

What do I already know?

- all living things have certain characteristics that are essential for keeping them alive and healthy
- animals, including humans, need the right types and amount of nutrition
- different parts of the body have special functions.

Science : Y6 - Summer - Blood Heart

BIG IDEA - What does our heart do?

Section 1	
KEY VOCABULARY	
circulatory system:	blood vessels that carry blood away from and towards the heart. Arteries carry blood away from the heart and veins carry blood back to the heart.
respiratory system:	the group of tissues and organs in your body that allow you to breathe. This system includes your airways, your lungs, and the blood vessels and muscles attached to them.
blood:	a body fluid in humans and other animals that delivers necessary substances such as nutrients and oxygen to the cells and transports waste products away from those same cells.
valve:	a structure for controlling the passage of fluid or air through a pipe or tube.
protein:	an essential part of all living organisms, found in living tissue including muscle and skin.
blood vessel:	a tube that transports blood around the body. Arteries, veins and capillaries are all types of blood vessel.
antibody:	a protein produced by the body's immune system that fights disease and infection.
aorta:	the major blood vessel that carries blood away from the heart to the rest of the body.

SECTION 2

What are the circulatory and respiratory systems?

The circulatory system is made up of blood vessels that carry blood away from and towards the heart. Arteries carry blood away from the heart and veins carry blood back to the heart. Smaller vessels called capillaries form a connection between arteries and veins and help transport blood to all of the body's cells.

The respiratory system is the group of tissues and organs in your body that allow you to breathe. This system includes your airways, your lungs, and the blood vessels and muscles attached to them. The respiratory system transports oxygen from the air we breathe, through a system of tubes, into our lungs and then diffuses it into the bloodstream, whilst carbon dioxide makes the opposite journey.

SECTION 3

What is our heart and how does it work?

The heart is a muscle that is found in the chest cavity between the lungs. It is responsible for pumping blood around the body - through the circulation system.

The heart is made up of four chambers known as the left and right atrium and left and right ventricle.

Each half of the heart works as a pump to move blood around. The right side receives blood that has been around the body; this side then contracts to send blood to the lungs to get resupplied with oxygen and get rid of carbon dioxide. The blood then travels back to the left side of the heart which contracts to pump it around the rest of the body. Valves help to control this process by only allowing blood to flow in the correct direction.

SECTION 4

How does our circulatory system keep us healthy and what can we do to keep it working well?

The circulatory system transports nutrients, oxygen, water and waste products around the body. Our blood helps carry all of these around. Red blood cells transport oxygen and carbon dioxide. White blood cells help our body fight infections from bacteria and viruses. Our blood also helps to protect us if we have injured ourselves - using special cells called platelets.

We can keep our heart and the rest of our circulatory system working well by eating a balanced diet and making sure that we exercise regularly. A balanced diet includes plenty of fruit and vegetables as well as whole grains, low-fat dairy products, lean meat and fish, nuts and pulses.

Eating foods that are high in salt, sugar and fat can be bad for the heart and lead to blockages in the arteries.

SECTION 5

The heart and the circulatory system.

