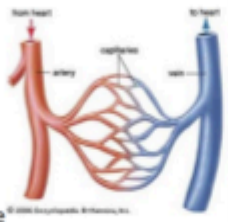
Caroline Haslett Primary - Science Topic: Animals Including Humans Y6

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.

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 • strengthens the **heart** • improves **lung** function • improves skin

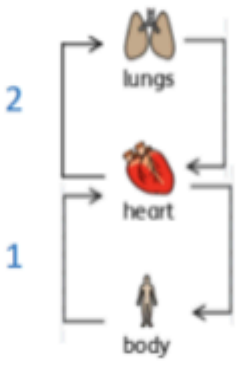
Vocabulary

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
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**
heart	the **organ** in your chest that **pumps** the blood around your body
lungs	two **organs** inside your chest which fill with air when you breathe in. They **oxygenate** the blood and remove **carbon dioxide** from it.
nutrients	substances that help plants and animals to grow
organ	a part of your body that has a particular purpose
oxygen	a colourless gas that plants and animals need to survive
oxygenated	blood that contains **oxygen**
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.**
vein	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**
via	through

Investigate!

- Identify the parts of the **circulatory** system and explain their functions
- Create a presentation to show how our blood is pumped around the body.
- Write a persuasive text explaining the importance of exercise.

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**.

Caroline Haslett Primary School - Science Topic: Animals Including Humans Year 6

Working scientifically	Questions can help us find out about the world and can be answered using a range of scientific enquiries, including fair tests, research and observation. Ask and answer deeper and broader scientific questions about the local and wider world that build on and extend their own and others' experiences and knowledge. Plan and carry out a range of enquiries, including writing methods, identifying and controlling variables, deciding on equipment and data to collect and make predictions based on prior knowledge and understanding. An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time, identify processes and make comparisons.
Animals including humans and evolution	The circulatory system includes the heart, lungs, blood vessels and blood. Explain that the circulatory system in animals transports oxygen, water and nutrients around the body. They are transported in blood and delivered to where they are needed. The heart pumps blood through the blood vessels and around the body. There are three types of blood vessel: arteries, veins and capillaries. They each have a different-sized hole (lumen) and walls. The blood carries gases (oxygen and carbon dioxide), water and nutrients to where they are needed. 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. Identify the parts of the circulatory system and explain their functions. Lifestyle choices can have a positive (exercise and eating healthily) or negative (drugs, smoking and alcohol) impact on the body. Explain the impact of positive and negative lifestyle choices on the body and why exercise is important.