



## Year 10 Biology Learning Map



- TERM 1 -

### Organisation, Breathing and Digestion

In this topic we study the methods of transport that cells use to import the substances they need and remove the waste substances they don't, e.g. gas exchange in the lungs. We then build on the work from year 8 looking at the digestive system in more detail, in particular the various cells, tissues and organs that work together to help us get the vital nutrients from the food we eat.

### The Cardiovascular System

In this topic we will be learning about the circulatory system, focussing on the roles of the heart and blood vessels to transport blood around the body, and the components of blood.



#### LINKS TO PRIOR LEARNING

Previously students will have learnt:

- How substances can move by diffusion.
- How the digestive system gets glucose and other food molecules into the blood.
- How the respiratory (breathing) system gets oxygen into the blood.
- Differences between cells from different organisms.
- How some cells are specialised and adapted to their functions.
- How cells, tissues, organs, and organ systems are related.



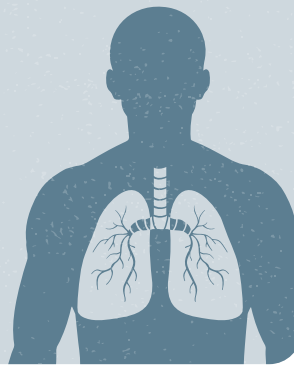
- TERM 2 -

### Non-communicable Disease

In this topic we focus on the importance of health, and the impact of lifestyle, stress, diet and life situations on both physical and mental wellbeing.

### Health and Disease

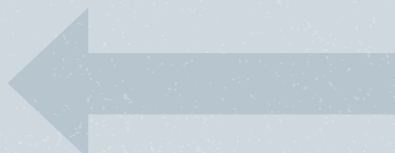
Pathogens have never played a more important role in our lives, and so this unit will help us understand how different pathogens can cause communicable disease. We also look at the ways we can prevent and treat diseases caused by pathogens.



#### LINKS TO PRIOR LEARNING

Previously at KS3, students will have learnt:

- About the structure of bacteria.
- About the use of microscopes to study cells.
- That recreational drugs (such as alcohol) can affect behaviour, health and life processes.



- TERM 3 -

### Plants

These units will help you learn about the process of photosynthesis and its importance, how plant structures are adapted to their functions and how water, mineral ions and sugar are transported through plants.

### Humans and the Environment

In this topic we explore how carbon is cycled, and the impact humans are having on the planet. Including changes to the biodiversity of organisms, climate change and global warming.



#### LINKS TO PRIOR LEARNING

Previously students will have learnt:

- How cells, tissues, organs and organ systems are related.
- That plants make their own food (glucose) using photosynthesis.
- How light and chlorophyll are necessary for photosynthesis.
- About certain plant cells being specialised and adapted to their functions.

