









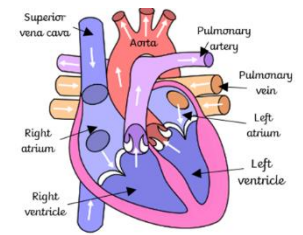


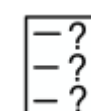



Vocabulary			Knowledge
Oxygenated	Contains oxygen.		Animals including humans need the <b>circulatory system</b> to breath and survive
Deoxygenated	Does not contain oxygen.		
Heart	The organ constantly pumping blood around the body through the circulatory system		The circulatory system includes the heart, blood and <b>blood vessels</b> . It is responsible for <b>transporting</b> nutrients, water and oxygen to the cells in your body. It is also responsible for carrying away waste such as <b>carbon dioxide</b>
Circulatory system	A set of connected parts which are involved in keeping nutrients and oxygen moving around the body.		
Ventricle	Two main chambers in the heart		Blood is pumped around the body by the heart through a complex network of blood vessels. Your heart is roughly the size of your closed fist.
Arteries	Blood vessels that deliver oxygenated blood to the body		
Veins	Blood vessels that deliver deoxygenated blood to the lungs		The heart is a muscle, that includes two pumps and two chambers, each side of the heart is called a <b>ventricle</b> . The right side of the heart receives <b>deoxygenated</b> blood from the body and pumps it to the lungs. The left side of the heart receives <b>oxygenated</b> blood from the lungs and pumps it to the body. Before each beat your heart fills with blood. Then it contracts which squirts the blood along the vessels. Each time the heart pumps can be heard or felt through our pulse.
Capillaries	Narrow blood vessels in smaller parts of the body		
Aorta	The main artery in the body		blood vessels carry blood, our blood contains red blood cells (which carry oxygen and carbon dioxide), white blood cells (which fight against diseases) and <b>platelets</b> (which help us to heal and form scabs)
Platelets	Help blood to thicken when it is cut		
Villi	Contain blood vessels and help to transport nutrients		<b>Arteries</b> carry blood away from the heart <b>Veins</b> carry bloody towards to the heart <b>Capillaries</b> are tiny blood vessels that connect arteries and veins
Endorphins	Hormone that makes us feel good		



Quizzing		Quiz at home																						
Ask your partner the questions below. Can they find the correct answer on the right-hand side?		Ask your adult to look at the KO.																						
Arteries carry blood towards the heart. True or False?	Help us heal and form scabs	Quiz them using the vocabulary and knowledge section or the quiz questions. <ul style="list-style-type: none"> <li>• Can they beat your score?</li> <li>• Can they score more than 5? 10?</li> <li>• Compete with your adult in the elimination quiz. Take it in turn to ask each other questions. The first person to get a question wrong is out.</li> </ul>																						
What is the largest artery in the body?	Aorta																							
Which bloody cells fight against disease?	Right side																							
Capillaries are tiny blood vessels that contain arteries and veins. True or False?	Villi																							
What do platelets do in the blood?	False																							
Which chemical released during exercise helps improve mood?	True																							
Which side of the heart pumps deoxygenated blood to the lungs?	White blood cells																							
What are the tiny hair-like structures in the intestine that help absorb nutrients?	It speeds up																							
What happens to your heart rate during exercise?	Endorphins																							
BIG Questions		Beat the adult																						
How does the blood know where to go in your body? What would happen if the heart stopped pumping blood for just a few minutes? Why do we feel our pulse more strongly in certain places, like our wrist or neck? How does exercise improve both physical and mental health?	Your teacher can give <b>10 facts in 1 minute</b> about this topic.  How many can you give to your partner? 	 																						
Word scramble	Creative Tasks	Challenge																						
Unscramble the key vocabulary from this topic below. You can create your own at the bottom <table border="1" data-bbox="100 1037 560 1468"> <tr><td>hreat</td><td></td></tr> <tr><td>rvnteicle</td><td></td></tr> <tr><td>etgnyoxaido</td><td></td></tr> <tr><td>pcilapiercs</td><td></td></tr> <tr><td>alttepeis</td><td></td></tr> <tr><td>rsteaier</td><td></td></tr> <tr><td>illvi</td><td></td></tr> <tr><td>deedognytaxe</td><td></td></tr> <tr><td>dnhrpeison</td><td></td></tr> <tr><td>rcaouitlil</td><td></td></tr> <tr><td>ystemss</td><td></td></tr> </table>	hreat		rvnteicle		etgnyoxaido		pcilapiercs		alttepeis		rsteaier		illvi		deedognytaxe		dnhrpeison		rcaouitlil		ystemss		Create a revision mind map that includes the information give on the knowledge organiser.   Build a model heart, label or mark it showing the flow of blood.  Measure your pulse at rest, after mild exercise and after vigorous exercise. What do you notice?	You are a doctor examining a patient. After some tests, you discover that one of the patient's <b>arteries is partially blocked</b> . This artery normally carries oxygen-rich blood from the heart to important organs.  Using your knowledge of the circulatory system:  Describe how this could affect oxygen delivery to the body's cells.  What symptoms might the patient notice?  Why do these symptoms happen based on how the circulatory system works?  Suggest ways the patient could reduce the risk of further artery blockage or improve their heart health.
hreat																								
rvnteicle																								
etgnyoxaido																								
pcilapiercs																								
alttepeis																								
rsteaier																								
illvi																								
deedognytaxe																								
dnhrpeison																								
rcaouitlil																								
ystemss																								

## Enquiry

### Spotting patterns in results

Year 6 do an experiment to test their heart rate after a certain number of minutes of exercise. Here are the results.

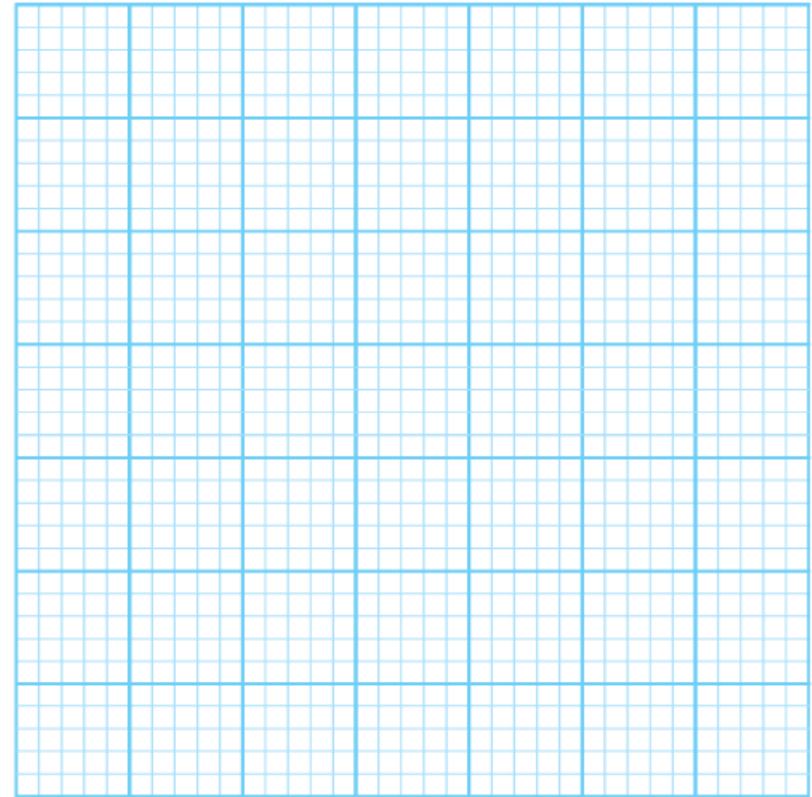
Duration of exercise (minutes)	Heart rate (bpm)
1	87
2	94
3	57
4	113

What do you notice about their results?

Anomalous results are results that don't fit the pattern.

1. Circle any anomalous results in their data
2. How can year 6 improve their investigation and get more accurate results next time?
3. Plot the results on the graph

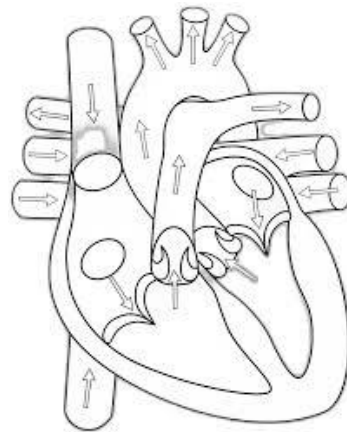
### Plotting a graph



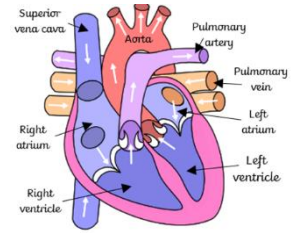
### Diagrams

Look at the diagram of the heart below. Complete the table to show which blood vessel is being labelled by each letter.

Blood Vessel	Letter
Vein from the lungs	
Artery to the body	
Vein from the body	
Artery to the lungs	




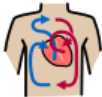

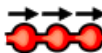






Knowledge	
<b>Circulatory system</b>	<p>Animals including humans need the <input type="text"/> to breath and survive</p> <p>The circulatory system includes the heart, blood and <b>blood vessels</b>. It is responsible for <input type="text"/> water and oxygen to the cells in your body. It is also responsible for carrying away waste such as <b>carbon dioxide</b></p> <p>Blood is pumped around the body by the heart through a complex network of blood vessels. Your heart is roughly the size of your <input type="text"/></p>
<b>The heart</b>	<p>The heart is a muscle, that includes two pumps and two chambers, each side of the heart is called a <input type="text"/></p> <p>The right side of the heart receives <input type="text"/> blood from the body and pumps it to the lungs. The left side of the heart receives <input type="text"/> blood from the lungs and pumps it to the body. Before each beat your heart fills with blood. Then it contracts which squirts the blood along the vessels. Each time the heart pumps can be heard or felt through our pulse.</p>
<b>Platelets</b>	<p>blood vessels carry blood, our blood contains red blood cells (which carry oxygen and carbon dioxide), white blood cells (which fight against diseases) and <input type="text"/> (which help us to heal and form scabs)</p>
<b>Arteries</b>	<p><input type="text"/> carry blood away from the heart</p>
<b>Veins</b>	<p><b>Veins</b> carry bloody <input type="text"/></p>
<b>Capillaries</b>	<p><b>Capillaries</b> are tiny blood vessels that connect arteries and veins</p>
<b>Aorta</b>	<p>The <input type="text"/> is the largest artery in the body and the most major arteries branch off from it.</p>
<b>Exercise</b>	<p>Nutrients from food are <b>absorbed</b> through the walls of the intestine into the blood. Tiny hair-like <input type="text"/> help this process.</p> <p>When we exercise, our heart beats more frequently so that the oxygen that is used around the body can be <b>replenished</b>, it returns to a resting heart rate afterwards. Exercise effects mental health and mood. It releases <input type="text"/> which makes humans feel happier and calmer.</p>








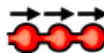



Write the definition for each of the following words

Vocabulary

Oxygenated		
Deoxygenated		
Heart		
Circulatory system		
Ventricle		
Arteries		
Veins		
Capillaries		
Aorta		
Platelets		
Villi		
Endorphins		

Write the vocabulary word for each definition

Vocabulary

	Contains oxygen.	
	Does not contain oxygen.	
	The organ constantly pumping blood around the body through the circulatory system	
	A set of connected parts which are involved in keeping nutrients and oxygen moving around the body.	
	Two main chambers in the heart	
	Blood vessels that deliver oxygenated blood to the body	
	Blood vessels that deliver deoxygenated blood to the lungs	
	Narrow blood vessels in smaller parts of the body	
	The main artery in the body	
	Help blood to thicken when it is cut	
	Contain blood vessels and help to transport nutrients	
	Hormone that makes us feel good	