

## 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

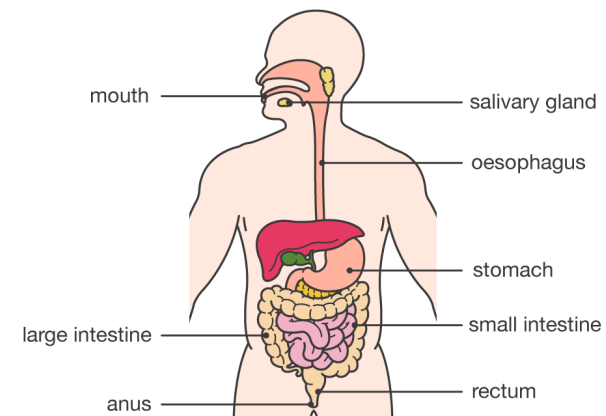
<b>Digest:</b> break down food so nutrients can be used by the body	<b>Mechanical digestion</b> Physically breaking down food into smaller parts	<b>Chemical digestion:</b> Breakdown food using chemicals	<b>Organs:</b> Group of tissues in a living organism that serves a function	<b>Mouth</b> The place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

### Knowledge

#### **The Digestive System:**

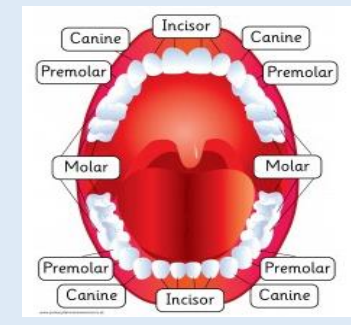
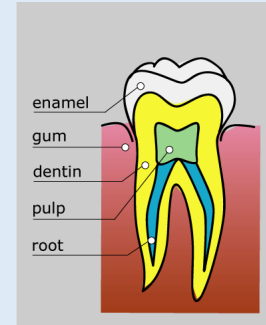
Group of organs that breakdown food in order to absorb its nutrients to be used by the body

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



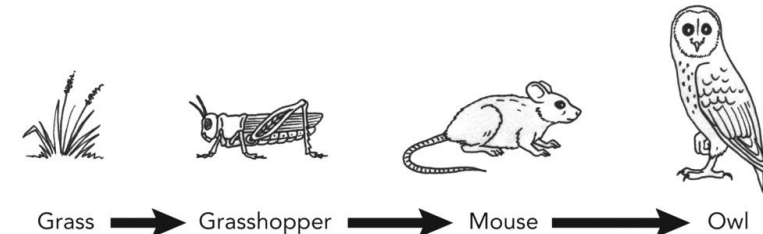
**Teeth and their functions:**

- 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)



**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/zbnbn9q> - food chains

<https://www.bbc.co.uk/bitesize/topics/zbnbn9q/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:**

Exploring - Digestive system in a bag. Chn. model food passing through the digestive system using real food (e.g. bread, bananas, vinegar, food colouring).

Research - Chn. formulating questions about the digestive system and researching answers – [WS - 'asking relevant questions and using different types of scientific enquiries to answer them']

Identifying and classifying – Different animal skulls and teeth [WS – 'identifying differences, similarities or changes related to simple scientific ideas and processes']

Identifying, grouping and classifying – constructing food chains