



Subject Progression Threads

SCIENCE

SHERINGDALE

Learn Create Grow Together

Animals, including Humans - curriculum aims

Nursery	<ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials. • Begin to make sense of their own life-story and family's history. • Understand the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things.
Reception	<ul style="list-style-type: none"> • Talk about members of their immediate family and community. • Name and describe people who are familiar to them. • Recognise some environments that are different to the one in which they live.
Year 1	<ul style="list-style-type: none"> • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.
Year 2	<ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults. • Find out about and 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. • Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. (Y2 - Living things and their habitats)
Year 3	<ul style="list-style-type: none"> • Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. • Identify that humans and some other animals have skeletons and muscles for support, protection and movement.
Year 4	<ul style="list-style-type: none"> • 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.
Year 5	<ul style="list-style-type: none"> • Describe the changes as humans develop to old age. • Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats) • Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats)
Year 6	<ul style="list-style-type: none"> • Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. • Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. • Describe the ways in which nutrients and water are transported within animals, including humans. • Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. (Y6 - Living things and their habitats) • Give reasons for classifying plants and animals based on specific characteristics. (Y6 - Living things and their habitats)

Starting from the National Curriculum



Science Aims (NC)

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.



EYFS - Prerequisite Learning for Science

<p>Understand the world</p>	<ul style="list-style-type: none">• Explore the natural world around them, making observations and drawing pictures of animals and plants: observe the life cycle of ducks• Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class:• Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter: signs of winter, spring, summer, autumn watching ice melt
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EYFS - Subject specific learning

ELG	Communication and Language	Listening, Attention and Understanding	<ul style="list-style-type: none">• Make comments about what they have heard and ask questions to clarify their understanding.
	Personal, Social and Emotional Development	Managing Self	<ul style="list-style-type: none">• Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.
	Understanding the World	The Natural World	<ul style="list-style-type: none">• <u>Explore the natural world around them, making observations and drawing pictures of animals and plants.</u>• <u>Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</u>• Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Comparative / fair testing

Changing one variable to see its effect on another, whilst keeping all others the same.



Research

Using secondary sources of information to answer scientific questions.



Observation over time

Observing changes that occur over a period of time ranging from minutes to months.



Pattern-seeking

Identifying patterns and looking for relationships in enquiries where variables are difficult to control.



Identifying, grouping and classifying

Making observations to name, sort and organise items.



Problem-solving

Applying prior scientific knowledge to find answers to problems.



Year 1

Lesson 1: Label parts of the body

Lesson 2: understand the function of the body parts



Lesson 3: understand the 5 senses

Lesson 4: explore touch



Lesson 5: explore sight and hearing



Lesson 6: explore smell and taste



Lesson 7: identify animal types – mammals, birds, amphibians, fish, reptiles



Lesson 8/9: identify and compare carnivores, herbivores and omnivores



Lesson 10/11: identify and compare structures of animals

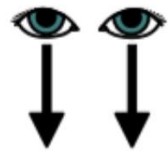


Year 1

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.
- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).
- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Can you help me sort these objects based on the sense?

Year 1



sight



hear



touch



taste

<u>Sound</u>	<u>Loud</u>	<u>Quiet</u>	<u>Animal</u>	<u>Music</u>	<u>Human</u>	<u>Not human</u>	<u>Answer</u>

Amphibians

Amphibians live on land and in water.



frog



Falcon

A falcon's diet mostly consists of smaller birds such as pigeons or ducks.

Year 2

Lesson 1: Identify basic needs of animals and humans



Lesson 2: understand how to eat healthily



Lesson 3: explore the importance of exercise



Lesson 4: explore how to be hygienic



Lesson 5: explain how to live a healthy lifestyle

Lesson 6: identify animals and their offspring



Lesson 7: similarities and differences between adults and offspring



Lesson 8/9/10: understand life cycle of hen/frog/human



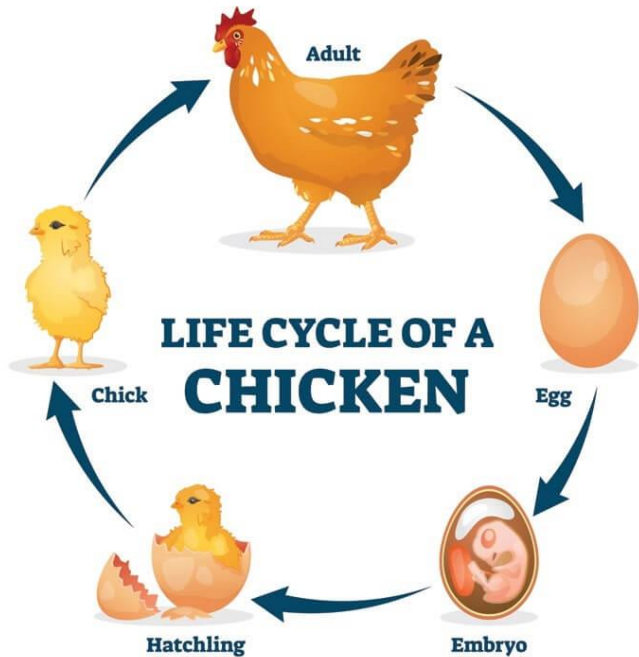
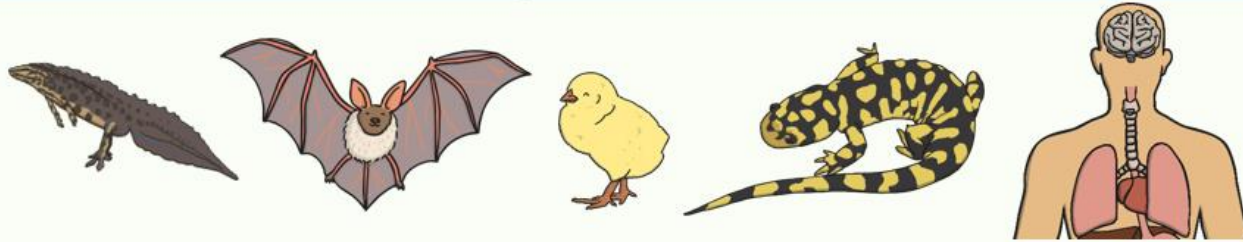
Year 2

- Notice that animals, including humans, have offspring which grow into adults.
- Find out about and 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.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. (Y2 - Living things and their habitats)

Year 2

Air

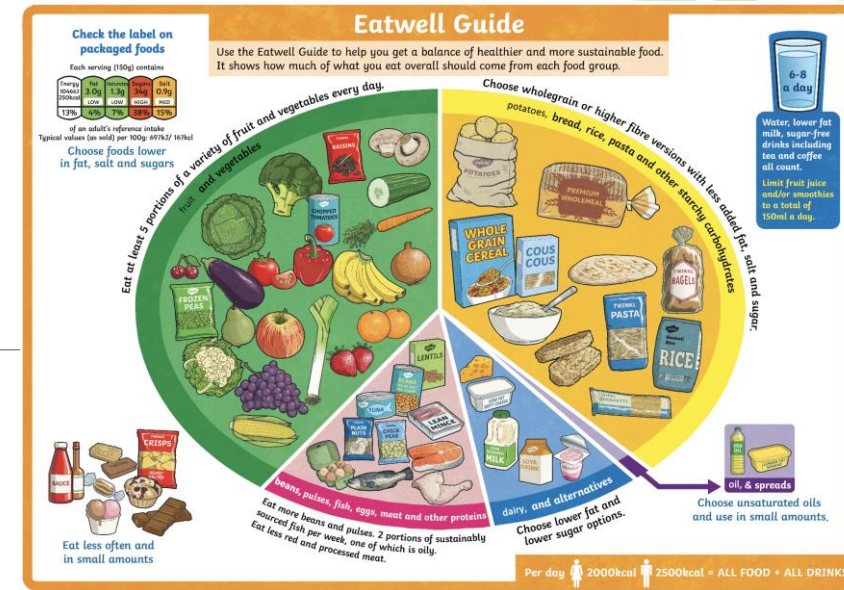
Mammals, reptiles and birds breathe air through their nose or mouth into their lungs.



Toddler

Just like the name suggests, the toddler stage is when a child is starting to toddle, which means wobbly walking. The toddler stages are from ages 1 to 3.

As well as learning to walk, toddlers go through lots of other changes...



Year 3

Lesson 1: understand changes in the human lifecycle



Lesson 2: identify and explain human bones and muscles



Lesson 3: Identify vertebrates and invertebrates



Lesson 4: identify organs



Lesson 5: identify human and animal body differences

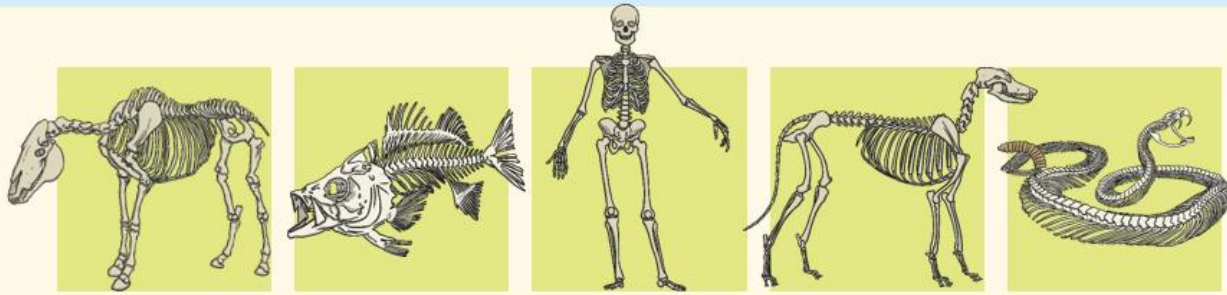


Lesson 6: understand food groups



Year 3	<ul style="list-style-type: none">Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.Identify that humans and some other animals have skeletons and muscles for support, protection and movement.
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Year 3



human

dog

horse

snake

fish

Vertebrates

Animals with backbones



Fish



Birds



Mammals



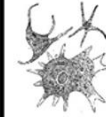
Reptile



Amphibians

Invertebrates

Animals without backbones



Protozoa



Annelids



Mollusks



Echinoderms



Crustaceans

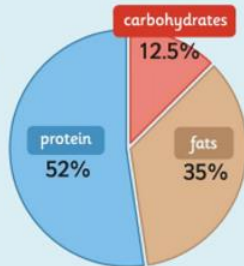
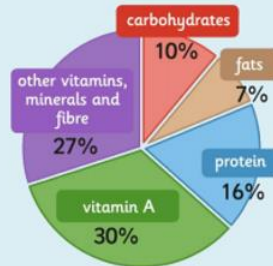
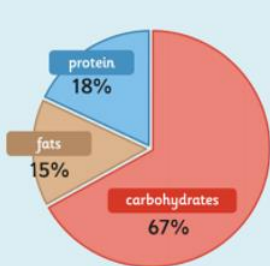
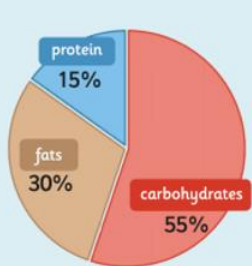


Arachnids

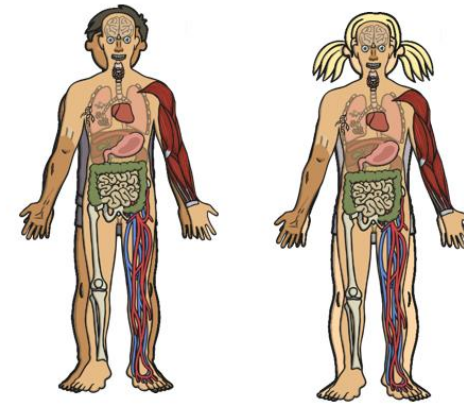


Insects

Match the animal with the pie chart showing the right amount of nutrients they need.



Have you ever wondered what was underneath your skin?



It is your organs. Your heart, brain, lungs, and many more!

Year 4 (NC)

WALT: understand the digestive system



WALT: explore the digestive system



WALT: explore human teeth



WALT: investigate teeth damage



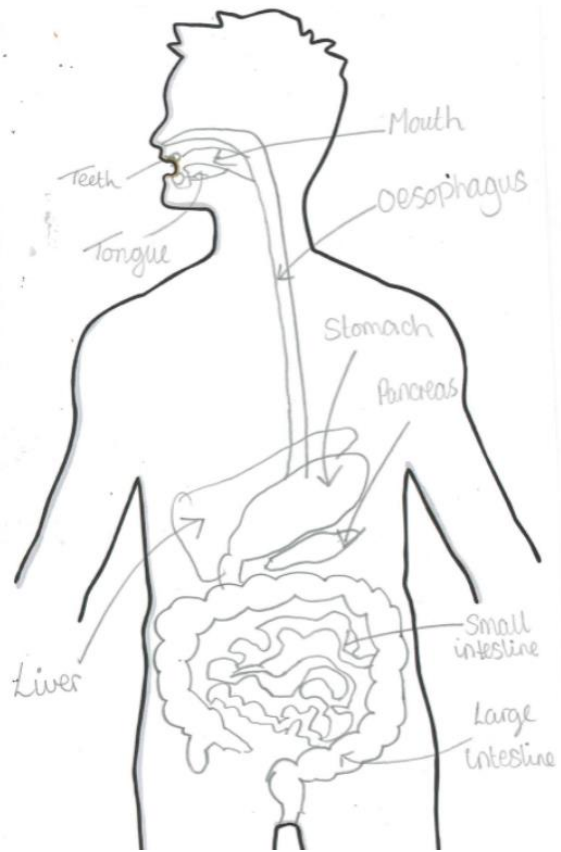
WALT: compare teeth of carnivores and herbivores



Year 4	<ul style="list-style-type: none">• 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.
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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.

Year 4

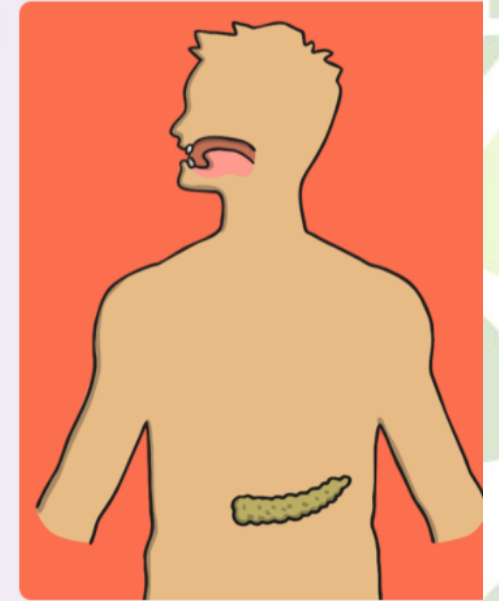


Pancreas

Function:

Produces enzymes to break down fats, proteins and carbohydrates.

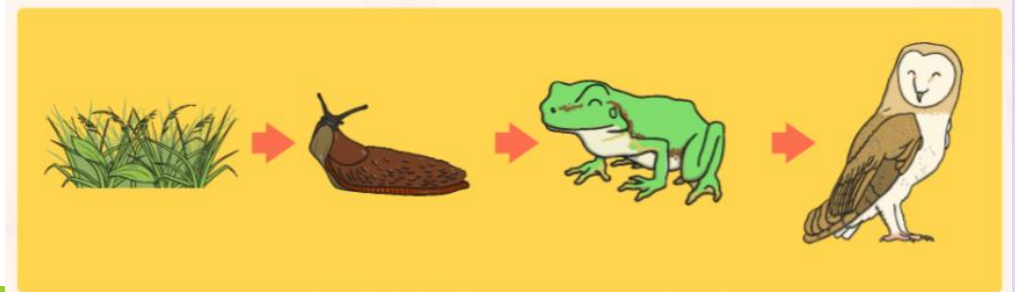
The pancreas also produces insulin which controls a type of sugar produced by carbohydrates called glucose. Insulin makes sure that the body has the right amount of glucose so that the body has enough energy.



What are the four main types of teeth?



Can you label this food chain?



Year 5

WALT: explore the human life cycle



WALT: understand gestation periods



WALT: understand physical and mental well-being



WALT: understand puberty in boys and girls



WALT: understand the later stages of human life



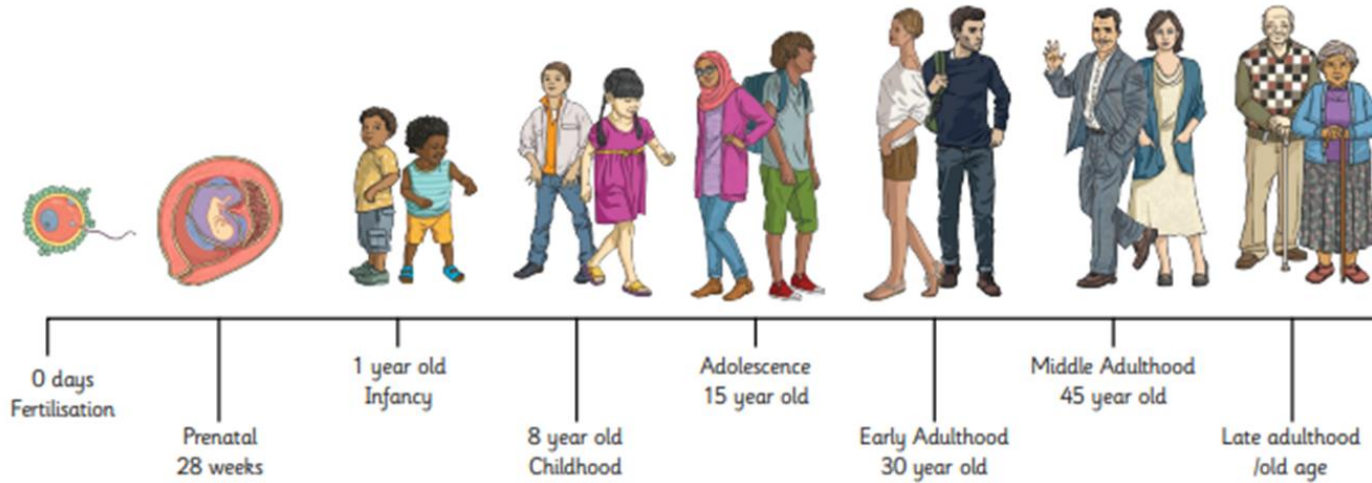
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Describe the changes as humans develop to old age.

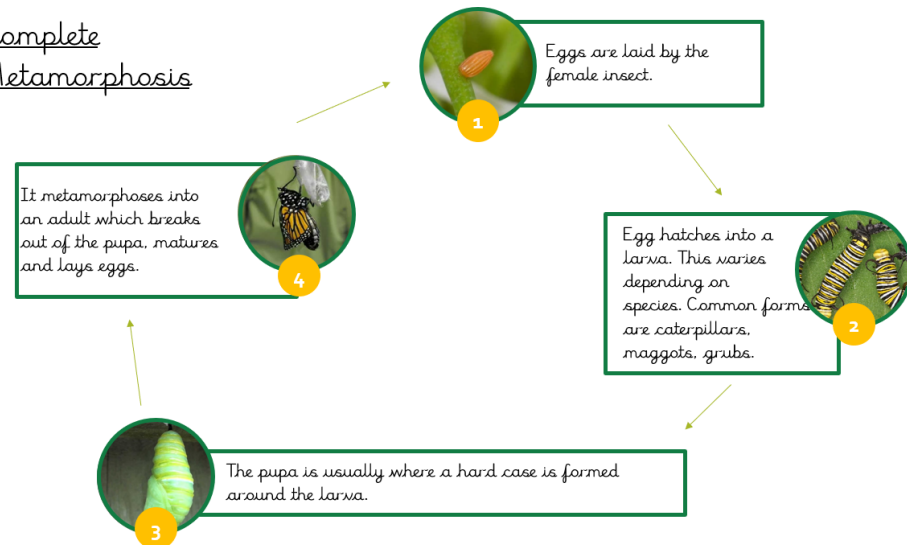
Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats)

Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats)

Year 5



Complete Metamorphosis



Potato plants grow tubers underground during the spring and summer. These tubers will grow into new plants the following spring if they are left undisturbed.

Year 6

WALT: explore blood and its function



WALT: explore the circulatory system



WALT: understand the respiratory system



WALT: explore heart rate



WALT: understand how the circulatory and respiratory systems work



WALT: recognise how our lifestyle affects our bodies function



Year 6

- Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.
- Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.
- Describe the ways in which nutrients and water are transported within animals, including humans.
- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. (Y6 - Living things and their habitats)
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Year 6

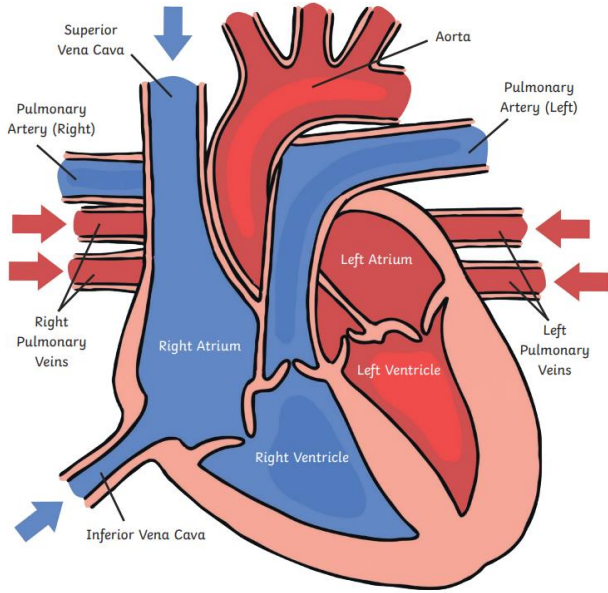
Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.

Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.

Describe the ways in which nutrients and water are transported within animals, including humans.

Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. (Y6 - Living things and their habitats)

Give reasons for classifying plants and animals based on specific characteristics. (Y6 - Living things and their habitats)



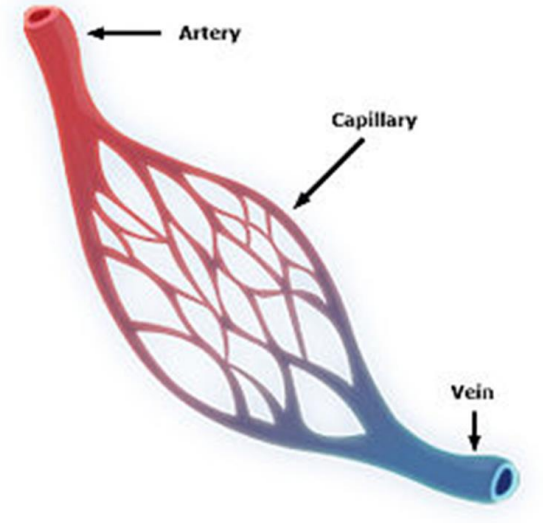
The Effect of Your Diet



The word 'diet' simply means all the food and drink you choose to put into your body.

People can have a healthy diet or an unhealthy diet. Some people have a special diet, perhaps because they are diabetic, have coeliac disease, are vegetarians or because they need to lose weight.

Your body is set up to be the best with a certain diet.



- Create your own simple classification key using the bird information sheet. First, you need to match the information with the correct animal.
- The question at the top should be broad, and splits the group in half – for example – **Are they most adapted to water?**
- Then the next question should split it in half again, to get to your correct classifications.
- When drawing your classification key, using a ruler is essential.

