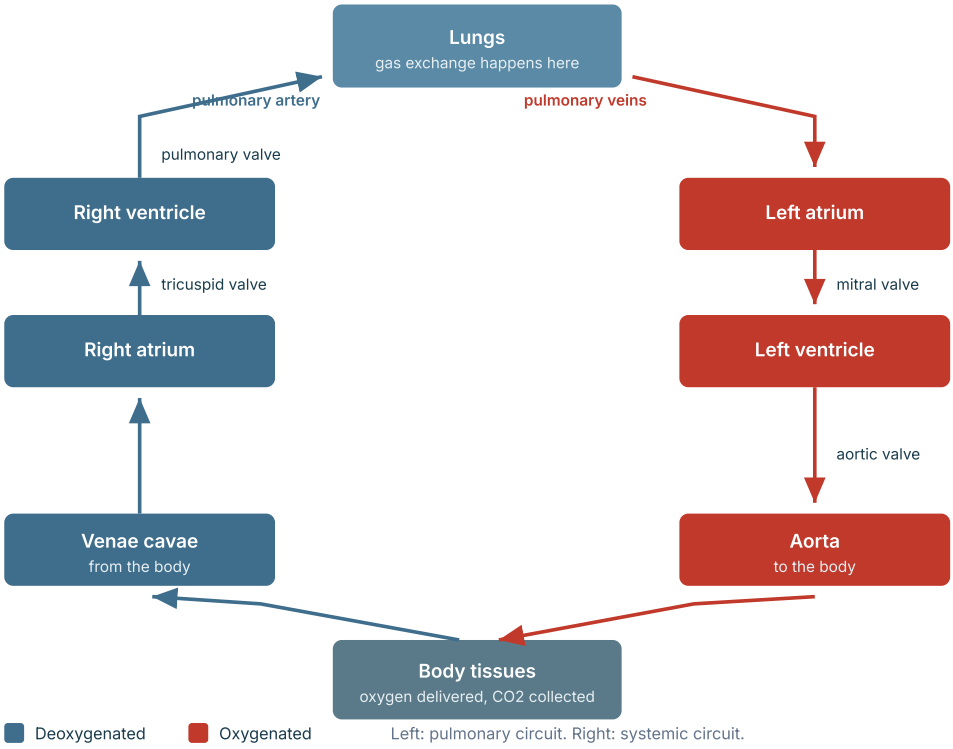
Blood Flow Through the Body

Name: _____ Date: _____ mm / dd / yyyy

Class or unit: _____ Tutor: _____

THE TWO CIRCUITS

Blood travels two loops in sequence, both driven by the same heartbeat. The pulmonary circuit sends blood from the right side of the heart to the lungs and back. The systemic circuit sends it from the left side to the rest of the body and back.



Blood flow through the heart, lungs and body. Follow the arrows clockwise from the body tissues at the bottom.

THE PATHWAY IN ORDER

	Structure	Blood is	Next
1	Body tissues	Deoxygenated	Drains into the venae cavae
2	Superior and inferior venae cavae	Deoxygenated	Right atrium
3	Right atrium	Deoxygenated	Through the tricuspid valve
4	Right ventricle	Deoxygenated	Through the pulmonary valve
5	Pulmonary artery	Deoxygenated	Lungs
6	Lungs	Gas exchange	Pulmonary veins
7	Pulmonary veins	Oxygenated	Left atrium
8	Left atrium	Oxygenated	Through the mitral valve
9	Left ventricle	Oxygenated	Through the aortic valve
10	Aorta	Oxygenated	Body tissues - back to step 1

> **The two exceptions people get caught by**
> The pulmonary artery is the only artery that carries deoxygenated blood, and the pulmonary veins are the only veins that carry oxygenated blood. Artery and vein describe direction relative to the heart, not oxygen content.

WHY THE LEFT VENTRICLE IS THICKER

	Right ventricle	Left ventricle
Pumps to	The lungs only	The whole body
Distance	Short	Long
Resistance met	Low	High
Wall thickness	Thin	Roughly three times thicker
Typical pressure generated	About 25 mmHg systolic	About 120 mmHg systolic

> **Both ventricles move the same volume**
> The circuits are in series, so whatever the right ventricle sends to the lungs must come back and be sent out by the left. The difference between them is pressure, not volume.

CHECK YOUR UNDERSTANDING

Question	Your answer
Which chamber receives blood from the lungs?	
Which valve sits between the right atrium and right ventricle?	
Name the only artery carrying deoxygenated blood.	
Where does gas exchange take place?	
Which vessel carries oxygenated blood away from the heart to the body?	
Why is the left ventricle wall thicker than the right?	

Notes

Sources: Diagram and sheet provided for educational use.