

Biology

Subject Leader: Dr A Naylor anaylor@taptonschool.co.uk

Curriculum Intent: To ensure students maintain and develop their curiosity and excitement about the natural world. To develop all students to be `scientists` by embedding a culture of confidence and mastery underpinned by scientific enquiry. To develop their ability to see connections between science subject areas and become aware of some of the big ideas for understanding the world. To provide a high challenge, high quality Science education for all our learners.

Core Knowledge

Topics:

Y10

Supplying the cell. The challenges of size. The nervous system. The endocrine system. Homeostasis. Ecosystems. Inheritance. Natural selection and evolution.

Y11

Monitoring & maintaining the environment. Feeding the human race. Communicable & non-communicable disease.

Procedural Knowledge

Students will:

Use scientific theories & explanations to develop hypothesis.
 Evaluate methods & suggest possible improvements.
 Apply a knowledge of sampling techniques to ensure any samples collected are representative.
 Apply a knowledge of a range of techniques, apparatus, & materials to select those appropriate for both field work & for experiments.
 Translate data from one form to another.
 Represent distributions of results & make estimates of uncertainty.
 Carry out & represent mathematical & statistical analysis.
 Explain everyday technological applications of science.
 Use a variety of concepts & models to develop scientific explanations.
 Appreciate the power of limitations of science & consider ethical issues.

Homework:

One homework will be set for every four hours of learning and take approximately 45 minutes to complete. There will be a variety of homework tasks which could include revision for assessments, recap, and review of core learning, Kerboodle quizzes, past paper questions, A4P tasks etc

Assessment:

In Y10 there will be five Unit Tests B2.1, B2.2, B3.1, B3.2 & B3.3 and B4.1

There are also two TSAT exams. The October exam will cover Y7, Y8 and Y9 Biology and the exam in April will include Y10 Biology.

In Y11 there will be five Unit Tests, B5.1+B5.2, B6.1, B6.2, B6.3 part 1 and B6.3 part 2.

There are also two TSAT exams. The October exam will cover B1, B2 and B3 and the exam in February will include B4, B5 and B6.1.

Links to Personal Development:

Enabling students to recognise risks to their own wellbeing.

Social development: Practise using a range of social skills in different situations. Confidence, Resilience &

Knowledge: Mentally healthy, physically healthy, active lifestyle, healthy relationships.

How is my knowledge developed further at Key Stage Five?

Knowledge & skills gained through a study of GCSE Biology or GCSE Combined Science Biology are a starting point for further study at KS5. A Level Biology explores the functions of cells, organ systems, organisms, populations & ecosystems. Starting with the biological molecules that make up living things, it then covers the delicate balance needed for a healthy, functioning body & the interaction of diverse species in ecological settings.