



Stevenage Education Support Centre

'A centre of excellence for inspiring successful futures'

Learning Roadmap

KS4 Biology

VALUES:

Kindness, Teamwork, Resilience,
High Aspirations, Tolerance,
Citizenship

Organisation

In this section we will learn about the human digestive system which provides the body with nutrients and the respiratory system that provides it with oxygen and removes carbon dioxide.

Infection and Response

Pathogens are microorganisms such as viruses and bacteria that cause infectious diseases in animals and plants

Homeostasis and Response

Cells in the body can only survive within narrow physical and chemical limits. They require a constant temperature and pH as well as a constant supply of dissolved food and water

Ecology

The Sun is a source of energy that passes through ecosystems. Materials including carbon and water are continually recycled by the living world, being released through respiration of animals, plants and decomposing microorganisms and taken up by plants in photosynthesis.

Cell Biology

Cells are the basic unit of all forms of life. In this section we explore how structural differences between types of cells enables them to perform specific functions within the organism.

Bioenergetics

In this section we will explore how plants harness the Sun's energy in photosynthesis in order to make food. This process liberates oxygen which has built up over millions of years in the Earth's atmosphere.

Inheritance, Variation and Evolution

In this section we will discover how the number of chromosomes are halved during meiosis and then combined with new genes from the sexual partner to produce unique offspring.

Key ideas

The complex and diverse phenomena of the natural world can be described in terms of a small number of key ideas in biology. These key ideas are of universal application, and we have embedded them throughout the subject content. They underpin many aspects of the science assessment.

