This Charter helps to implement the intent of the science curriculum every lesson by every Teacher.

The intent of the science curriculum

The aim of teaching science in our schools is to be curious about the world around us, to learn through scientific discovery, and to be scientists and innovators of the future whilst becoming well rounded individuals. We aim to encourage our pupils to develop a positive and practical approach to science. We also seek to develop key scientific skills, combine knowledge with practical application and establish cross-curricular links, where appropriate. We build understanding of the 'Big Ideas' in Science that are relevant to pupils' lives during and beyond Academy.

The aims of the *Fulwood Academy Science Secondary Curriculum* are to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- develop the understanding of scientific methods and processes through different types of science enquiry which allows them to answer specific questions about the world they live in.
- are equipped with the scientific knowledge required to understand the uses and implications of science today and in the future.
- can access conceptual models and theories to make sense of the observed diversity of natural phenomena.
- appreciate that every effect has one or more cause.
- understand that change is driven by interactions between different objects and systems and that they occur over distance and over time.
- understand that science is based on hypotheses, practical experimentation, observation, theory development and review.
- know that quantitative analysis is a key element of theories and scientific methods of enquiry.

Implementing the intent through the Charter:

1. Check learning from last lesson has been retained through the 10 question DIN/starter.

2. Introduce the learning objectives of the lesson making links to the 'Big Picture' and real-life scientific applications.

3. Model key concepts to cement understanding by "I do, we do, you do" activities.

4. Model and explicitly teach the relevant mathematical requirements to enhance their scientific understanding and enquiry.

5. Use practical experiments to enable pupils to deepen their science experience and develop their understanding of hypotheses, observation, theory development and review.

6. Promote both qualitative and quantitative analysis to form theories and scientific methods of enquiry

7. Use effective questioning including cold call questioning and oracy development

- cold calling is embedded as standard practice (no hands-up policy) to ensure full accountability and check for understanding across the class.
- Turn and talk is used to support:
  - Oracy skills.
  - Rehearsal of vocabulary.
  - Preparation for class discussion or written response

8. Build in regular checks for understanding during the lesson and address misconceptions quickly either whole-class or bespoke to individuals.

Retrieval practice is embedded through:

- 10-question do it now tasks at the start of every lesson, focused on spaced retrieval from recent and prior topics.
- Use of "Show Me" whiteboards for real-time formative assessment.
- Application of past paper questions to build exam readiness.

9. Check new learning is being retained to the working memory at the end of every lesson and at the start of the next.

10. Ensure pupils to take pride in their work and provide clear evidence in their books of development and understanding of scientific knowledge and skills. Ensure they are used as an aide-memoire for recall and revision.

11. Extended Response and Tier 3 Vocabulary Development

- Increased focus on extended writing in lessons, with success criteria and model answers supported by visualiser modelling.
- Emphasis on Tier 3 scientific vocabulary and sentence stems to support written accuracy and oracy.
- Structured use of literacy strategies to develop precise scientific communication.

12. Live Feedback and Formative Assessment

- Frequent use of visualisers for:
    - Modelling written and calculated responses.
    - Providing live feedback via Show Call using anonymised or real examples.
    - Highlighting misconceptions and modelling corrections.
- Green pen feedback loops are embedded in lessons to show progress from feedback.

Black- 2024-25
Green- 2025-26
Purple- 2026-27