

## Key Stage 4 Science at Yavneh College

The pupils who study science during Key Stage 4 Science at Yavneh College will go down one of three routes. Pupils will either complete a **Triple Science** course that gives 3 GCSEs in the separate sciences, or they will take **Double Science** which has two different routes to achieve two Science GCSEs.

### Qualifications:

Triple Science pupils will obtain

- GCSE Biology
- GCSE Chemistry
- GCSE Physics

Additional Science Double Award pupils will obtain

- GCSE Science
- GCSE Additional Science

Additional Applied Science Double Award pupils will obtain

- GCSE Science
- GCSE Additional Applied Science

### Content:

Here at Yavneh College we will be studying the AQA Science course. All pupils, whether doing **Double or Triple science** will cover the following topics.

*B1a – Human Biology*

*B1b – Evolution and Environment*

*C1a – Products from Rocks*

*C1b – Oils, Earth and Atmosphere*

*P1a – Energy and Energy Resources*

*P1b – Radiation and the Universe*

Those pupils on the **Triple Science** and the '**Additional Science**' **Double Award** route will then go onto study the following units of work.

*B2 – Additional Biology (Including Cells, Plants, Energy Flows, Enzymes, Homeostasis, Inheritance)*

*C2 – Additional Chemistry (Including Chemical Bonding, Atoms, Moles, Rates of Reaction, Electrolysis, Acids and Alkalis)*

*P2 – Additional Physics (Including Forces, Motion, Momentum, Electricity and Nuclear Physics)*

Pupils who go on to sit the '**Additional Applied**' Science course will cover the following topics.

*Unit 1 – Science in the Workplace*

*Unit 2 – Science at work*

- *Food Science*
- *Forensic Science*
- *Sports Science*

*Unit 3 – Using scientific skills*

Those pupils doing **Triple Science** will then study the following units, giving them enough content to qualify for individual GCSEs in each of the three Sciences.

*B3 – Further Biology (including Exchange of Materials, Human Anatomy, Microbiology)*

*C3 – Further Chemistry (Including Periodic Table Development, Acids and Bases, Water, Energy calculations)*

*P3 – Further Physics (Including Turning forces, Light and Sound, Electromagnetism, Stars and Space)*

### **Teaching:**

Throughout their GCSE course, three different subject specialist teachers will teach pupils in the individual subject disciplines of Biology, Chemistry and Physics. Those completing the double science course will have 4 hours of teaching from each teacher over the two-week school timetable. This totals 12 hours of science in two weeks. The pupils studying for the Triple Science qualifications will have 5 hours 20 minutes of contact time with each teacher over the two-week timetable. This extra 40 minutes per week comes in the place of the enrichment period that is used for various clubs throughout Key Stage 3.

### **Assessment:**

For **Additional Double Science** pupils:

- Units B1a, B1b, C1a, C1b, P1a, P1b and a practical exam known as an ISA combine to give the pupils a GCSE grade in **Core Science**.
- Units B2, C2 and P2, along with another ISA practical exam will combine to give the pupils their second GCSE grade in **Additional Science**.

For **Additional Applied Double Science** pupils:

- Units B1a, B1b, C1a, C1b, P1a, P1b and a practical exam known as an ISA combine to give the pupils a GCSE grade in **Core Science**.
- Unit 1, Unit 2 and Unit 3 combine to give the pupils a GCSE grade in **Additional Applied Science**.

Pupils will sit the examinations for the units B1a, C1a and P1a in the month of March during their Year 10, they will then sit the examinations for B1b, C1b and P1b in June of Year 10. The ISA (or practical exam) will be completed within lessons throughout the year. By the end of Year 10 pupils will have completed their Core Science GCSE.

During Year 11 Additional Science pupils will study for examinations in B2, C2 and P2 in June of that year. They will also complete another ISA during lessons. This will give them their grade for the Additional Science GCSE.

The Additional Applied course is slightly different from the other options in Year 11. This course is largely portfolio based, and pupils will build up folders of work as a result of their activities in class and on visits to workplaces, this will contribute towards 60% of the grade. There will also be a single exam in June at the end of Year 11 worth the final 40%.

For **Triple Science** pupils:

- Units B1a, B1b, B2 and B3 along with a Biology based ISA will give a grade in **GCSE Biology**.
- Units C1a, C1b, C2 and C3 along with a Chemistry based ISA will give a grade in **GCSE Chemistry**.
- Units P1a, P1b, P2 and P3 along with a Physics based ISA will give a grade in **GCSE Physics**.

Units B1a and B1b (and likewise for the other sciences) will be combined into a written paper of B1, which will be sat along with C1 and P1 during June of Year 10. The tests B2, C2, P2, B3, C3 and P3 will be examined in June of Year 11. All the practical ISA examinations will be sat during lessons throughout the two years of Key Stage 4.