

### What should I already know?

- The functions of the basic organs within the digestive system.

### Scientific Skills and Enquiry

- To take measurements over a period of time, questioning accuracy and drawing conclusions from those measurements.
- To record data and results.
- To describe causal relationships and draw conclusions from experiments.
- To raise questions about the effect different stimuli have upon the heart.

### What should I know by the end?

- The circulatory system is made up of the heart, lungs and blood vessels.
- Arteries carry the 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.
- The blood is made up of red blood cells, white blood cells, plasma and platelets.
- The nutrients needed for humans to grow are protein, carbohydrate, fats, dairy, fruit and vegetables.
- The digestive system breaks down food.
- Nutrients are transported around the body by the blood stream.
- Absorption occurs in the intestines via the villi.
- Elimination of waste produces occurs in the rectum.
- Diet, exercise, drugs and lifestyle have an impact on the way the body functions.

### Vocabulary

**absorption** – the process by which one thing takes in another

**aerobic** - relating to exercise taken to improve the efficiency of the body's cardiovascular system in absorbing and transporting oxygen

**anaerobic** - relating to exercise which does not improve the efficiency of the body's cardiovascular system in absorbing and transporting oxygen.

**aorta** - the main artery of the body, supplying oxygenated blood to the circulatory system

**arteries** - any of the muscular-walled tubes forming part of the circulation system by which blood is transported around the body

**atrium** - each of the two upper cavities of the heart from which blood is passed to the ventricles

**blood vessels** - a tubular structure carrying blood through the tissues and organs

**capillaries** – thin branching blood vessels

**circulatory system** – the system which circulates blood around the body

**digestive system** – the system which transports, absorbs and eliminates nutrients in the body.

**elimination** – the discarding of waste materials

**heart** – the central organ in the circulatory system that pumps body around the body

**lungs** - the pair of organs that allow oxygen to pass into the blood and carbon dioxide be removed

**nutrients** - a substance that provides nourishment essential for the maintenance of life and for growth.

**oxygen** – a colourless, odourless gas, essential for supporting life

**plasma** – the colourless part of blood in which fats are suspended

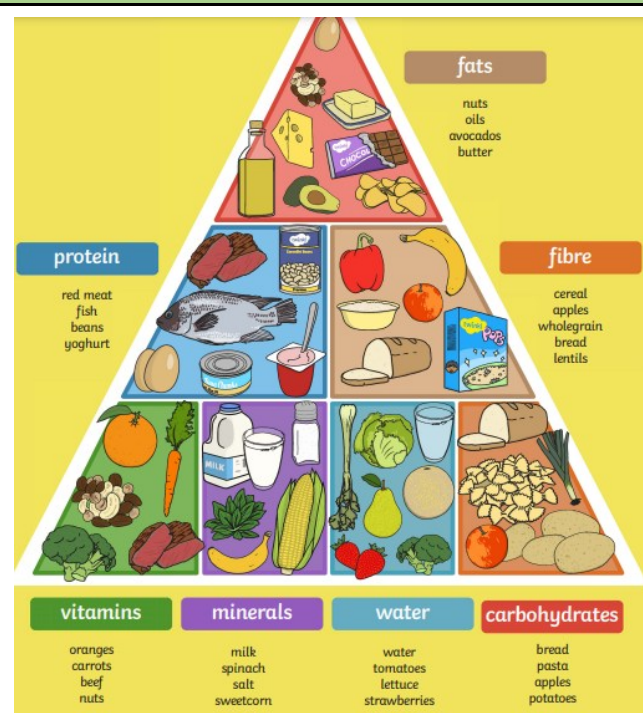
**platelets** - a small colourless disc-shaped cell fragment without a nucleus, found in large numbers in blood and involved in clotting.

**transportation** – the process by which nutrients, oxygen and waste are moved around the body

**veins** - any of the tubes forming part of the blood circulation system of the body, carrying in most cases oxygen-depleted blood towards the heart.

**ventricle** – each of the two lower chambers of the heart

### The Six Key Nutrients



### The Circulatory System

