Science Knowledge Organiser

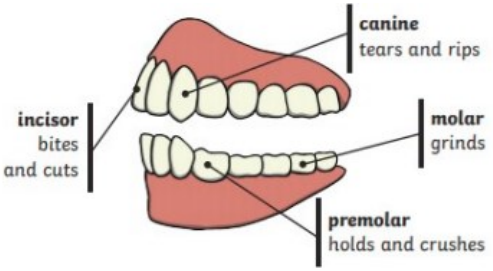
Topic: Animals including Humans	Year: 4	Strand: Biology	Southwold Primary School

What should I already know?

- Some simple food chains.
- Animals can be grouped into carnivores, herbivores and omnivores and other ways in which to classify animals.
- Examples of habitats (including microhabitats) and the animals and plants that can be found there.
- Plants need sunlight to grow.
- Living things depend on each other to survive.
- The parts of the human body and what they do.
- All animals need water, air and food to survive.

What will I know by the end of this unit? (Teeth)

- Human teeth and their functions
- The teeth of an animal are designed to eat different foods depending on the diet of the animal.
- A diet of too much sugar and bad oral hygiene may cause decay and cavities.

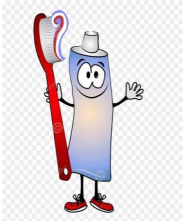


Oral hygiene (keeping your teeth healthy)

Brush your teeth twice a day (morning /before bed-time).

Don't eat too much sugar or sour food.

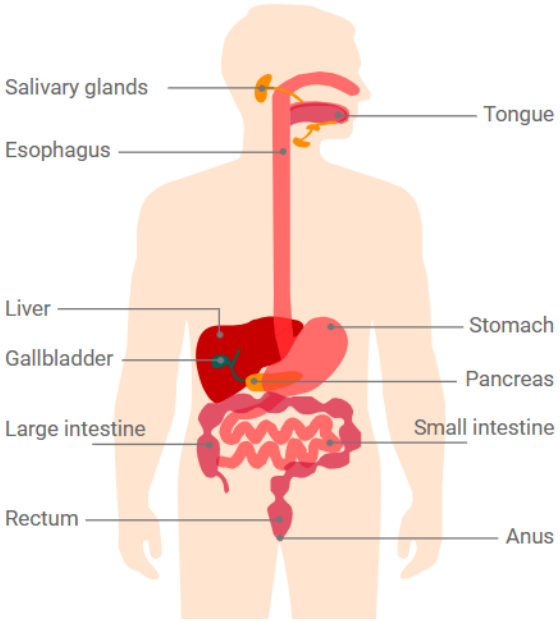
See a dentist for a check up on a regular basis so small problems can be corrected before they get bigger.



What will I know by the end of this unit?

The Digestive System

- The digestive system begins with the mouth and teeth where food is ingested and chewed.
- Saliva is mixed with the food which helps to break it up.
- When the food is small enough to be swallowed, it is pushed down the oesophagus by muscles to the stomach.
- In the stomach, food is mixed further.
- The mixed food is then sent to the small intestine which absorbs nutrients from the food.
- Any leftover broken down food then moves on to the large intestine.
- The food minus the nutrients arrives in the rectum where muscles turn it into faeces (poo). It is stored here until it is pushed out by the anus. This is called excretion.



Vocabulary

bladder	A bag-like organ which stores urine before excretion.
canines	Pointed teeth at the front of the mouth, used for tearing and ripping food.
carnivore	An animal that eats meat.
cavity	A hole in a tooth.
consumer	Animals that eats other organisms (animals and/ or plants).
decay	Destruction of the tooth's enamel.
enamel	The outer, hard part of the tooth.
excretion	The process of eliminating faeces, urine or sweat.
food chain	The connection between organisms bases on who feeds on who.
herbivore	An animal that only eats plants.
incisors	The teeth at the front of the mouth which are used for biting into food.
intestines	The tubes through which food passes when it has left your stomach. Humans have a small intestine and a large intestine.
molars	The large, flat teeth towards the back of the mouth. You use it for chewing food.
nutrients	Parts of the food (e.g. minerals and vitamins) that are essential for survival and growth.
esophagus	The muscular tube which moves food from the mouth to the stomach.
omnivore	An animal that eats both plants and meat.
predator	An animal that eats other animals.
premolar	Sits behind the canine teeth.
prey	An animal that is hunted and killed to be eaten by a **predator.**

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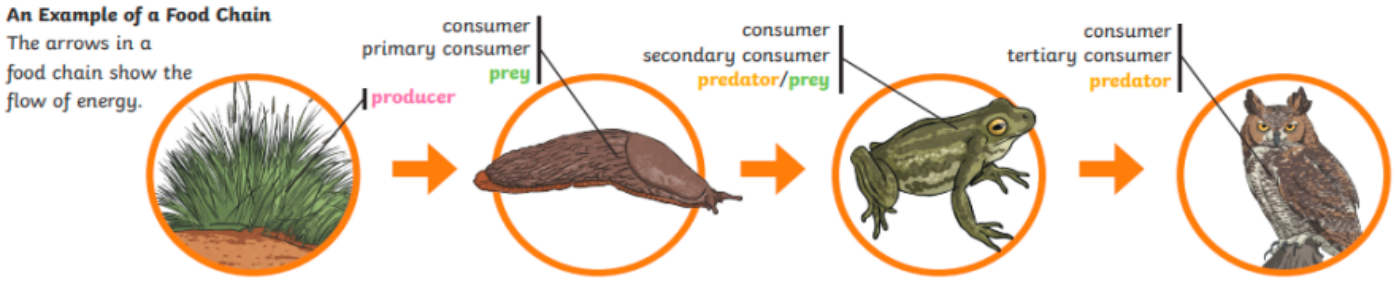
What will I know by the end of this unit?

Food Chains

- A **food chain** always starts with a **producer**, which is a plant, and gets its **energy** from the Sun.
- The slug eats the grass and gets its **energy** from it. The slug is the primary **consumer.**
- The slug is then eaten by the frog, which is the secondary **consumer.** The frog gets its **energy** from the slug. The frog is the **predator** and the slug is the **prey.**
- The frog is then eaten by the owl, which is the tertiary **consumer.** The owl gets its **energy** from the frog.
- The arrows show the direction in which the **energy** travels.

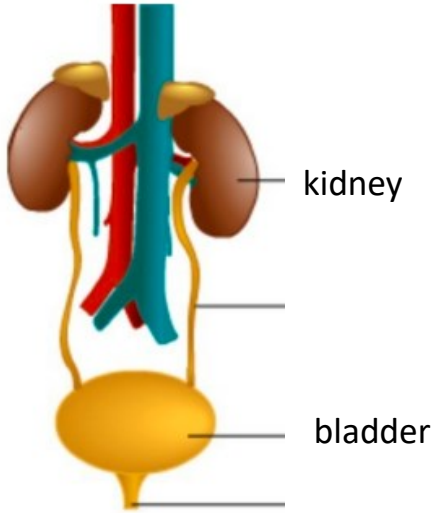


What will I know by the end of this unit?

Excretory System

Excretion is the process of removing excess liquids from the body.

- The excretory system (also called urinary system) starts with the kidneys, which remove waste from the blood stream and makes urine.
- Urine is transported down the ureters and is stored in the bladder.
- Finally, when it is time to urinate, the bladder pushes the urine through another tube, called the urethra, out of the body.



Working Scientifically

- Plan a fair test to investigate which drinks cause the most damage to teeth.
- Compare the teeth of animals which are carnivores, herbivores and omnivores. What do you notice?
- Explore what happens when part of a food chain is removed.
- Create and compare food chains for different habitats.
- Use scientific vocabulary to explain the digestive systems.

The importance of a healthy diet

- A **healthy diet** is a diet that maintains or improves overall health.
- A healthy diet provides the body with essential nutrition: fluid, protein, vitamins, and enough fibre and energy.
- A healthy diet may contain fruits, vegetables, and whole grains, and may include little to no processed food or sweetened drinks
- An unhealthy diet can be harmful: it can cause diabetes, too much weight gain or weight loss, lack of energy, lack of essential building blocks for important body functions and repair.