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|  **Key vocabulary** |
| **pulse** | Each time the heart beats it can be felt as a pulse in the arteries. Typically, in the wrist and neck. |
| **blood vessels** | The narrow tubes which our blood flows through including the arteries, veins and capillaries. |
| **lungs** | Two organs situated in the ribcage that fill with air when you breathe in. They remove carbon dioxide from blood and add oxygen. |
| **circulatory system** | This circulates blood through the body. It consists of the heart, blood and blood vessels. |
| **oxygen** | a chemical element found in the air as a colourless odourless tasteless gas that is necessary for life |
| **carbon dioxide** | a chemical compound found in air. Produced by humans when breathing out and absorbed by plants. |



**Animals including humans – Year 6**

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| **Significant scientist** |
| **William Harvey***(1578-1657)* | William Harvey was an English physician and the first person to correctly describe blood’s circulation in the body. He showed that arteries and veins form a complete circuit. |

**The human circulatory system**

* The **heart** pumps **blood** in the **blood vessels** to the lungs where oxygen goes into the **blood** and carbon dioxide is removed.
* The **blood** goes back to the **heart**.
* It is then pumped around the body so that water, nutrients and oxygen are transported in the **blood** to the muscles and all the other parts of the body where they are needed. As all these are used, they produce carbon dioxide and other waste products.
* Carbon dioxide is carried by the **blood** in **blood vessels** back to the **heart**.
* The cycle starts again as the carbon dioxide is then transported back to the lungs to be removed from the body.

**Exercise can increase fitness, make you feel physically and mentally healthier, strengthen your heart and improve your lung function.**

**The circulatory system transports nutrients and water in the blood to all the parts of the body that need them. These nutrients provide us with energy.**



**Healthy bodies**

Diet, exercise, drugs and other lifestyle choices have an impact on how our bodies function. This can affect how well our heart and lungs work and how fit and well we feel.

Some choices such as smoking, drinking alcohol and obesity can be harmful to our health:

**Alcohol**

Too much alcohol can damage the liver, heart and stomach.

**Smoking**

 Can cause shortness of breath, heart and lung disease.