Lunsford Primary School – Science	Topic: Animals including Humans	Strand: Biology	Year 6

Linked scientists

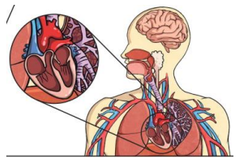
James Miranda Stuart Barry - (Doctor - born Margaret Bulkley, who went to medical school by presenting as male and lived the rest of his life as a man – who became Inspector General of military hospitals and improved conditions for wounded soldiers, native inhabitants, and performed the first caesarean section in Africa)

Key Vocabulary

aorta	The main **artery** through which blood leaves the **heart** before it flows to the rest of your body
arteries	A tube that carries **oxygenated** blood from your **heart** around the body
atrium	One of the four chambers in the **heart**
blood vessels	Narrow tubes through which 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 around the body> it supplies **nutrients** and **oxygen** and removes waste products such as **carbon dioxide**
deoxygenated	Blood that doesn't contain **oxygen**
exercise	An activity which can raise the speed of your **pulse**
heart	The **organ** in your chest that **pumps** the blood around your body
lungs	The **organs** inside your chest that 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	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	Regular beating of blood through your body. The speed of your **pulse** depends on the activity you are doing
respiration	Process of breathing; inhaling and exhaling
veins	Carries **deoxygenated** blood back to your heart from the rest of the body
vena cava	Large **vein** through which **deoxygenated** blood reaches your **heart** from the body
ventricle	One of the four chambers of the **heart**

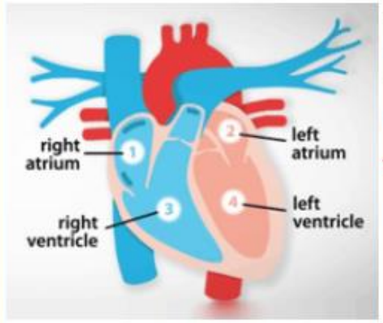
What I will know by the end of the unit

What the **circulatory system** is



The **circulatory system** is made up of the **heart**, **lungs** and **blood vessels**.
Arteries carry **oxygenated** blood from the **heart** to the rest of the body.
Veins carry **deoxygenated** blood from the body back to the **heart**.

Diagram—The Heart



The **heart** is composed of four chambers; the right **atrium**, the right **ventricle**, the left **atrium** and the left **ventricle**.

The rate that your heart pumps is called your **pulse**.

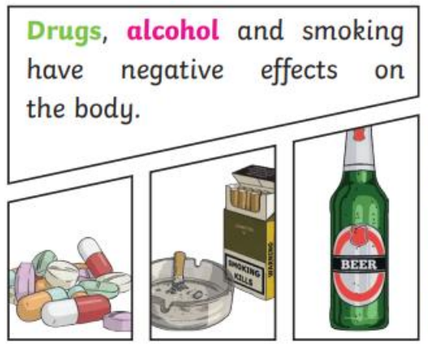
Deoxygenated

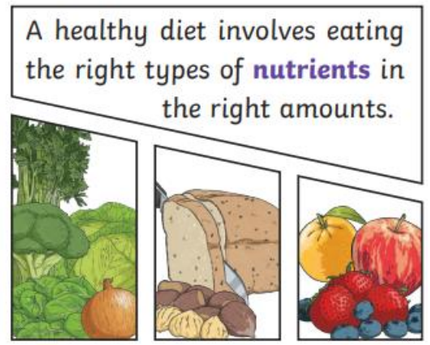
Oxygenated

The Function of the Heart	
1	**Deoxygenated blood** flows into the **heart** from the body through the **veins**.
2	This blood is pumped out of the lungs through the **pulmonary artery**
3	Blood is then the **oxygenated** in lungs
4	Blood returns to the heart through the **pul-**
5	The **oxygenated blood** is then pumped out of the heart through the **aorta.**
6	The blood travels around the body delivering **oxygen** and **nutrients** to the **organs.**

That diet, **exercise**, drugs and lifestyle can impact the **circulatory system**

Some lifestyle choices can be harmful to our health and they can affect how well the **heart** and **lungs** work.





Smoking and drinking alcohol can cause short-term effects and long-term effects such as **organ** damage, cancer or death.

Exercise can reduce fat, increase fitness, strengthen the **heart** and improve **lung** function.

How **nutrients** and water are transported around the body

Nutrients, **oxygen** and **carbon dioxide** are exchanged **via** the **capillaries**.

Nutrients, water and **oxygen** are moved in the blood to muscles, **organs** and rest of the body where they are needed.
As they are used, they produce **carbon dioxide** and other waste products. This is then carried back to the **heart** and **lungs** to be removed from the body.