

Science Knowledge Organiser Y5/6 – Animals Including Humans



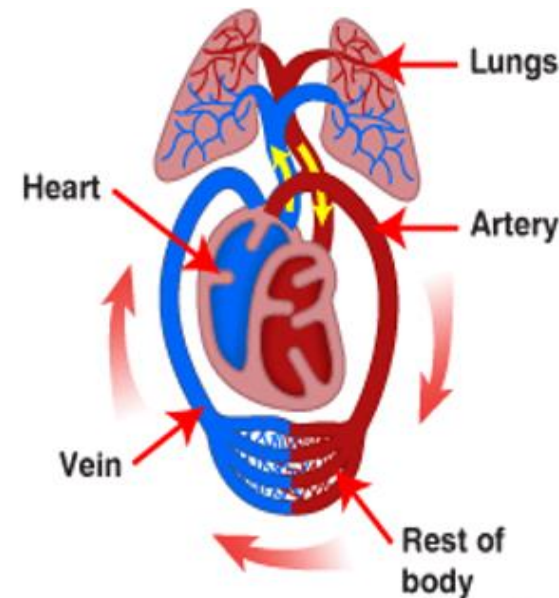
Key vocabulary

Asexual reproduction	Offspring get genes from one parent so are clones of their parents
Foetus	An unborn or unhatched offspring of a mammal, in particular an unborn human more than eight weeks after conception
Gestation	The process or period of developing inside the womb between conception and birth
Offspring	A person's child or children/ an animal's young
Puberty	The period during which adolescents reach sexual maturity and become capable of reproduction
Reproduction	The production of offspring by a sexual or asexual process
Sexual reproduction	Offspring get genes from both mum and dad, inheriting a mix of features from both
Arteries	Muscular-walled tubes that transport blood from the heart to other parts of the body
Blood	Red liquid that circulates in arteries and veins, carrying oxygen to and carbon dioxide from tissues of the body
Blood vessel	A tubular structure carrying blood through the tissues and organs
Circulatory system	The system that circulates blood through the body, including the heart, blood vessels and blood
Heart	A hollow muscular organ that pumps the blood through the circulatory system
Lungs	Pair of organs situated within the ribcage where oxygen can pass into the blood and carbon dioxide be removed
Veins	Tubes forming part of the blood circulation system of the body, carrying mainly oxygen-depleted blood towards the heart

The heart

The **heart** pumps oxygen-rich blood to every cell in the body.

The Circulatory System



The circulatory system allows blood to circulate and transport nutrients, oxygen, hormones and blood cells to and from the cells in the body to provide nourishment and help fight diseases.

Blood

- Transports oxygen and nutrients to the lungs and tissues
- Forms blood clots to prevent blood loss
- Carries cells to fight infection
- Brings waste products to organs
- Regulates body temperature

Blood vessels

A network of arteries and veins that provide the pathway for blood to travel.



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During **puberty**, boys and girls will undergo **physical changes** as they get older. They can increase in height and weight, they may get acne or spots and their **moods can change** regularly.

In boys, they may grow **body and facial hair**, their **voices** can get **deeper** and their **Adam's apple** may start to **protrude**. They may also start to have **wet dreams**.

In girls, their **breasts** will grow, their **body fat** may **increase**, including the **widening** of their **hips** and they will start **menstruation**.

fertilisation

The male and female sex cells fuse together.



prenatal

The cells develop and grow into a foetus inside the mother's uterus. After around nine months, the baby is born.

infancy

Rapid growth and development. Children learn to walk and talk.

childhood

Children learn new skills and become more independent.

adolescence

The body starts to change over a few years. The changes occur to enable reproduction during adulthood. Much more independent.

middle adulthood

Ability to reproduce decreases. There may be hair loss or hair may turn grey.

late adulthood

Leading a healthy lifestyle can help to slow down the decline in fitness and health which occurs during this stage.

early adulthood

The human body is at its peak of fitness and strength.

Fetal Growth From 8 to 40 Weeks



As humans grow, they undergo many **physical** and **emotional changes**. As a **child**, we learn **new skills** such as **walking** and **talking** and as we develop into **old age**, we may get **wrinkles** and **greying hair**. These changes are all part of the **human life cycle**.

A healthy diet involves eating the right types of **nutrients** in the right amounts.



Drugs, **alcohol** and smoking have negative effects on the body.



Assessment

- To describe the changes as humans develop to old age
- To explain how babies grow and develop
- To compare the changes that take place to boys and girls during puberty
- To understand the changes that take place in old age
- To investigate the gestation periods of different animals
- To identify and name the main parts of the human circulatory system
- To describe the functions of the heart, blood vessels and blood
- To describe the ways in which nutrients and water are transported within animals, including humans
- To recognise the impact of diet and exercise on the way the body functions
- To plan an enquiry comparing different forms of exercise and their effect on pulse rate
- To explain the impact of drugs and alcohol on the body