

**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**

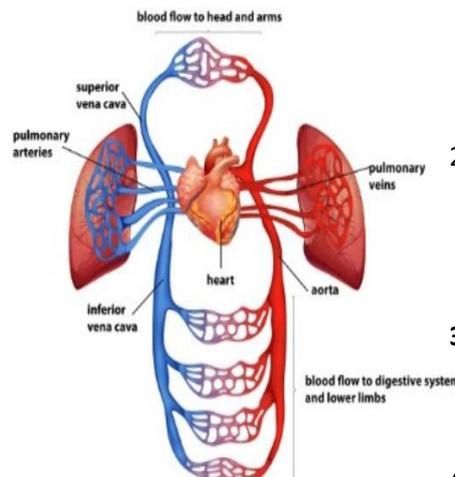
Choices that can harm the **circulatory system**

- Some choices, such as smoking and drinking alcohol can be harmful
- 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

**Diagram—The circulatory system**

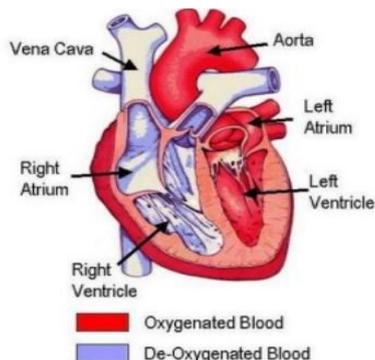


1. The right **atrium** collects the **deoxygenated** blood from the body, **via** the **vena cava**. It sends the blood to the right **ventricle**.
2. The right **ventricle pumps** the **deoxygenated** blood to the **lungs**. Here the blood picks up **oxygen** and disposes of **carbon dioxide**.
3. 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**.

**Vocabulary**

aorta	the main <b>artery</b> through which blood leaves your <b>heart</b> before it flows through the rest of your body
arteries	a tube in your body that carries <b>oxygenated</b> blood from your heart to the rest of your body
atrium	one of the chambers in your <b>heart</b>
blood vessels	the narrow tubes through which your blood flows. <b>Arteries, veins</b> and <b>capillaries</b> are <b>blood vessels</b> .
capillaries	tiny <b>blood vessels</b> 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 <b>nutrients</b> and <b>oxygen</b> to the body and removes waster products such as <b>carbon dioxide</b>
deoxygenated	blood that does not contain <b>oxygen</b>
heart	the <b>organ</b> in your chest that <b>pumps</b> the blood around your body
lungs	They are two <b>organs</b> inside your chest which fill with air when you breathe in. They <b>oxygenate</b> the blood and remove <b>carbon dioxide</b> from it.
nutrients	substances that helps plants and animals grow
organ	a part of your body that had a particular purpose
oxygen	a colourless gas that plants and animals need to survive
oxygenated	blood that contains <b>oxygen</b>
pulse	The pulse is the regular beating of blood through your body. How fast or slow depends of activity level.
respiration	process of respiring, breathing, inhaling and exhaling air
veins	a tube in your body that carries <b>deoxygenated</b> blood to your <b>heart</b> from the rest of your body
vena cava	a large <b>vein</b> through which <b>deoxygenated</b> blood reaches your <b>heart</b> from your body
ventricle	one of the chambers of the <b>heart</b>
via	through

**Diagram—the heart**



How often you **heart pumps** is called your **pulse**.

# St Joseph's Junior School - Science

Topic: Animals including humans

Year: 6

Strand: Biology

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

2. Which one of these is <b>not</b> an organ?	Start of unit:	End of unit:
heart		
lungs		
blood		

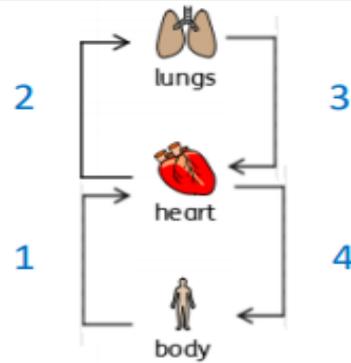
3. The most effective way to show the change in pulse rate over time is...	Start of unit:	End of unit:
a picture		
a bar chart		
a pie chart		
a line graph		

4. You are investigating which exercise yields the highest heart rate. How can you ensure it is a fair test?	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		

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

6. Tick TWO boxes below to show the two activities that 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: Explain what is happening at each stage of the process.



1	
2	
3	
4	

8. Which of these can harm our bodies? Tick TWO.	Start of unit:	End of unit:
smoking		
all drugs		
alcohol		
exercise		

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

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