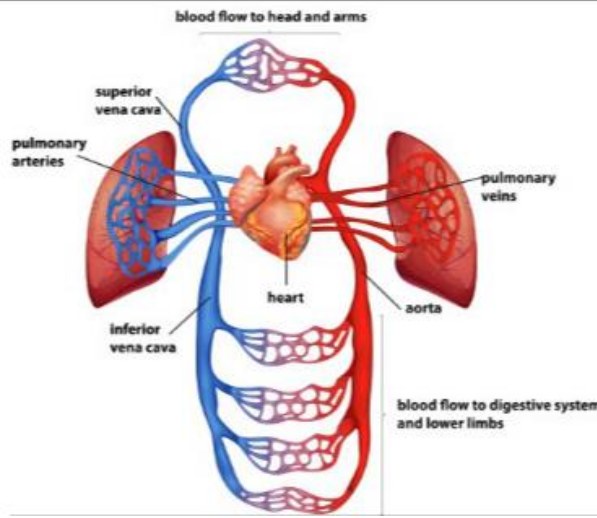
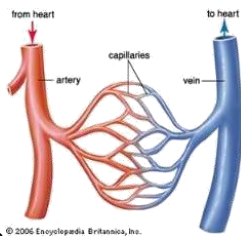
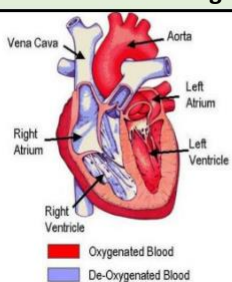


Science Knowledge Organiser

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. The life cycle of a human and how we change as we grow.		Diagram - The Circulatory System 																																									
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 from heart to heart 		1. The right atrium collects the deoxygenated blood from the body, via the vena cava. It sends the blood to the right ventricle. 2. The right ventricle pumps the deoxygenated blood to the lungs. Here the blood picks up oxygen and disposes of carbon dioxide. 3. The lungs send oxygenated blood back to the left atrium which pumps it to the left ventricle. 4. The left ventricle pumps the blood to the rest of the body, via the aorta.																																									
Diagram - The Heart  The heart is composed of four chambers; the right atrium, the right ventricle, the left atrium and the left ventricle. How often your heart pumps is called your pulse.		Vocabulary <table><tr><td>aorta</td><td>the main artery through which blood leaves your heart before it flows through the rest of your body</td></tr><tr><td>arteries</td><td>a tube in your body that carries oxygenated blood from your heart to the rest of your body</td></tr><tr><td>atrium</td><td>one of the chambers in the heart</td></tr><tr><td>blood vessels</td><td>the narrow tubes through which your blood flows. Arteries, veins and capillaries are blood vessels.</td></tr><tr><td>capillaries</td><td>tiny blood vessels in your body</td></tr><tr><td>carbon dioxide</td><td>a gas produced by animals and people breathing out</td></tr><tr><td>circulatory system</td><td>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.</td></tr><tr><td>deoxygenated</td><td>blood that does not contain oxygen</td></tr><tr><td>heart</td><td>the organ in your chest that pumps the blood around your body</td></tr><tr><td>lungs</td><td>two organs inside your chest which fill with air when you breathe in. They oxygenate the blood and remove carbon dioxide from it.</td></tr><tr><td>nutrients</td><td>substances that help plants and animals to grow</td></tr><tr><td>organ</td><td>a part of your body that has a particular purpose</td></tr><tr><td>oxygen</td><td>a colourless gas that plants and animals need to survive</td></tr><tr><td>oxygenated</td><td>blood that contains oxygen</td></tr><tr><td>pulse</td><td>the regular beating of blood through your body. How fast or slow your pulse is depends on the activity you are doing.</td></tr><tr><td>respiration</td><td>process of respiring; breathing ; inhaling and exhaling air</td></tr><tr><td>veins</td><td>a tube in your body that carries deoxygenated blood to your heart from the rest of your body</td></tr><tr><td>vena cava</td><td>a large vein through which deoxygenated blood reaches your heart from the body</td></tr><tr><td>ventricle</td><td>one of the chambers in the heart</td></tr><tr><td>via</td><td>through</td></tr></table>		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	atrium	one of the chambers in the heart	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	veins	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	ventricle	one of the chambers in the heart	via	through
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Investigate! How does your pulse change with exercise? What is the most efficient way of presenting this data? Which exercise produces the fastest pulse? How would you make this a fair test?																																											