

## What is our overarching curriculum intent and what do we intend students leave The Portsmouth Academy with?

In Science we want to help the students to develop a love of learning through 'big ideas' using investigation and practical skills to underpin their scientific knowledge and literacy. To look at the world with a level of curiosity and then identify the relevance and usefulness of science in their lives.

We believe that the opportunities provided will ensure that our students are confident, life long learners who will explore the world around them. Using their curiosity and scientific knowledge to develop their ideas and beliefs which they can use to help them as they progress through life, work and the world around them. Whether they end up in a highly scientific career or not they will be 'scientists' of the future!

## What is the structural intent of the subject curriculum, & how is it sequenced so that students know and remember more?

The curriculum across all subjects is carefully sequenced so that prior the core substantive and disciplinary knowledge is built upon. It focuses on the core values of the Thinking Schools by encouraging pupils to aspire, achieve, respect and so become their best selves. The curriculum and assessment cycles are designed to allow opportunities for building on their metamemory to ensure that they can show their progress at each stage. Facilitating knowledge adds important local, national, and global context to core knowledge, and our curriculum intends to provide a richness and diversity that enables our students to experience learning in real life contexts.

## How do any school values and focuses influence or feed through the curriculum?

The school is keen to promote our pupils to endeavour to:

- Aspire
- Achieve
- Respect
- Be their best selves

We want the students in the Science department to:

- develop a love of science and see the relevance to the world around them.
- be fully engaged in lessons and willing to try
- develop an open and positive mindset
- identify that if it feels difficult it's worth trying
- be confident to ask questions
- understand that to fail is fine as it helps learning
- be able to look critically at the world
- listen to other views and ideas
- develop their own ideas and views
- articulate their own views confidently
- Consider science in all contexts of their life
- Consider how science can affect the world around them

What is our intent to assess how well students access the curriculum and how the school intends to adapt the curriculum to close gaps in knowledge?

To ensure any gaps in prior or new knowledge are quickly identified we use pre-requisite quizzes at the start of lessons. These show the teacher gaps in knowledge that is required for pupils to move on successfully. We use end of topic testing to show the accumulation of knowledge for specific topics and interleave questions to encourage recall and retention of key facts.

The curriculum we intend to deliver to students at each Key Stage:

At KS3 we deliver a curriculum that begins their journey by developing an understanding of the safety and practical aspects of science. In Year 7 and 8 Science is divided into two sub-topics, biology and Phys/Chem (Physics and Chemistry as they have many common elements). Year 7 we focus on the science that will affect them such as the human body and in Year 8 we focus on the wider world of science e.g. global warming. In Year 9 we start to focus in on the sciences separately. By year 10 and 11 they will be given opportunity to cover, in greater detail, how living organisms interact with each other and the environment. We will also develop a greater understanding of the composition, structure, properties and reactions of matter, atoms, atomic particles and the way they are arranged and link together. Finally, we will further develop their understanding of the fundamental concepts of forces, radiation and particle structure by looking deeper into waves and their behaviour. All this will lead to them having a sound understanding of basic science giving them the opportunity to study this interesting subject further if they so wish.