



LEARNING JOURNEY

Biology

This module will build your knowledge of exchange surfaces and highlight the similar properties that they possess and aid your understanding of the importance of these properties to living organisms.

This module builds on your understanding of processes and structures found in the digestive and circulatory systems from Key Stage 4 to give a more complete picture.

Organisms and Exchange

Surface area:volume

You will learn how surface area links to volume and how this relates to simple organisms without a specific exchange surface

Insect and fish gas exchange

You will learn the structures of the exchange surface and how they allow for efficient gas exchange

Human and plant gas exchange

You will learn the structures of the exchange surface and how they allow for efficient gas exchange

Digestion

You will learn the structure and function of the digestive system as well as the role of enzymes

Haemoglobin

You will learn how haemoglobin is used to transport oxygen and how and why the affinity of haemoglobin can change

Blood and the heart

You will learn the structures and functions of the circulatory and the pathway of blood through the circulatory system

VOCABULARY

Diffusion

Osmosis

Active transport

Tracheoles

Spiracles

Stomata

Peptidase

Lipase

Carbohydrase

Micelles

Loading

Unloading

Affinity

Systole

Diastole

Cardiac cycle

You will learn how blood passes through the heart and be able to interpret graphs relating to pressure and volume

Tissue fluid formation

You will learn how the tissue fluid around cells is formed and what substances are present

Transpiration

You will learn how plants transport water and the factors that affect the rate of transpiration

Translocation

You will learn the mechanism which transports sugar from photosynthesis through the phloem