

# Pye Bank CE Primary DSAT Knowledge Organiser

**YEAR 3**

**BIOLOGY: Humans**

**SCIENCE**

## KEY VOCABULARY

**Arthropod:** an animal with an outside skeleton (exoskeleton), e.g. insects, spiders, crabs and lobsters, centipedes and millipedes.

**Balanced diet:** meals taken over a period of time that include all of and have the correct balance of nutrients for the body to stay healthy.

**Carbohydrates:** nutrients consisting of carbon, hydrogen and oxygen, which provides energy that the body can release quickly for its activities.

**Fats:** nutrients which provide a store of energy and build a heat insulating layer under the skin.

**Invertebrate:** an animal without a skeleton, bone or cartilage.

**Minerals:** substances such as calcium (that aids bone growth) and iron (that helps the blood carry oxygen) that are natural processes in the body.

**Protein:** nutrients that help the body grow and repair injuries.

**Tendons:** non-elastic cords that attach muscles to bones.

**Unbalanced diet:** meals taken over a period of time which have too much of some foods and too little of other which leads to the body not receiving all the nutrients it needs to stay healthy.

**Vitamins:** substances such as Vitamin A (which increases resistance to disease) and vitamin B (which prevents digestive disorders) that are needed for general good health.

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**Skeletal muscle:** Muscle that is attached to the skeleton. When skeletal muscles contract they move your bones.

**Contract:** The action of muscles shortening.

**Relax:** The action of muscles lengthening.

## KEY CONCEPT

### Balanced diet / food groups

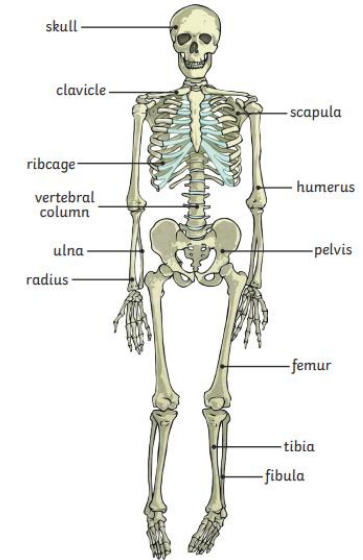
Nutrient	Found in... (examples)	What it does/they do
carbohydrates		provide <b>energy</b>
protein		helps growth and repair
fibre		helps you to digest the food that you have eaten
fats		provide <b>energy</b>
vitamins		keep you <b>healthy</b>
minerals		keep you <b>healthy</b>
water		moves <b>nutrients</b> around your body and helps to get rid of waste

## STICKY KNOWLEDGE

1. There are five groups of nutrients needed for health: proteins, fats, carbohydrates, vitamins and minerals. It is important to have a balanced diet as an unbalanced diet can lead to ill health.
2. The human skeleton includes the skull and rib cage which provide protection to the organs they enclose. Animals can have different types of skeletons such as exoskeletons which gives almost complete protection to the body beneath it.
3. Muscles can only contract (get shorter) so when one muscle contracts another relaxes creating movement.

## KEY CONCEPT

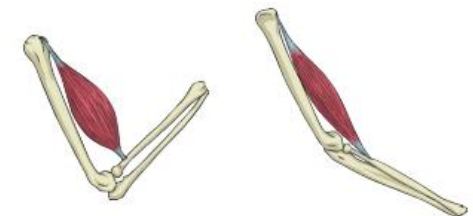
### Labelled diagram of the human skeleton



Humans have skeletons for support, protection and movement.

## KEY CONCEPT

### Diagram of how muscles create movement.



Skeletal muscles work in pairs to move the bones they are attached to by taking turns to contract and relax.