

Science Knowledge Organiser

Year 6 Autumn 1

Animals including humans

Year 6

Main Foci: Biology

What should I already know?

- 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 importance of exercise, hygiene and a balanced diet.
- Animals get nutrition from what they eat.
- The basic parts of the digestive system.
- The different types of teeth in humans.
- Respiration is one of the seven life processes.

What will I know by the end of the unit?

What is the circulatory system?

- There are only three parts of the circulatory system:
- **blood**: which circulates or travels round the whole body.
- **blood vessels**: that carry the blood.
- The **Heart**: which is the muscle which pumps the blood.

What is the function of the heart?

- **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**

What is the blood and what is in it?

Blood transports materials around the body and protects against disease. It contains:

- **Red blood cells**
- **White blood cells**
- **Blood platelets**
- **Plasma**

What do valves and blood vessels do?

Blood vessels are the tubes that carry blood around the body. There are three main types:

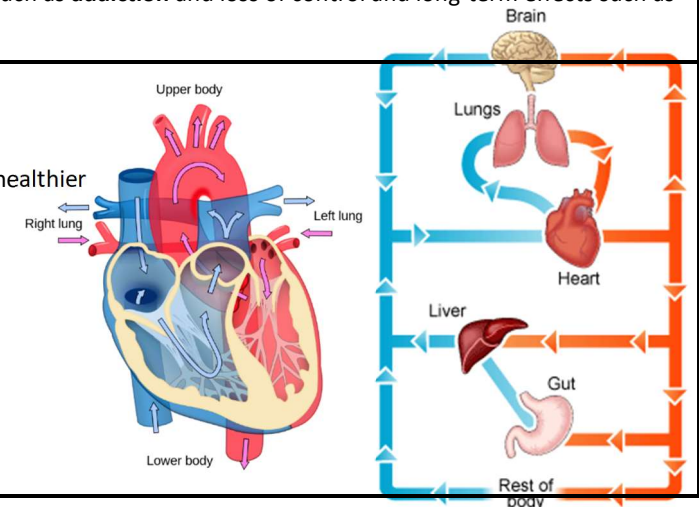
- **Veins** carry blood back to the heart.
- **Arteries** carry blood away from the heart.
- **Capillaries** are the small (in some cases very small) blood vessels that carry blood through the various tissues of the body.

What 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
 - strengthens the **heart**
 - improves **lung** function
 - improves skin



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
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
nutrients	substances that help plants and animals to grow
oxygen	a colourless gas that plants and animals need to survive
oxygenated	blood that contains oxygen
respiration	process of respiring; breathing; inhaling and exhaling air.
vein	a tube in your body that carries deoxygenated blood to your heart from the rest of your body

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