

Year 6 Knowledge Organiser – Animals including Humans

What you should already know...



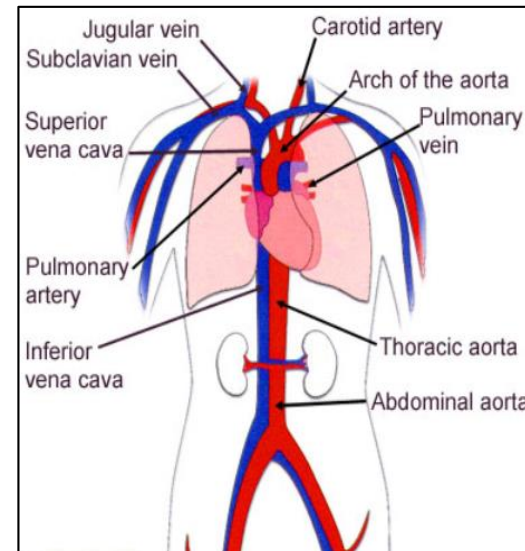
Humans and animals go through life stages, including **birth**, **growth**, **reproduction** and **death**.

Humans go through **puberty** as they move beyond childhood into adulthood, and their bodies age as they get older.

Different foods contain various quantities of **carbohydrates**, **fats**, **proteins**, **fibre**, **vitamins** and **minerals**. It is important to have the right balance.

Humans (and many animals) have **skeletal**, **muscular** and **digestive** systems.

The Circulatory System



The circulatory system is your body's delivery system. It is made up of your **heart**, **blood** and **blood vessels**. The human body needs a constant supply of blood to keep working. Blood delivers **oxygen** to all of the body's **cells** – without this, cells would die.

The circulatory system takes blood (and the oxygen) all around your body in blood vessels which are a series of tubes inside your body. **Arteries** carry blood away from the heart and transport oxygen and useful nutrients to the body's cells.

After the oxygen has been used up, **veins** take blood back to the heart. The heart pumps **deoxygenated blood** to the **lungs** via the **pulmonary artery**, where it picks up oxygen. It is then returned to the heart through the **pulmonary vein**.

The heart then pumps the **oxygenated blood** to the rest of the body through the **aorta** and the other **arteries**.

Impact of Diet, Exercise, and Drugs

Diet

A healthy, balanced diet can have a huge effect on a person's health. People who eat the right balance of fresh, healthy foods are less prone to chronic illnesses and diseases.



Carbohydrates are used by the body to create glucose, the body's main energy source. **Fat** is also helpful for energy, but too much fat in a person's diet causes them to gain weight. **Protein** helps to build and repair muscles, but too much can cause indigestion and intestinal problems.

Exercise



As we exercise, our muscles need more oxygen. So, we breathe quicker, helping our lungs to take in more oxygen.

Our heart needs to pump blood more quickly to get all of the oxygen around the body. In order to do this, our heart rate increases.

Regular exercise helps our bones and muscles to become stronger. It also helps the heart and lungs to become healthier.

Drugs

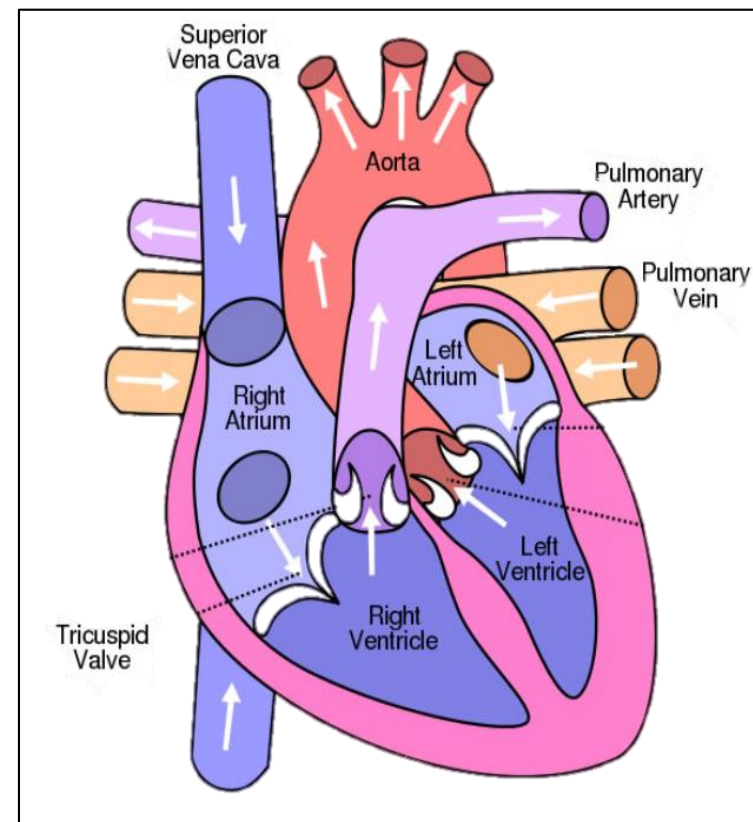
A drug is a chemical that has an effect on your body.



Some drugs are prescribed by doctors to make people healthy. Other, illegal drugs can have a dangerous effect on our health.

Too much alcohol can cause damage to the liver and brain. Cigarettes contain nicotine, which is a stimulant, and is addictive. Cigarettes cause damage to the lungs and heart.

The Heart



The circulatory system is centred on the heart, an organ that works constantly to pump blood around the body.

The heart is made up of four sections, called **chambers**. There are two sides to the heart (right and left) each of which have an **atrium** (at the top) and a **ventricle** (at the bottom).

The job of the '**atria**' (the word for the two atriums) is to fill with the blood returning to the heart before pushing it to the **ventricles**.

The **left atrium** receives blood from the lungs and the **right atrium** receives it from the rest of the body.

The job of the ventricles is to push the blood out of the heart. The **left ventricle** pushes blood to the lungs and the **right ventricle** pushes blood to the rest of the body.

Transportation of Water in the Body

Rehydration – water is drunk through the mouth.



Absorption – water is absorbed by the intestines and is carried in the bloodstream.



Transportation – water is taken in blood to different parts of the body.



Excretion – waste water is passed out as urine.

