

Animals including humans- Year 6- Kapow unit- Circulation and health (Continue to also do dissection of heart)

Previous learning

Describe the changes as humans develop into old age.

Key scientists you could look at...

Charles Darwin

Scientific skills

Working scientifically	Questioning and enquiry	Observing and measuring	Investigating	Recording	Grouping and classifying
To use practical scientific methods, processes and skills	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	Take measurements using a range of scientific equipment with increasing accuracy and precision. Take repeat readings where appropriate. Identify patterns that might be found in the natural environment. Make own decisions about what observations, measurements to use and whether or not to repeat them. Choose most appropriate equipment. Interpret data and find patterns. Select equipment independently. Use accurate and precise measures	Use test results to make predictions to set up further comparative and fair tests. Recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. Suggest improvements to methods and give reasons. Decide when it is appropriate to do a fair test.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. Report and present findings from enquiries. Decide how to record data from a choice of familiar approaches. Choose how best to present data	Use and develop keys and other information records to identify, classify and describe living things and materials.

Key Vocabulary for Year 6

Circulatory system	Respiration
Heart	
Blood vessels	
Veins	
Arteries	
Oxygenated	
Deoxygenated	
Valve	
Exercise	

Previous vocabulary

Foetus, embryo, womb, gestation, baby, toddler, teenager, elderly, growth, development, puberty

Useful links

<https://www.stem.org.uk/resources/community/collecion/13109/year-6-animals-including-humans>

<https://www.hamilton-trust.org.uk/science/year-6-science/art-being-human/>

<https://www.ase.org.uk/resources/y6-animals-including-humans-muharem>

Experiment and activity ideas

Dissect a heart	Create a diagram of the circulatory system	Heart rate experiment	Create a healthy lifestyle plan	Human representation of circulatory system
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Knowledge- objectives

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.

Resources in school

Human body, x rays, stop watches, magnifying glasses, bug finders, stethoscopes, height measure, teeth model, PSHCE resources on puberty, heart model

Mammals have **hearts** with four chambers. Notice how the blood that has come from the body is **deoxygenated**, and the blood that has come from the lungs is **oxygenated** again. The blood isn't actually red and blue: we just show it like that on a diagram.

from body to body
to lungs from lungs
from body

deoxygenated blood

oxygenated blood

The **heart** pumps blood to the lungs to get oxygen. It then pumps this **oxygenated blood** around the body.

Capillaries are the smallest **blood vessels** in the body and it is here that the exchange of water, nutrients, oxygen and carbon dioxide takes place.

Arteries carry **oxy genat ed blood** away from the **heart**.

Veins carry **deoxy genat ed blood** toward the **heart**.

The liquid part of blood contains water and protein. This is called **plasma**.

Blood transports:

- gases (mostly oxygen and carbon dioxide);
- **nutrients** (including water);
- waste products.

Regular exercise:

- strengthens muscles including the heart muscle;
- improves circulation;
- increases the amount of oxygen around the body;
- releases brain chemicals which help you feel calm and relaxed;
- helps you sleep more easily;
- strengthens bones.

It can even help to stop us from getting ill.

Plasma is liquid. The other parts of your blood are solid.

Red blood cells carry oxygen through your body.

Platelets help you stop bleeding when you get hurt.

White blood cells fight infection when you're sick.

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

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