

Year 3 -Science

NC Unit: Animals including humans (muscles and skeletons)

How do living things work?

Biology



What should I already know?

- The parts of the body and what they do.
- There are five types of vertebrates (mammals, fish, reptiles, amphibians, birds)
- Vertebrates are animals that have a backbone.
- Invertebrates are animals that do not have a backbone.
- All animals need water, air, and food to survive.
- The different ways in which humans can be healthy

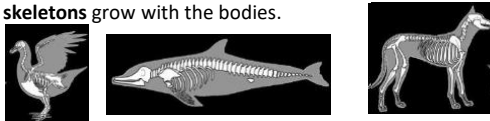
Big Ideas this works towards:

- *Living things are special collections of matter that make copies of themselves, use energy and grow.*

What will I know by the end of the unit?

What are the different types of skeletons?

- **Vertebrates** are animals that have a **backbone**. These **skeletons** are called **endoskeletons** - this means that the **skeletons** are on the inside of the bodies. These **skeletons** grow with the bodies.



- When the **skeleton** exists outside the body, it is called an **exoskeleton**. An **exoskeleton** is a covering that supports and protects animals. These have to be shed and a new **skeleton** is grown.



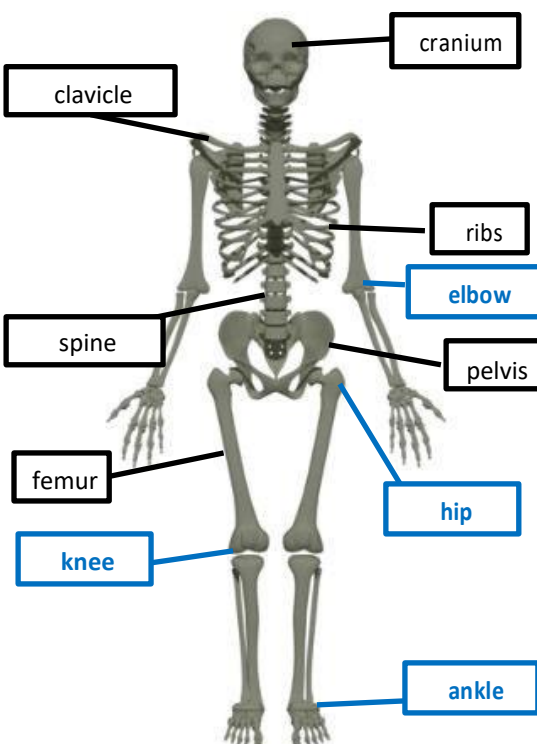
What does an endoskeleton do?

- The three most important things a **skeleton** does are:
 - provide **support** and shape to an animal's body
 - allow movement through the **joints**
 - **protect organs** (e.g. the skull protects the brain)

How do we move?

- **Joints** are where **bones** meet - they allow our bodies to move.
- **Muscles contract** and **relax**.
- If you place an **elbow** on a desk and lift your arm up, **muscles** in your upper arm (biceps) **contract** while **muscles** behind the upper arm (triceps) **relax**. The **muscles** work together and in opposition to allow your arm to move.
- **Muscles** are connected to **bones** by **tendons**.

The Human Skeleton



bones

joints

Vocabulary

backbone	the column of small linked bones down the middle of your back. Also known as a spine.
bones	the hard parts inside your body which form your skeleton
contract	to make smaller by drawing together; shrink or make tighter.
elbow	the bend or joint between the upper arm and the lower arm
endoskeleton	the internal skeleton of an animal, especially the bony skeleton of vertebrates
exoskeleton	the protective or supporting structure covering the outside of the body of many animals
joints	the junction between two or more bones
muscles	something inside your body which connects two bones and which you use when you make a movement
organs	a part of your body that has a particular purpose
protect	protecting someone or something means to prevent them from being harmed or damaged
relax	When a part of your body relaxes , or when you relax it, it becomes less stiff or firm
skeleton	the framework of bones in your body
support	to hold something up
tendons	a strong cord in a person's or animal's body which joins a muscle to a bone
vertebrate	a creature which has a spine

Muscles

