



Year 6

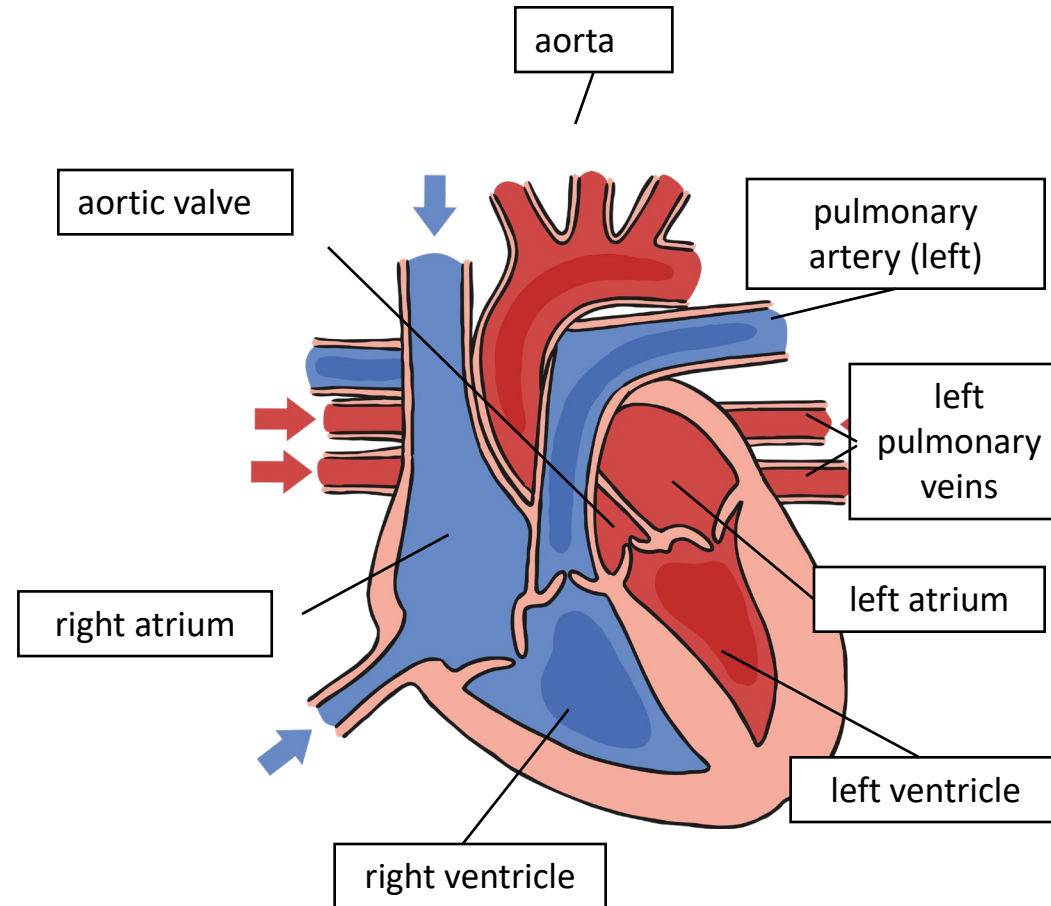
The Human Circulatory System

The function of the heart

The heart is a powerful muscle that is situated between your lungs, protected by the ribcage.

The heart pumps blood to the lungs to get oxygen.

The heart pumps the oxygenated blood to the rest of the body.



How the heart works

Aorta

Oxygen rich blood is pumped out of the left ventricle and into the body via the aorta. It quickly branches off into other arteries that travel through your entire body.

Pulmonary Artery

When blood is pumped out of the right ventricle, it travels along the pulmonary artery to the lungs where it can pick up more oxygen.

Right Atrium

When deoxygenated blood returns to the heart, the right atrium is the first place that it goes.

Left Atrium

Freshly oxygenated blood (blood that has been saturated with oxygen) travels from the lungs and into the left atrium.

How the heart works

Left Ventricle

The body needs oxygenated blood to fuel cells and keep the body alive. The left ventricle is responsible for contracting and pumping blood from the left atrium out into the body.

Right Ventricle

The right ventricle is filled with blood from the right atrium. It needs to be saturated with oxygen again, and the right ventricle is responsible for contracting and pumping blood on towards the lungs.

Aortic Valve

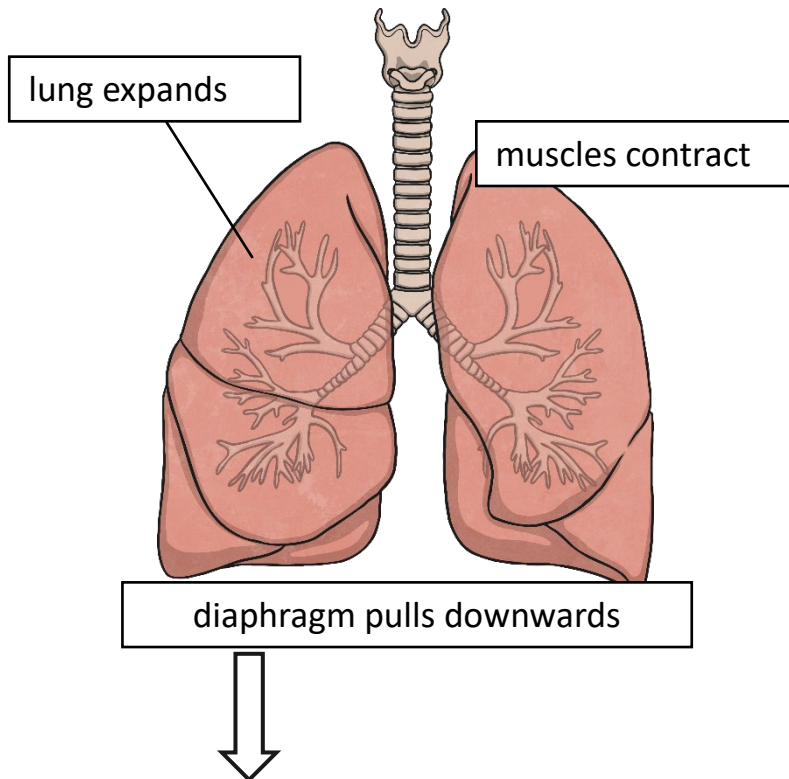
The Aortic valve is one of the four heart valves. Its primary function is to control blood flow from the heart into the aorta, ensuring that blood flows in one direction.

Pulmonary Veins

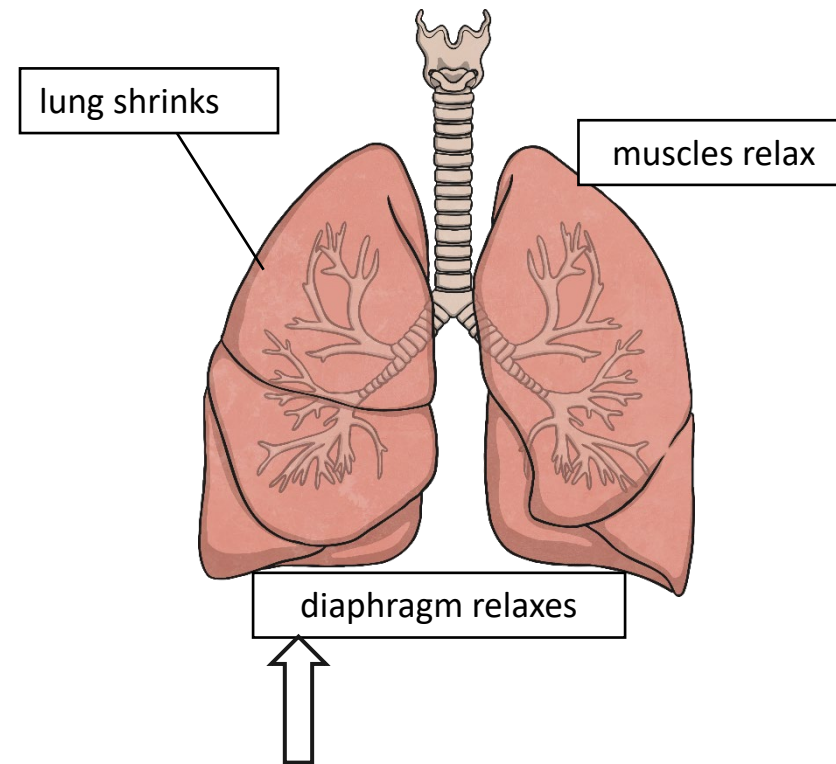
The pulmonary veins transfer oxygenated blood from the lungs into the heart. The blood is then passed into the left atrium.

The function of the lungs

When we breathe in (inhale), the intercostal muscles contract and the diaphragm pulls down, making the chest expand. This causes air to be sucked into the lungs.

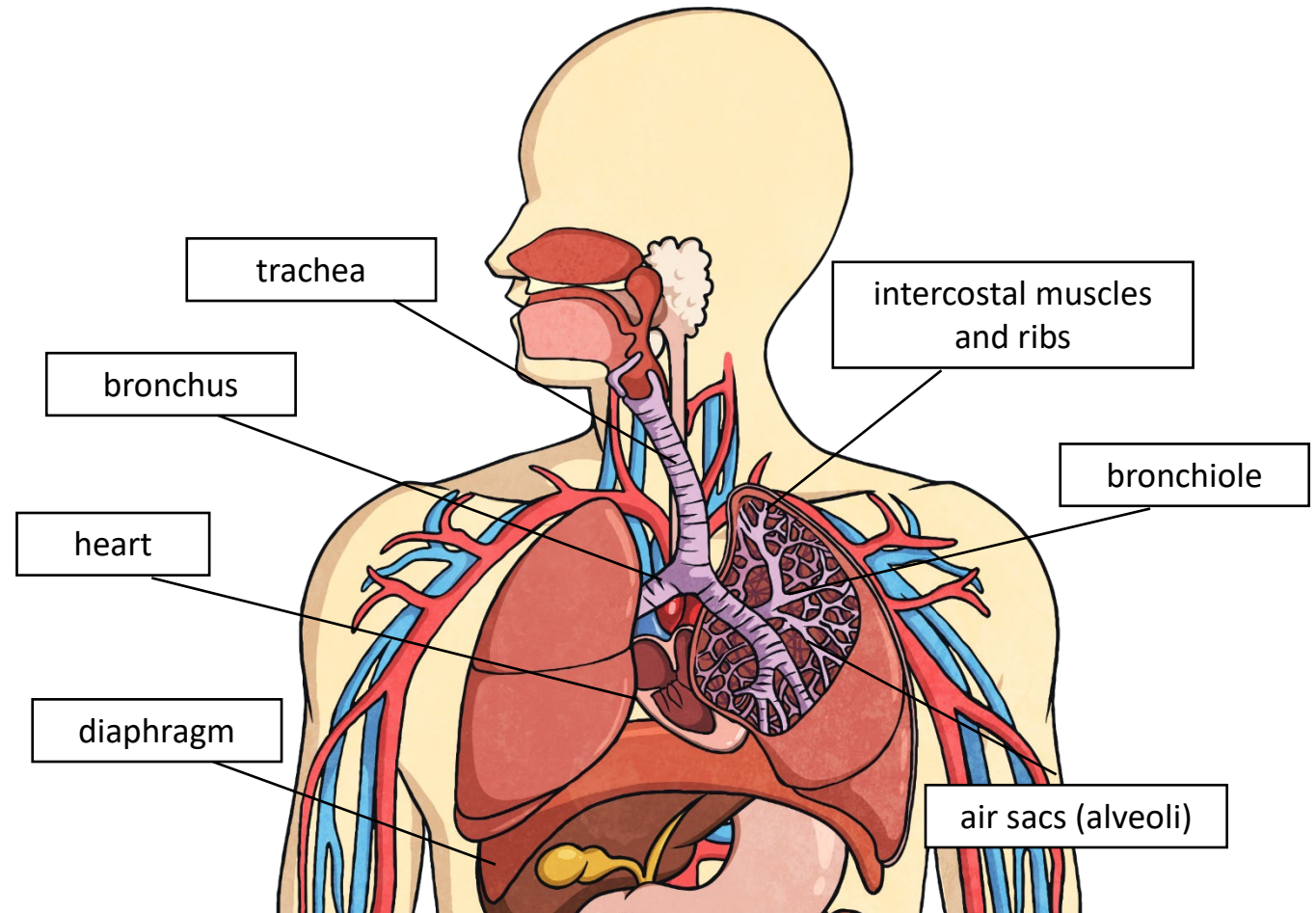


The intercostal muscles and diaphragm then relax and the air is pushed out of the lungs (exhale) as the ribcage falls downward and inhale.



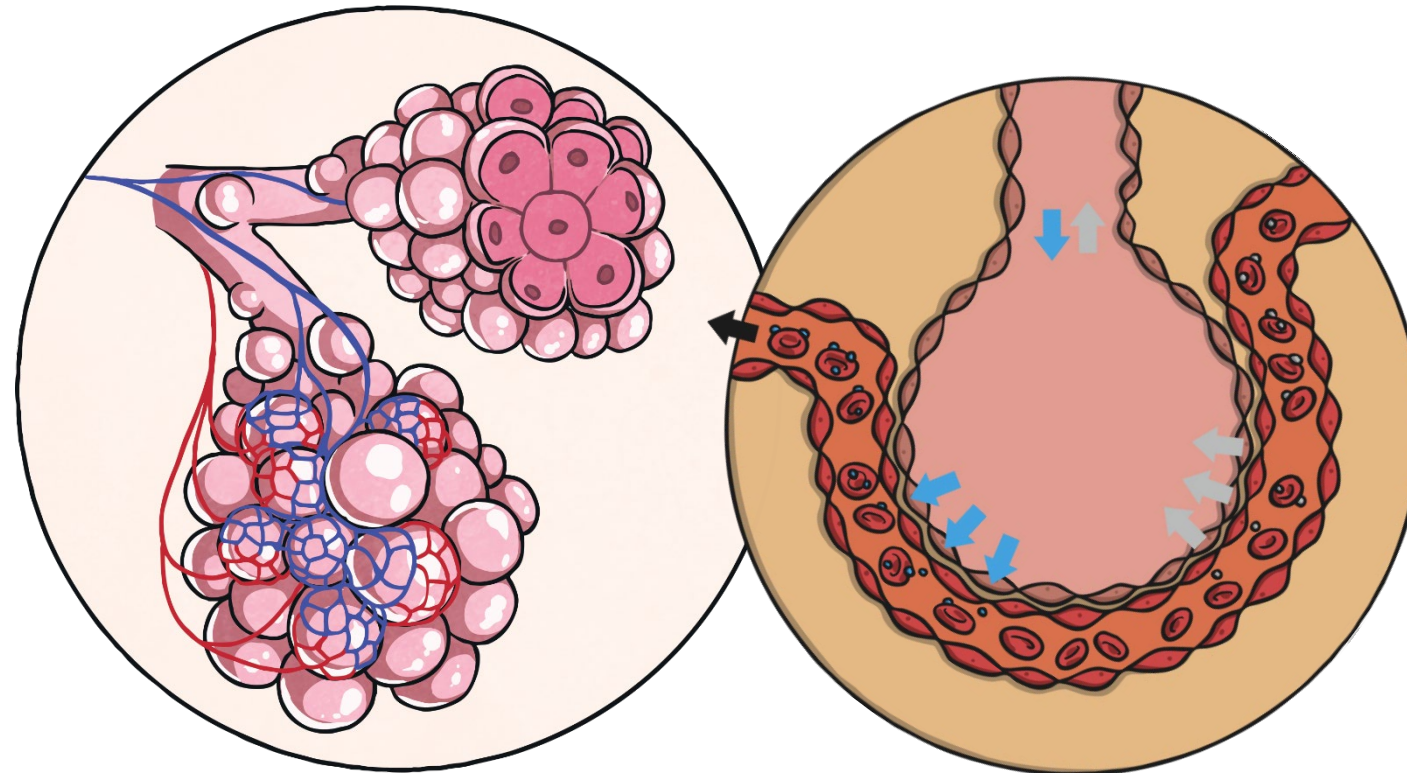
The function of the lungs

Air breathed in through the mouth or nose travels down the trachea, through the bronchi into one of the lungs. The air travels into the bronchioles and into the air sacs (alveoli).



The function of the Alveoli

The oxygen is absorbed into the blood through a layer of moisture in the air sacs (alveoli). Carbon dioxide in the blood is transferred back into the air, which then travels back out of the lungs.



What do blood vessels do

Arteries – carries oxygenated blood **away** from the heart

Capillaries – enable **exchange** of oxygen with body

Veins – carries blood from capillaries back to the heart to be pumped **to** the lungs to be re-oxygenated.

