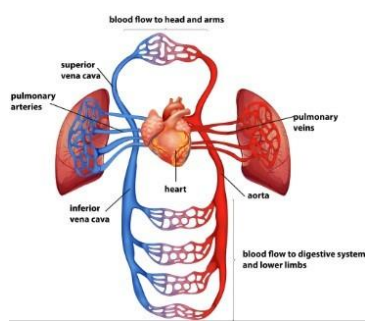
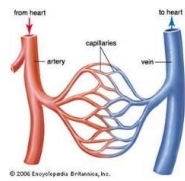
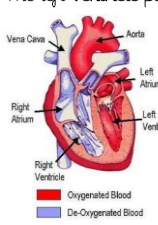


Autumn One: Science

Animals including Humans – Blood and the Circulatory System

What should I already know?		Diagram - The Circulatory System	
<ul style="list-style-type: none">the function of the skeleton and the purpose of muscles;the basic parts of the digestive system and the functions of organs in this system;the different types of teeth in humans and their functions;the life cycle of a human and how we change as we grow and develop;the basic needs of animals for survival (water, food, air);the importance of exercise, hygiene and a balanced diet.			
Scientific Learning			
<p>What is the Circulatory System?</p> 	<ul style="list-style-type: none">The circulatory system is made 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 to the heart.Nutrients, oxygen and carbon dioxide are exchanged via the capillaries.	<ul style="list-style-type: none">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.  <p>The heart is composed of four chambers: the right atrium, the right ventricle, the left atrium and the left ventricle.</p> <ul style="list-style-type: none">How often your heart pumps is called your pulse.	
<p>Choices that can harm the circulatory system.</p>	<ul style="list-style-type: none">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.		
<p>Why is exercise so important?</p>	<p>Exercise can:</p> <ul style="list-style-type: none">tone our muscles and reduce fat;increase fitness;make you feel physically and mentally healthier;strengthen the heart;improve your lung functions;improve your skin.	<p>What I should know by the end of the unit?</p> <ul style="list-style-type: none">How my pulse changes with exercise and the most efficient way of presenting this data.The four parts of my blood and the job of each of these parts.The names of the four chambers of the heart and how they work.How blood travels around my body.The effect exercise has on my heart.The effect food, drugs and alcohol have on my body.The way in which water and nutrients are transported around my body.	

Key Vocabulary

Aorta: the main artery through which blood leaves your heart before it flows through the rest of your body.	Nutrients: substances that help plants and animals to grow
Arteries: a tube in your body that carries oxygenated blood from your heart to the rest of your body.	Organ: a part of your body that has a particular purpose
Atrium: one of the chambers in the heart	Oxygen: a colourless gas that plants and animals need to survive
Blood vessels: the narrow tubes through which your blood flows. arteries , veins and capillaries are blood vessels	Oxygenated: blood that contains oxygen
Capillaries: tiny blood vessels in your body	Pulse: the regular beating of blood through your body. How fast or slow your pulse is depends on the activity you are doing
Carbon dioxide: a gas produced by animals and people breathing out	Respiration: process of respiring; breathing
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	Veins: a tube in your body that carries deoxygenated blood to your heart from the rest of your body.
Deoxygenated blood: blood that does not contain oxygen	Vena cava: a large vein through which deoxygenated blood reaches your heart from the body
Heart: the organ in your chest that pumps the blood around your body	Ventilation: the exchange of air between the lungs and the atmosphere so that oxygen can be exchanged for carbon dioxide
Lungs: Two organs inside your chest that fill with air when you breathe in. They oxygenate the blood and remove CO ₂ from it	Ventricles: one of the chambers in the heart

Animals including Humans – Blood and the Circulatory System

Pre-Unit Quiz

Question 1: The heart, blood vessels and lungs make up the...	Start of unit:	End of unit:
digestive system		
circulatory system		
skeletal system		
muscular system		

Question 2: Which one of these is not an organ?	Start of unit:	End of unit:
Heart		
Lungs		
Blood		

Question 3: The most effective way to show the change in pulse rate over time is by using a...	Start of unit:	End of unit:
picture		
bar chart		
pie chart		
line graph		

Question 4: You are investigating which exercise yields the highest heart rate. How can you ensure a fair test? Tick two:	Start of unit:	End of unit:
treat everybody the same		
measure the same subject's pulse before, during and after each exercise.		
ensure the starting heart rate is the same before each exercise		
complete each exercise without resting in between.		

Question 5: The veins carry blood	Start of unit:	End of unit:
deoxygenated		
oxygenated		
blue		

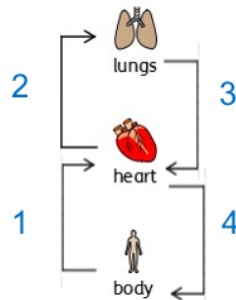
Question 6: Which two activities would increase pulse rate the most?	Start of unit:	End of unit:
reading a book		
playing football		
drinking water		
going for a walk		

Question 7: Which of these can harm our bodies? Tick two.	Start of unit:	End of unit:
smoking		
all drugs		
alcohol		
exercise		

Question 8: The function of the blood is to provide the body with... (tick three)	Start of unit:	End of unit:
nutrients		
water		
carbon dioxide		
oxygen		

Question 9: Arteries, veins and capillaries are examples of...	Start of unit:	End of unit:
blood		
blood vessels		
blood types		
nutrients		

Question 10: Explain each of these four processes.



1.	
2.	
3.	
4.	