

Sithney C.P. School Knowledge Organisers



Science. Biology: The Body

What you should already know:

- Notice that animals, including humans, have offspring which grow into adults.
- Describe the basic needs of animals, including humans, for survival (water, food and air).
- Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Key learning:

Animals, unlike plants which can make their own food, need to eat in order to get the nutrients they need. Food contains a range of different **nutrients** – carbohydrates (including sugars), protein, vitamins, minerals, fats, sugars, water – and fibre that are needed by the body to stay healthy. A piece of food will often provide a range of nutrients.

Food enters the body through the mouth. **Digestion** starts when the teeth start to break the food down. Saliva is added and the tongue rolls the food into a ball. The food is swallowed and passes down the **oesophagus** to the **stomach**. Here the food is broken down further by being churned around and other chemicals are added. The food passes into the **small intestine**. Here nutrients are removed from the food and leave the digestive system to be used elsewhere in the body. The rest of the food then passes into the **large intestine**. Here the water is removed for use elsewhere in the body. What is left is then stored in the **rectum** until it leaves the body through the **anus** when you go to the toilet.

Humans, and some other animals, have **skeletons** and **muscles** which help them move and provide protection and support

Humans have four types of teeth: **incisors** for cutting; **canines** for tearing; and **molars and premolars** for grinding (chewing). Living things can be classified as **producers, predators and prey** according to their place in the food chain.

Key Vocabulary:

Nutrients

substances in food that our bodies process to enable it to function which can be made up of: carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water and fibre.

Skeleton

The bones of the body form a framework called the skeleton. This framework supports and protects the softer tissues. All the higher animals have an internal skeleton (endoskeleton) with a central spine, or backbone. Many lower animals, such as insects and shellfish, carry their skeletons on the outside (exoskeleton).

Muscles

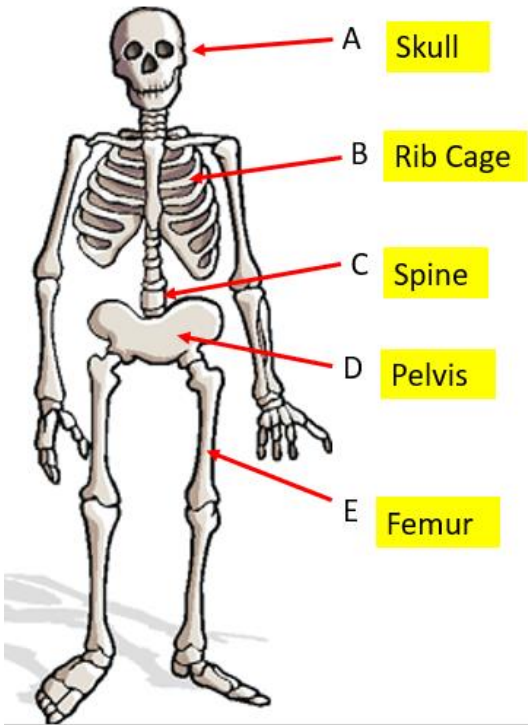
There are three types of muscle. Muscle connected to a skeleton is called skeletal muscle. Animals with backbones, including humans, also have two other types of muscle: cardiac muscle and smooth muscle. Cardiac muscle makes blood flow. Smooth muscle helps to digest food.

Digestive system

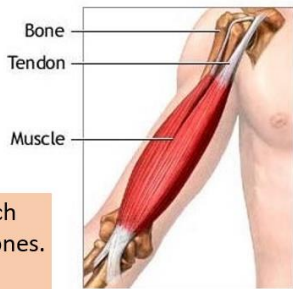
Animals need food for energy and growth. To use the food they eat, they must change it into a form that the body can use. This process is called digestion. The different organs, or body parts, that are involved in this process make up the digestive system.

In humans the different parts of the digestive system make up what is called the digestive tract. The digestive tract begins with the mouth and ends at the anus.

Diagram showing the human skeleton and muscle structure



Muscles are made of strong stretchy tissue that can contract and relax



Tendons attach muscles to bones.

What are these muscles called?

The biceps and triceps

Diagram showing the digestion system

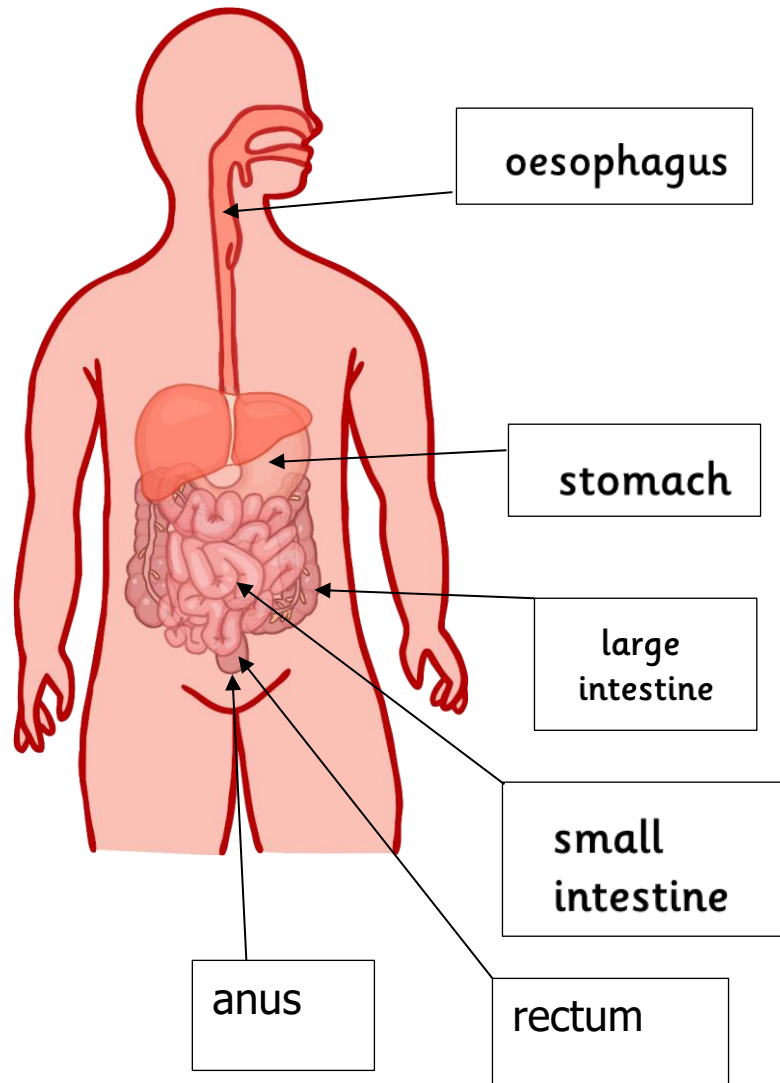
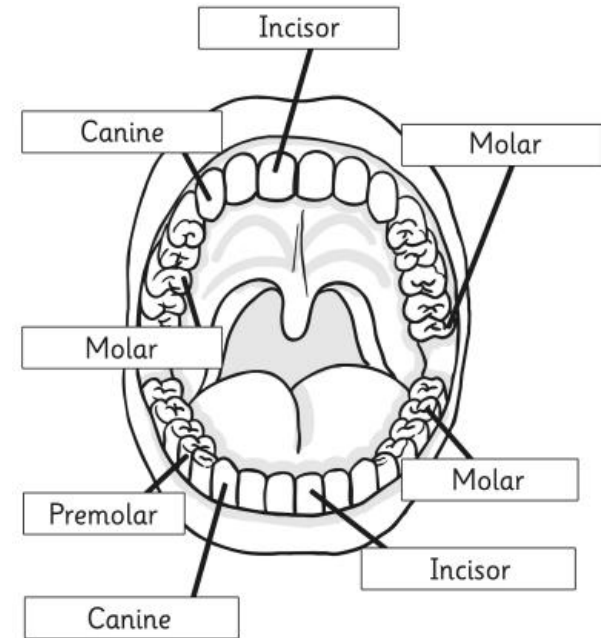


Diagram showing tooth types and tooth cross-section



What's in a tooth?

