

Year 6: Science – Biology – Animals Including Humans



Glossary		Key Information	Curricular Goals
Arteries	Tubes in your body that carry oxygenated blood from your heart to the rest of your body.	<div data-bbox="1082 164 1414 392"> <p>The Human Circulatory System</p> <p>The human circulatory system is a network of blood vessels throughout our bodies which carry gasses and hormones in our blood to keep us nourished and functioning.</p> </div> <div data-bbox="1439 164 1770 449"> <p>The Human Heart</p> <p>How it Works</p> <p>Our hearts pump blood out to the lungs to oxygenate it. The oxygenated blood is then pumped back into our heart and out to the rest of the body.</p> </div> <div data-bbox="1082 464 1414 635"> <p>lungs</p> </div> <div data-bbox="1184 664 1668 699"> <p>What Is the Impact of Regular Exercise?</p> </div> <div data-bbox="1159 721 1694 1035"> <ul style="list-style-type: none"> Helps you fall asleep faster and deeper so you are better rested. Stimulates and releases brain chemicals – for example endorphins leave you feeling happier and serotonin helps keep your mood calm and leaves you feeling relaxed. Increases the number of air sacs (alveoli). Increases the amount of oxygen delivered to and carbon dioxide removed from the body. Joints are more stable. Bones increase in width and density (The denser the bone, the stronger it is). Increases the number of capillaries in the muscles. Strengthens heart muscle. Strengthens diaphragm and intercostal muscles. Strengthens muscles. When you exercise your body increases the circulation of blood – this means that nutrients are delivered and waste taken away faster which improves parts of the body like skin. Increases the volume of blood and red blood cells. </div> <div data-bbox="1082 1063 1439 1306"> <p>THE Lungs</p> <p>How Breathing Works</p> <p>Inhalation: When we breathe in (inhale), the intercostal muscles contract and the diaphragm contracts and moves downwards, making the chest expand. This causes air to be sucked into the lungs.</p> <p>Exhalation: The intercostal muscles and diaphragm then relax and the air is pushed out of the lungs (exhale) as the ribcage falls downward and inward.</p> </div> <div data-bbox="1465 1063 1770 1306"> <p>THE Alveoli</p> <p>How it all Works</p> <p>Capillary Blood Flow: The oxygen is absorbed into the blood through a layer of moisture in the air sacs (alveoli). Carbon dioxide in the blood is transferred back into the air, which then travels back out of the lungs.</p> <p>Gas Exchange: Capillaries enable exchange of oxygen with body.</p> <p>Blood Vessels: Arteries: carries oxygenated blood away from the heart. Veins: carry blood from capillaries back to the heart to be pumped to the lungs to be re-oxygenated.</p> </div>	<p>What is the circulatory system? The circulatory system is a network within the body that consists of blood, blood vessels, and the heart. The reason for this network is to supply tissues in the body with nutrients and oxygen, transport hormones and remove waste products that the body doesn't need.</p>
Atrium	The part of the heart that receives blood from the veins.		
Blood Vessels	The narrow tubes which our blood flows through including the arteries, veins and capillaries.		
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 body that pumps blood around the body .		
Lungs	Two organs in your chest which fill with air when you breathe in. They oxygenate the blood and remove carbon dioxide from it.		
Nutrients	Substances that help animals and plants grow.		
Organ	A part of the body that has a particular purpose and performs specific functions		
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 rate is depends on how active you are.		
Respiration	Inhaling oxygen-rich air and exhaling air filled with carbon dioxide.		
Veins	A tube in your body that carries deoxygenated blood to your heart from the rest of your body.		
Ventricle	The part of the heart from which blood passes into the arteries.		
Drugs	A drug is a chemical that is not food and that affects your body. Some drugs are given to people by doctors to make them healthy.		
Alcohol	Alcohol is part of a drink that you can become addicted to. Some types of alcohol are beer, wine and spirits like vodka. It is advisable not to drink alcohol if you are under the age of 18.		
		<p>How are water and nutrients transported? The heart pumps blood in the blood vessels around to the lungs. Oxygen goes into the blood and carbon dioxide is removed. The blood goes back to the heart and is then pumped around the body. Nutrients, water and oxygen are transported in the blood to the muscles and other parts of the body where they are needed</p>	
		<p>What does a healthy lifestyle look like? Healthy living means making choices that result in a healthy body and mind. To be healthy means to not be sick. Generally, a person can maintain a healthy lifestyle by eating a healthy diet and exercising. In order for the body to function properly, it needs nutrients.</p>	
		<p>What are the impacts of drugs and alcohol on the body? Alcohol can affect the body and brain. It can lessen perception and judgement. This has consequences for young people. A doctor explains how a small amount of alcohol can influence the ability of a young person to make decisions, which can then lead to everyday tasks resulting in injury. They make you feel more energetic and confident, but they can damage the liver and heart. They can also cause loss of memory and concentration, and bring an increased risk of mental illness. Any drug that is misused can cause damage to the body, as well as personal and social problems.</p>	
		<p>Who is Alexander Fleming? Sir Alexander Fleming was a Scottish physician and microbiologist, best known for discovering the world's first broadly effective antibiotic substance, which he named penicillin.</p>	