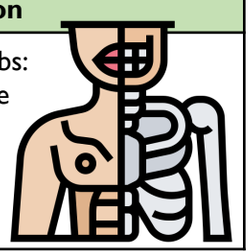
Skeletons, muscles and nutrition KNOWLEDGE ORGANISER

ESSENTIAL SKELETONS,, MUSCLES AND NUTRITION VOCABULARY	
skeleton	The framework of bones supporting the body of an animal.
nutrition	Food or nourishment.
organs	A part of the body that has a particular function.
tendons	Cords that join muscles to bones.
metabolism	The chemical reactions that go on in an organism's body to make energy.
digest	To break down food into substances that can be absorbed by the body
enzymes	Chemicals in the body that help to digest food.
diet	The kinds of food that a person or animal eats.
circulation	The continuous motion of blood travelling around the body.
muscle	A band of fibrous tissue that contracts to produce movement.
bones	The hard, whitish tissue that makes up the skeleton in vertebrates.

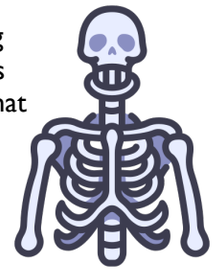
The Skeleton

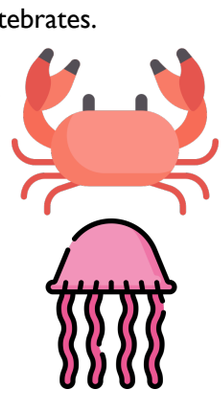
The skeleton has three main jobs:
- Protect the organs inside the
- body from damage
- Allow the body to move
- Support the body



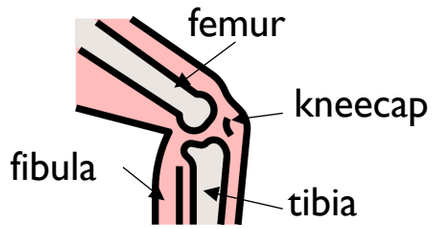
Vertebrates and Invertebrates

- A **vertebrate** is a living thing that has a backbone. Humans are vertebrates. We have what is known as an endoskeleton (a skeleton the body)
- An **invertebrate** is a living thing that does not have a backbone.
- There are two types of invertebrates.
  -those with an exoskeleton (a skeleton outside the body, like a shell). A crab has an exoskeleton.
  -those with a hydrostatic skeleton (a skeleton made up of a fluid-filled compartment in the body called a coelom). A jellyfish has a hydrostatic skeleton.

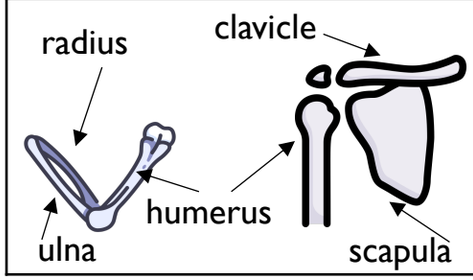




Leg Bones



Arm and Shoulder Bones



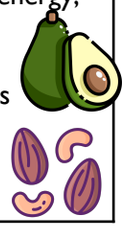
Muscles

Muscles are attached to bones by tendons. They work in pairs to help the body move smoothly. To move a joint, one muscle contracts (tightens) and the other relaxes and lengthens.

Types of Fat

Saturated fats are less healthy and should only be eaten in small amounts. Things like crisps, chocolate and sweets will have lots of saturated fats.

Unsaturated fats are fats that give you energy, vitamins and minerals. Foods like avocados, nuts and seeds have unsaturated fats.



Water

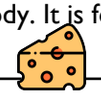
It is important to keep the body hydrated by drinking water. Water helps to maintain processes such as digestion, transporting nutrients and regulating body temperature.

MAKING LINKS TO PREVIOUS LEARNING GOLDEN VOCABULARY		
oxygen	The gas that we breathe in.	**Plants**	Plants produce **oxygen**.
carbon dioxide	The gas that we breathe out.	**Plants**	Plants absorb **carbon dioxide**.
nutrients	A substance that provides the nourishment needed to stay alive and grow.	**Animals including humans**	**Nutrients** are required for humans to live.
energy	The power from a source.	**Forces**	To apply a force, **energy** is required.

The Four Main Food Groups

Protein helps the body to repair itself. It is found in foods such as fish, beans and nuts.

Fat helps store energy in the body. It is found in foods such as cheese and nuts.



Carbohydrates give us energy. It is found in foods such as potatoes and pasta.

Fibre helps to digest food. It is found in foods such as fruits and vegetables.