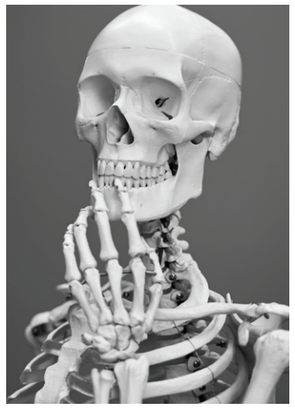
Knowledge Organiser Skeletons, Muscles and Nutrition

	Glossary	
1	**Skeleton**	The human skeleton is a framework of bones
2	**Bone**	A hard white material making up the skeleton
3	**Cartilage**	A flexible material found in parts of the body
4	**Support**	To hold something in place
5	**Protection**	To prevent something from being damaged
6	**Movement**	The act of moving
7	**Joint**	A place where two bones meet and are able to move
8	**Muscle**	Tissue in the body which is able to contract and relax
9	**Tendon**	Attaches muscle to bone
10	**Ligament**	Straps two bones together and holds them in place
11	**Vertebrate**	An animal with a vertebral column or backbone
12	**Invertebrate**	An animal without a vertebral column or backbone
13	**Endoskeleton**	A hard skeleton found on the inside of a body
14	**Exoskeleton**	A hard skeleton found on the outside of a body
15	**Hydrostatic Skeleton**	A soft skeleton filled with fluid
16	**Nutrition**	The process of providing the body with what it needs
17	**Food Chain**	The chain of nutrition from animal to animal which always starts with a green plant
18	**Carnivore**	An animal which eats only meat (other animals)
19	**Herbivore**	An animal which eats only plants
20	**Omnivore**	An animal which eats both meat and plants



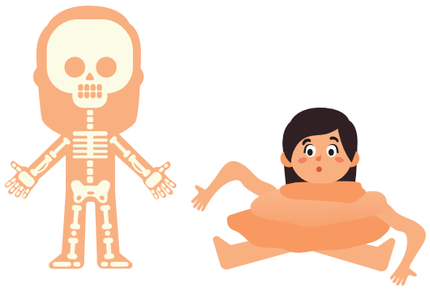
What is a skeleton and why do we need one?

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.

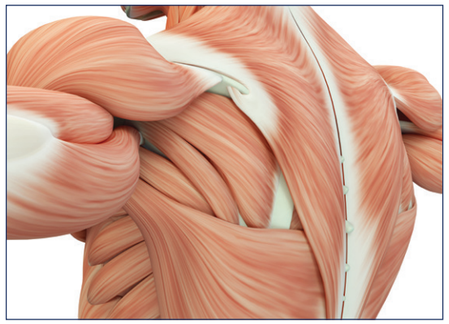
Our skeleton supports our bodies by maintaining our shape and allowing us to stand up straight. If we did not have a skeleton we could end up looking this is picture here. We would have nothing supporting our skin and organs.

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.

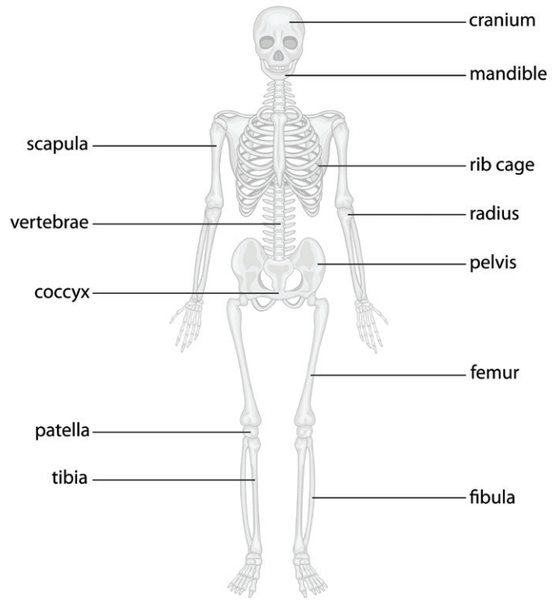
Another way to group animal skeletons is to decide whether they have an endoskeleton, an exoskeleton or a hydrostatic skeleton.

An endoskeleton is on the inside of the body, an exoskeleton is on the outside of the body and a hydrostatic skeleton is soft and filled with fluid (or liquid).

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.