

Topic: Animals Including Humans

Year: 6

Term: 1

What should I already know?

- Which things are living and which are not.
- Classification of animals (e.g. amphibians, reptiles, birds, fish, mammals, invertebrates)
- Animals that are carnivores, herbivores and omnivores.
- Animals have offspring which grow into adults.
- The basic needs of animals for survival (water, food, air)
- The importance of exercise, hygiene and a balanced diet.
- Animals get nutrition from what they eat.
- Some animals have skeletons for support, protection and movement.
- The basic parts of the digestive system.
- The different types of teeth in humans.
- Respiration is one of the seven life processes.
- The life cycle of a human and how we change as we grow.

MRS GREN

M movement
 R respiration
 S sensitivity
 G growth
 R reproduction
 E excretion
 N nutrition

These 7 characteristics tell us if something is alive

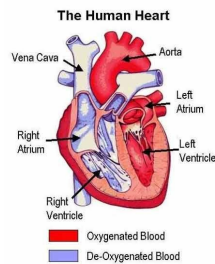
Vocabulary

aorta	the main artery through which blood leaves your heart before it flows through the rest of your body
arteries	a tube in your body that carries oxygenated blood from your heart to the rest of your body
atrium	one of the chambers in the heart
blood vessels	the narrow tubes through which your blood flows, arteries, veins and capillaries are blood vessels
capillaries	tiny blood vessels in your body
carbon dioxide	a gas produced by animals and people breathing out
circulatory system	the system responsible for circulating blood through the body, that supplies nutrients and oxygen to the body and removes waste products such as carbon dioxide.
deoxygenated	blood that does not contain oxygen
oxygen	a colourless gas that plants and animals need to survive
pulse	the regular beating of blood through your body. How fast or slow your pulse is depends on the activity you are doing.
respiration	process of respiring; breathing ; inhaling and exhaling air. In KS3 Science, this process is referred to as ventilation.
veins	a tube in your body that carries deoxygenated blood to your heart from the rest of your body
vena cava	a large vein through which deoxygenated blood reaches your heart from the body
ventilation	The exchange of air between the lungs and the atmosphere so that oxygen can be exchanged for carbon dioxide
ventricle	one of the chambers in the heart

What will I know by the end of the unit?

What is the circulatory system?

- The circulatory system is made of the heart, lungs and the blood vessels.
- Arteries carry oxygenated blood from the heart to the rest of the body.
- Veins carry deoxygenated blood from the body to the heart.
- Nutrients, oxygen and carbon dioxide are exchanged via the capillaries.

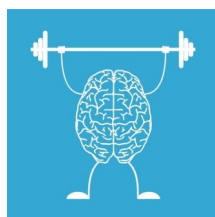


Choices that can harm the circulatory system

- Some choices, such as smoking and drinking alcohol can be harmful to our health.
- Tobacco can cause short-term effects such as shortness of breath, difficulty sleeping and loss of taste and long-term effects such as lung disease, cancer and death.
- Alcohol can cause short-term effects such as addiction and loss of control and long-term effects such as organ damage, cancer and death.

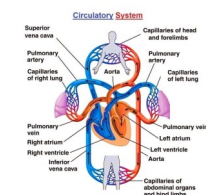
Why is exercise so important?

- Exercise can:
- tone our muscles and reduce fat
 - increase fitness
 - make you feel physically and mentally healthier
 - strengthen the heart and improve lung function



Diagram

1. The right atrium collects the deoxygenated blood from the body, via the vena cava. It sends the blood to the right ventricle.
2. The right ventricle pumps the deoxygenated blood to the lungs. Here the blood picks up oxygen and disposes of carbon dioxide.
3. The lungs send oxygenated blood back to the left atrium which pumps it to the left ventricle.
4. The left ventricle pumps the blood to the rest of the body, via the aorta.



Skills to be covered in this unit

- Identifying and naming the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.
- Describing the ways in which nutrients and water are transported within animals, including humans.
- Recognising the impact of diet, exercise, drugs and lifestyle on the way their bodies function.
- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.

Investigate!

- How does your pulse change with exercise? What is the most efficient way of presenting this data?
- Which exercise produces the fastest pulse? How would you make this a fair test?