

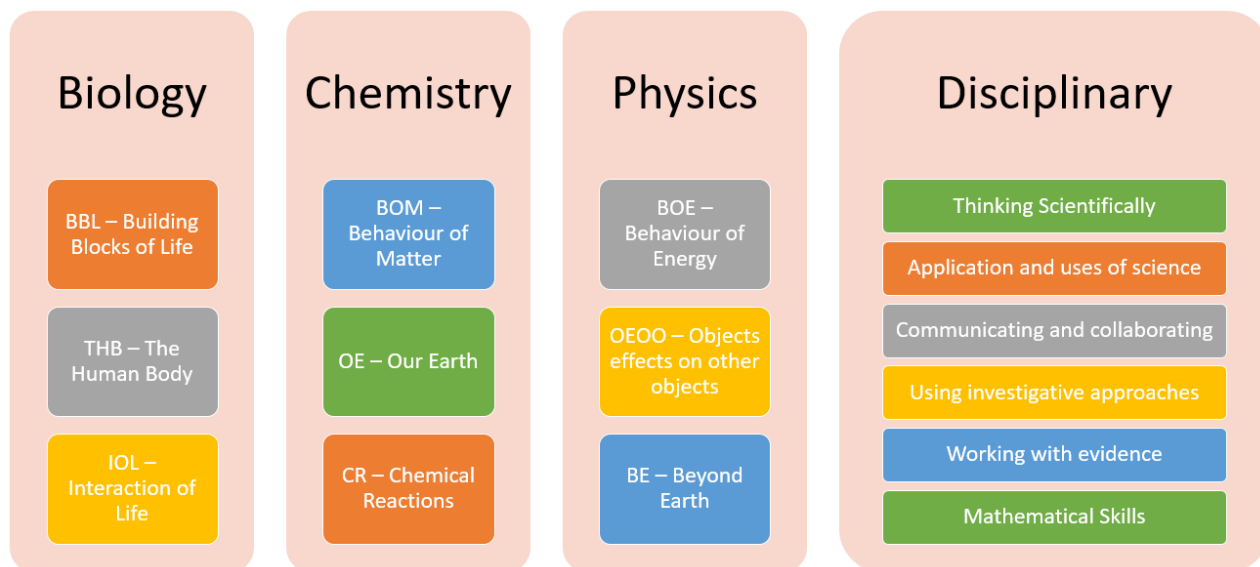
## Science curriculum at Brownhills Ormiston Academy

### The department's vision

- As the science department we aim to provide exciting and engaging lessons for our learners, challenging them to become independent critical thinkers.
- The science curriculum focuses on mastery of disciplinary and substantive knowledge taught across all strands from year 7 to 11, interleaving skills across lessons, units and key stages through the careful sequencing of lessons.
- We have high expectations, encouraging students to aspire to be the best they can, taking opportunities to develop student's cultural capital, British values and careers throughout our units of work.
- As a result of the above we intend to develop students so that they can demonstrate:
  - confident recall and understanding of scientific concepts and the scientific method
  - an understanding of how their bodies work and how they can look after them
  - an understanding of the world around them and why we should take care of it
  - the ability to question science in the news and make informed and ethical opinions about the scientific questions facing society.

### Sequencing of lessons

Across both key stage 3, and key stage 4, the strands of science are taught as shown below. Students will build their knowledge and understanding over time using the OAT science curriculum units of work which act as building blocks to support the development of their knowledge.



In Year 7 students are introduced to these strands and the core knowledge that underpin the secondary science curriculum including: the scientific method, particles, effect of forces, cells, the atom, changes of state, the breathing system, types of reaction, the rock and water cycle, human reproduction, health and disease and purity of substances.

In year 8 and 9 students continue to develop their skills and build on knowledge across all of these strands. We take every opportunity to make connections between the strands and continue to build upon their existing knowledge.

In key stage 4 all students learn the core content to be successful at science, some students will study additional, extension content, this allows all students to develop their existing knowledge base and study science across the three disciplines. Units continue to be sequenced to allow students to develop their prior learning and make links between topics across the three science disciplines.

### **Assessment**

Assessment takes place in all lessons with students self and peer assessing their work against model answers.

Pupils are given opportunity to recall information from previous lessons in low stake quizzes in every lesson.

Formative assessments consist of multiple choice, structured, closed short answer, and open response question types allowing pupils to demonstrate the ability to recall and apply knowledge and understanding, and analyse information throughout all lessons.

Formal KS3 assessments take place twice during each unit of work (2-3 times per half term).

Formal KS4 assessments are more extensive and take place at the end of each unit.