

# Science: Biology @ WBS Year 9 Roadmap

**Subject Aim:** This is the start of your Science GCSE course. You will be building on the skills and knowledge you covered in Y7 and 8, but will be going into the topics in greater depth.

TTP and Autumn Term	<b>Topic 1 – Cell Biology</b>
	You will take a closer look at animal, plant and bacterial cells. You will also learn about light and electron microscopes and how to make measurements using a light microscope. This topic includes a required practical on microscopy and making biological drawings. P11-14 of the Biology revision guide.
	<b>Topic 2 – Cell Transport</b>
	You will learn about transport between and within cells by the processes of diffusion, osmosis and active transport. This topic includes a required practical on osmosis in potatoes. P20-22 of the Biology revision guide.
	<b>Topic 3 – Transport in Animals</b>
	In this topic you will learn about gas exchange in fish and humans and how they are adapted to do this efficiently. You will also learn about the heart and human circulatory system including the structure and function of blood vessels, composition of blood and cardiovascular disease. P23-25,33-38 of the Biology revision guide
Spring Term	<b>Topic 4 – Transport in Plants</b>
	You will learn about how water and sugars move around in plants by the processes of transpiration and translocation. You will also study how plants are specially adapted for these processes to happen. P42-44 of the Biology revision guide
	<b>Topic 5 – Communicable diseases</b>
	In this topic you will study infectious diseases and the pathogens that can cause them. You will learn about how they maybe spread and how they can be prevented. This topic includes a required practical on investigating the effect of antiseptics/antibiotics on bacterial growth. P46-48 of the Biology revision guide.
Summer Term	<b>Topic 6 – Non communicable diseases</b>
	You will learn about non-infectious diseases and risk factors and lifestyle choices linked to these. P39-41 of the Biology revision guide.
	<b>Topic 7 - Treating disease</b>
	You will learn about how we defend ourselves against disease, vaccination and drug development You will also learn about plant diseases and defences. P49-55 of the Biology revision guide.

## Assessment

There will be 3 formal Key Assessments in Y9. Each will be a test of all of the content you have covered up to that point in time. You will be given the page references of the revision guides that you need to use 2-3 weeks prior to the assessment. The revision forms a key part of your homework. Your setting in Science will be reviewed following each assessment.

Key Assessment 1	11 <sup>th</sup> September 2023
Key Assessment 2	11 <sup>th</sup> December 2023
Key Assessment 3	15 <sup>th</sup> April 2024

## Homework and Revision

Homework is set by your class teacher on Brightspace. You can expect to get 2 homework tasks per topic. One homework is a quiz and the other is a set of written questions.

Revision for the assessments is set by the Head of Department several weeks before each assessment. You will have some revision time in class with your core teacher, but revision is a key component of your Homework.

## Enrichment themes

You will look at careers in science throughout the year. You will have the opportunity to engage with Science outside the classroom through STEM club (Science, Technology, Engineering, Maths)

## Where Next?

In year 10 you will continue to develop your knowledge and practical skills in Science. You will study; Organisation and Enzymes, Photosynthesis, Respiration, Cell Division, Nervous System, Hormones and Homeostasis.