

Year 4 – Animals, including humans - Knowledge Organiser

Pupils should be taught to:

- 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.

Vocabulary

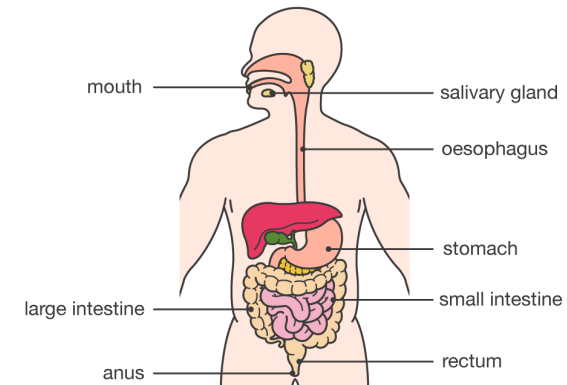
Digest: break down food so nutrients can be used by the body	Mechanical digestion Physically breaking down food into smaller parts	Chemical digestion: Breakdown food using chemicals	Organs: Group of tissues in a living organism that serves a function	Mouth The place where food is broken down mechanically and chemically	Oesophagus: Tube that connects mouth to the stomach	Stomach: An organ involved in the digestive system. Chemical digestion
Small intestine: Runs from stomach to large intestine	Large intestine: Connects small intestine to rectum	Rectum: Where waste is stored until ready to leave digestive system	Herbivore: an animal that eats vegetation only	Carnivore: an animal that eats meat (other animals) only	Omnivore: an animal that eats vegetation and meat	Vegetation Plants (all)
Producer: an organism that produces its own food (plant)	Consumer: An animal that eat plants/other animals	Prey: an animal that is hunted and eaten by another animal	Predator: an animal that preys on and eats other animals	Incisors Bites and cuts	Canines Tears and rips food	Molars Grinds and crushes food

Knowledge

The Digestive System:

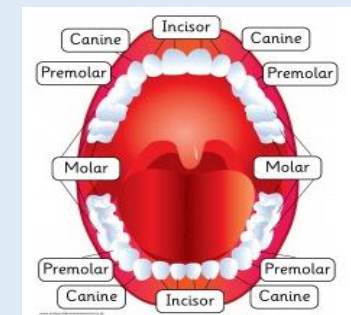
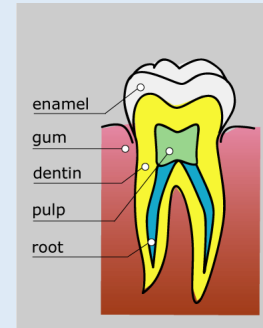
Group of organs that breakdown food in order to absorb its nutrients to be used by the body

1. *Mouth* – teeth break down food mechanically (chewing), saliva breaks down food chemically
2. *Oesophagus* – tube that carries chewed food from mouth to stomach. Tongue pushes food back, throat muscles contract and push food down oesophagus
3. *Stomach* – contains hydrochloric acid to kill harmful bacteria, contains enzymes which break down food chemically
4. *Small intestine* – absorbs nutrients through intestinal wall into the blood. Blood carries nutrients around the body. Bile (produced in liver) breaks down fat from food in small intestine
5. *Large intestine* – absorbs water from food that has not been digested, leaving waste materials (that the body doesn't need). Moves waste to rectum
6. *Rectum* – waste stored until full. Waste leaves body via the anus



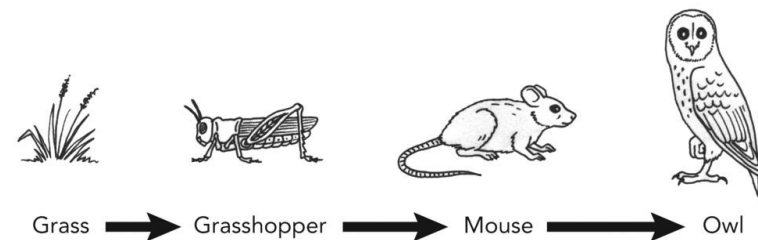
Teeth and their functions:

- Different teeth have different functions (see vocab list)
- Teeth of an animal are designed for the foods an animal eats
- Herbivores (e.g. horse) have little use for canines, mainly use incisors and molars
- Carnivores (e.g. Lion) mainly use canines and incisors, don't have molars (have pre-molars – small molars)
- Omnivores (e.g. human) use all three
- Tooth enamel is the hardest substance in the human body
- Humans have two sets of teeth; milk teeth and adult teeth



Food chains:

- All food chains start with a producer (plant)
- Animals eat the producer, or other animals, these are called consumers
- There are three types of consumers – herbivores, carnivores and omnivores
- Animals that eat other animals are predators
- Animals that are eaten by other animals are prey
- Food chains show the flow of energy up the food chain to the top predator (represented by the direction of arrows)



Opportunities for depth:

- Will identify common living things that can be found in a habitat (e.g. woodland)
- Will use scientific language associated with food chains (producer, predator, prey, primary consumer, composer)
- Will know that a food chain is a flow of energy and will be able to consider what will happen if part of the food chain is missing (will pose and will answer questions)

Websites to use:

<https://padlet.com/pstem/animalsy4>

<https://www.childrensuniversity.manchester.ac.uk/learning-activities/science/the-body-and-medicines/digestive-system/> - digestive system

<https://www.bbc.co.uk/bitesize/topics/z27kng8> - digestive system

<https://www.bbc.co.uk/bitesize/topics/zbnnb9q> - food chains

<https://www.bbc.co.uk/bitesize/topics/zbnnb9q/resources/1> - videos about food chains

<https://www.bbc.co.uk/bitesize/topics/zn22pv4/articles/z846gdm>

<https://www.bbc.co.uk/teach/class-clips-video/teeth/zr8ygwX> - teeth

Working scientifically skills/Enquiry types:

Research - Chn. formulating questions about the digestive system and researching answers – [WS – *asking scientific questions*]

Identifying and classifying – Different animal skulls and teeth [WS – *identifying and classifying, asking scientific questions*]

Identifying, grouping and classifying – constructing food chains [WS – *identifying and classifying, asking scientific questions*]

Example activity - Digestive system in a bag. Chn. model food passing through the digestive system using real food (e.g. bread, bananas, vinegar, food colouring). [WS – *asking scientific questions*]