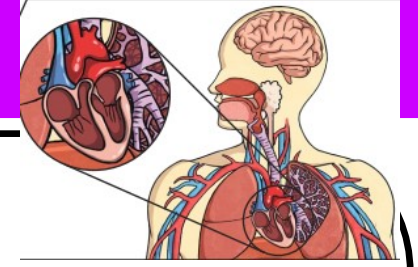


Science, Year 6 - Healthy Bodies



Learning Objectives -

National Curriculum Link: Animals, including Humans.

- ◆ Identify and name the main parts of the circulatory system.
- ◆ Describe the functions of the heart, blood and blood vessels.
- ◆ Recognise the impact of diet, exercise, drugs and lifestyle on our bodies and the way they function.
- ◆ Describe the ways in which nutrients and water are transported within animals, including humans.

Working Scientifically Skills -

- ◆ Plan different types of scientific enquiries to answer questions.
- ◆ Take measurements using a range of scientific equipment.
- ◆ Record data and results.
- ◆ Use test results to make predictions.
- ◆ Report and present findings including conclusions.
- ◆ Identify scientific evidence that has been used to support or refute ideas or arguments.

What should I already know?

- ◆ How to identify if something is living, dead or was never alive.
- ◆ The classification of animals (mammals, amphibians, reptiles, fish, bird, invertebrates).
- ◆ Carnivores, Omnivores and Herbivores.
- ◆ Basic needs of survival - water, air, food.
- ◆ Importance of exercise and healthy diet.
- ◆ Basic human anatomy - bones, skeleton, muscles.
- ◆ Digestive system and teeth.
- ◆ The life cycle of a human and how we change and grow.

Scientific Vocabulary -

Addiction: Uncontrollable urge to do something as it makes you feel good.

Aorta: A major artery carrying blood from the heart.

Atrium: Chambers of the heart.

Arteries: Blood vessels that carry blood away from the heart.

Blood: The liquid that transports oxygen around the body.

Circulatory system: Made up of the heart, the lungs, blood and the vessels it travels through.

Carbon dioxide: Gas released when living things breathe.

Capillaries: Blood vessels between the ends of arteries and beginning of veins.

De-oxygenated: Does not contain oxygen.

Exercise:

Heart: The organ that pumps blood around the body.

Lungs: The organ that gathers in air.

Nicotine: Addictive substance in cigarettes.

Oxygenated: Enriched with oxygen.

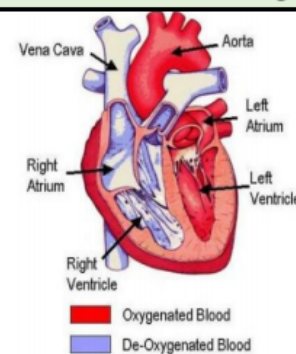
Pulse: Regular throbbing of the arteries - can be felt on certain parts of the body. Try your wrist!

Respiration: Process of breathing.

Vein: Bloody vessel carrying blood back to the heart.

Ventricles: Chambers of the heart from which blood is forced into the arteries.

Diagram - The Heart



- The **heart** is composed of four chambers; the right **atrium**, the right **ventricle**, the left **atrium** and the left **ventricle**.
- How often your **heart** pumps is called your **pulse**.

What will I know by the end of this unit?

The Circulatory System

- ◆ Made up of heart, lungs and blood vessels.
- ◆ Arteries carry oxygenated blood from the heart to the rest of the body.
- ◆ Veins carry de-oxygenated blood from the body back to the heart.
- ◆ Nutrients, oxygen and carbon dioxide are exchanged via capillaries.

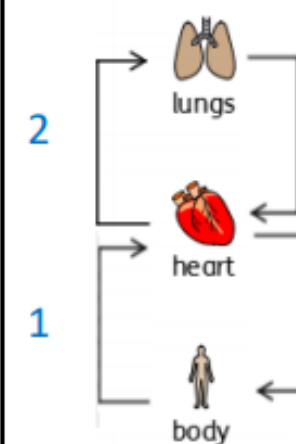
The effects of exercise on the body - Exercise can...

- ◆ Tone our muscles and reduce fat.
- ◆ Increase fitness.
- ◆ Strengthen the heart and lungs.
- ◆ Make you feel better physically and mentally.
- ◆ Diet is also very important - you must think carefully about what you eat.

The effects of drugs on the body

- ◆ Smoking and drinking can have negative effects on the body. They can both be addictive.
- ◆ Tobacco from smoking can cause shortness of breath, difficulty sleeping, loss of taste and long term disease like cancer or even death.
- ◆ Alcohol can cause organ damage, cancer or even death.
- ◆ Drugs are substances that contain man-made or natural chemicals that have an effect when they enter your body.

Diagram - The Circulatory System



1. **Deoxygenated** blood is sent to the **heart** from the rest of the body.
2. This is then sent from the **heart** to the **lungs**. Here, the blood picks up **oxygen** and disposes of **carbon dioxide**.
3. **Oxygenated** blood is then sent back to the heart.
4. The **heart** sends the **oxygenated** blood back to the rest of the body.

How often your **heart** pumps is called your **pulse**.