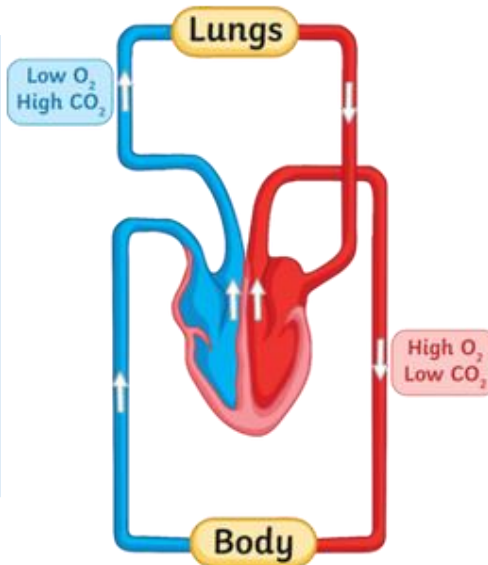
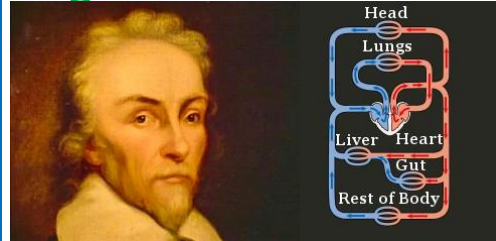


Circulatory & Respiratory Systems

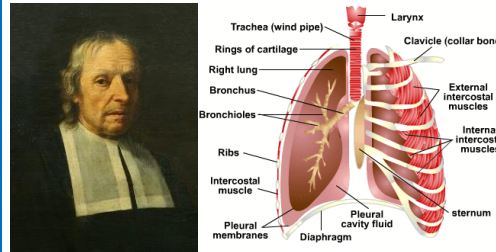
'Double circulation' = blood passes **twice** through the heart



Significant Scientists



William Harvey (1578-1657) was the first person to correctly describe blood's circulation in the body. He showed that arteries and veins form a complete circuit. The circuit starts at the heart and leads back to the heart. The heart's regular contractions drive the flow of blood around the whole body.



Marcello Malpighi (1628-1694) was an Italian scientist who made many important discoveries about how different animals respire. He worked out how oxygen is passed into the blood via tiny alveoli (air pockets) in mammals' lungs.

Key Vocabulary

| | |
|------------------------------|---|
| circulatory system | is the system of blood vessels that carries blood around the body |
| heart | is a muscle that pumps blood |
| blood | is not a liquid, but a mixture of red blood cells, white blood cells and platelets floating in a liquid called plasma |
| white blood cells | fight illnesses and infections |
| red blood cells | carry oxygen to the parts of the body that need it |
| platelets | gather together in cuts and other wounds to block them up. They make blood clot |
| arteries | are blood vessels that carry blood (usually oxygenated) away from the heart |
| veins | are blood vessels that carry blood (usually de-oxygenated) towards the heart |
| respiratory system | enables us to breathe. It allows oxygen to enter our bloodstream and carbon dioxide and other waste products to be taken away |
| lungs | are two sponge-like organs in which oxygen is passed to the blood from air and carbon dioxide is taken out of it |
| respire / respiration | when an organism takes in a gas from the air and gives back another waste gas (one form of respiration is breathing) |
| drugs | are substances that change the way the body behaves |

Gas exchange in lungs

ALVEOLUS GAS EXCHANGE

