

Science: Animals incl Humans Unit 2

Definition: Animal (noun) a living organism that feeds on organic matter, typically having specialized sense organs and nervous system and able to respond rapidly to stimuli.
 "wild animals adapt badly to a caged life"

Biology definition: The word **biology** is derived from the greek words /bios/ **meaning** /life/ and /logos/ **meaning** /study/ and is **defined** as the science of life and living organisms. An organism is a living entity consisting of one cell e.g. bacteria, or several cells e.g. animals, plants and fungi.

POS:

- describe the simple functions of the basic parts of the digestive system in humans
- identify the different types of teeth in humans and their simple functions
- construct and interpret a variety of food chains, identifying producers, predators and prey
- simple food chains

Prior learning :

Can name the nutrients found in food
 Can state that to be healthy we need to eat the right types of food to give us the correct amount of these nutrients
 Can name some bones that make up their skeleton giving examples that support, help them move or provide protection
 Can describe how muscles and joints help them to move

Links to other science topics:

Living things and their habitats Y2 Simple food chains
 Plants – how plants provide their own food

Disciplinary concepts:

Function: what is the function of the digestive system?

Structure: how are the parts in the digestive system arranged?

Process: what happens to food after it enters the mouth?

Common misconceptions: Some very young children might believe that the whole digestive system consists of a single tube that travels from their mouth to their stomach, and no further. Or they might think that food goes down one tube, and drink goes down another, hence food “going down the wrong hole”.

Core Knowledge:

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 have four types of teeth - incisors for cutting, canines for tearing, molars and premolars for grinding (chewing).

Living things can be classified as producers, predators (Venus flytrap, Piranha. Arctic Fox. Box jellyfish. Trapdoor spider. Komodo dragon, Giant Amazon centipede. Polar bear) and prey according to their place in the food chain (specifics on KO).

Wider Knowledge: Lazzaro Spallanzani (1729–1799) was an Italian physiologist who made many important contributions to the study of bodily functions. In 1773 he carried out a set of investigations on digestion, specifically looking at gastric juices. He collected his own vomit to use in experiments, and would leave pieces of meat, bread or bone in it so he could study what happened.

Alexis St Martin (1802–1880) was a Canadian woodsman who was accidentally shot with a musket at close range. He survived, but was left with a hole in his side that wouldn't heal. His surgeon, William Beaumont used this opportunity to study the workings of the stomach.

Deadliest predator of all time – Smilodon – Sabre Tooth Tiger – prehistoric cat.

Working scientifically: * asking relevant questions and using different types of scientific enquiries to answer them * setting up simple practical enquiries, comparative and fair tests *making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers *gathering, recording, classifying and presenting data in a variety of ways to help in answering questions * recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables *reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions *using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions *identifying differences, similarities or changes related to simple scientific ideas and processes *using straightforward scientific evidence to answer questions or to support their findings.

End Goals:

Can sequence the main parts of the digestive system and draw on a human outline

Can describe what happens in each part of the digestive system

Can point to the three different types of teeth in their mouth and talk about their shape and what they are used for

Can name producers, predators and prey within a habitat

CPD: Reach out CPD Science Association / STEM website

Enrichment: Fossils / Skulls at a museum to study teeth