, oils and nuts instead.



