

Term 2

Year 7 Science Curriculum Overview – Term 2

Welcome to the Year 7 Science curriculum overview for this half term. Following the AQA KS3 Science curriculum, Year 7 students will focus on foundational topics in biology: *Reproduction (Human and Plant)* and *Cells*. These topics introduce key concepts that will help your child build a strong understanding of biological processes. Below is an outline of what your child will be learning this term.

Reproduction (Human and Plant)

In this unit, students will explore the processes and structures involved in reproduction in both humans and plants, gaining an understanding of how life is sustained and passed to the next generation.

1. Human Reproduction

- **The Human Reproductive System:** Students will learn about the male and female reproductive systems, their structures, and functions.
- **Fertilisation and Development:** We will explore how fertilisation occurs and the stages of development from a zygote to a baby, including the role of the uterus and placenta.
- **Puberty:** Students will discuss the changes that occur during puberty and how these changes prepare the body for reproduction.

2. Plant Reproduction

- **Flower Structure:** Students will identify the key parts of a flower (stamen, carpel, petals, sepals) and their roles in reproduction.
 - **Pollination and Fertilisation:** We will explore how pollination occurs and the journey of pollen from one plant to another, leading to fertilisation.
 - **Seed Dispersal:** Students will investigate the different ways plants disperse their seeds, such as wind, animals, and water, to ensure survival and growth in new locations.
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Cells

This unit introduces students to the building blocks of life: cells. They will develop an understanding of cell structure, function, and the differences between plant and animal cells.

1. What are Cells?

- Students will learn that cells are the basic units of life and are present in all living organisms.
- We will discuss the discovery of cells and their importance in biology.

2. Structure of Cells

- **Animal Cells:** Students will learn about the key components of animal cells, including the nucleus, cytoplasm, cell membrane, and their functions.

- **Plant Cells:** In addition to the components of animal cells, students will study the unique structures of plant cells, such as the cell wall, chloroplasts, and vacuole, and understand their roles.
- 3. Using Microscopes**
- Students will learn how to use a light microscope to observe cells and understand the importance of magnification in studying small structures.
 - They will prepare and examine slides, gaining hands-on experience in observing cells and drawing scientific diagrams.
- 4. Specialised Cells**
- Students will explore examples of specialised cells (e.g., nerve cells, red blood cells, root hair cells) and how their structure relates to their function.
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Assessment and Skills Development

This term, students will develop key scientific skills, including observation, practical techniques, and data interpretation. They will complete hands-on activities such as using microscopes to observe cells. Assessments will include quizzes, practical tasks, and an end-of-topic test to evaluate their understanding and progress.

We look forward to an exciting term filled with discovery and learning!