Rotherhithe Primary School - Science

Topic: Animals including humans	Year: 6	Strand: Biology

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.

What will I know by the end of the unit?

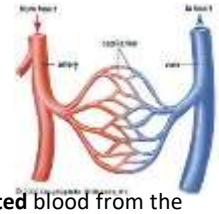
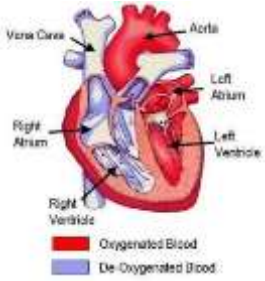
What is the **circulatory system**?	• The **circulatory system** is made of the **heart**, **lungs** and the **blood vessels**.  • **Arteries** carry **oxygenated** blood from the **heart** to the rest of the body. • **Veins** carry **deoxygenated** blood from the body to the **heart**. • **Nutrients,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

Diagram - The Heart

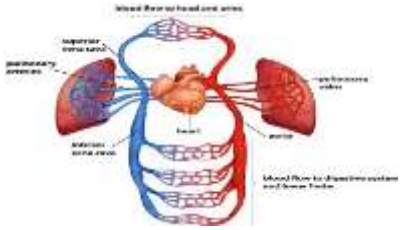
The **heart** is composed of four chambers; the right **atrium**, the right **ventricle**, the l eft **atrium** and the left **ventricle**. How often your **heart** pumps is called your **pulse**.



Vocabulary

Aorta	the main **artery** through which blood leaves your **heart** before it flows through the rest of your
Arteries	a tube in your body that carries **oxygenated**
Atrium	one of the chambers in the **heart**
Blood vessels	the narrow tubes through which your blood flows. **Arteries**, **veins** and **capillaries** are **blood**
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
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
Oxygenated	blood that contains **oxygen**
Pulse	the regular beating of blood through your body. How fast or slow your **pulse** is depends on the
Respiration	process of respiring; breathing ; inhaling and exhaling air
Veins	a tube in your body that carries **deoxygenated**
Vena cava	a large **vein** through which **deoxygenated** blood reaches your **heart** from the body
Ventricle	one of the chambers in the **heart**
Via	through

Diagram - The Circulatory System



The right **atrium** collects the **deoxygenated** blood from the body, **via** the **vena cava**. It sends the blood to the right **ventricle**.
The right **ventricle pumps** the **deoxygenated** blood to the **lungs**. Here the blood picks up **oxygen** and disposes of **carbon dioxide**.
The **lungs** send **oxygenated** blood back to the left **atrium** which pumps it to the left **ventricle.**
The left **ventricle** pumps the blood to the rest of the body, **via** the **aorta**.

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Question 1
Question 2
Question 3
Question 4
Question 5