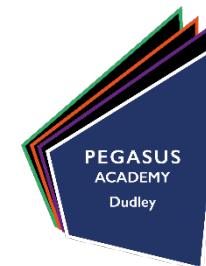


Pegasus Academy

Statement of Curriculum Intent – Science

2022/23



The purpose of education is to bring about social justice through the unapologetic teaching of powerful knowledge that raises learners above their everyday experience. Through promoting a love of knowledge, and the delivery of a broad and balanced curriculum, learners will be able to take their rightful place in an educated, democratic, and environmentally conscious society.

Science will achieve this purpose by inducting Learners into a world of awe and wonder. We will teach an ambitious curriculum that is coherently sequenced to allow all students to maximise progress and secure success when learners move on to their next stage. We firmly believe that curiosity is not limited by socio-economic background and all learners have the right to know and seek answers to the greatest questions ever asked. As a result of this, learners will be empowered to engage with debate, rise above the spread of misinformation, and become intellectually free.

It is our ambition that by the end of year 11, learners will

- have a firm grasp of the powerful, substantive knowledge across all the scientific disciplines.
- be good communicators of science. They will be able to research, inform, argue and debate relevant scientific ideas; interrogate their validity and be immune to the spread of misinformation.
- know that theories must be testable and how to apply the scientific method to their everyday lives.
- have flexible, transferrable knowledge of science and the science of learning so that they are confident life-long learners and equipped for further study.
- have a confident grasp of the key mathematical concepts that underpin Science.

How will this be achieved in our curriculum?

Our ambitions for our curriculum will be achieved through ensuring challenging subject content is delivered by subject specialists to ensure expert explanations of scientific concepts. Sequential long and medium collaborative planning will ensure that lessons build on prior knowledge and skills with clear opportunities to assess understanding and provide live feedback. Teachers will make use of the of live modelling, knowledge organisers, and planned opportunities for recall and retrieval. Underpinned by the science of learning and high quality curriculum design, this will ensure learners know more, remember more and can do more.

We will ensure high quality teaching of the disciplinary literacy required for science allowing learners to write, talk and read like scientist. Use of the Frayer model and other strategies will support this development of learner vocabulary. We also ensure that opportunities to work collaboratively with other learners is provided. Teachers will develop further develop learners thinking around key wider social, environmental and economic impacts of scientific applications.

Our spiral model curriculum provides opportunities for repetition and building on prior knowledge. Through the explicit teaching of revision skills, opportunities for revision and retrieval practice we will ensure learners are prepared for external examinations and are equipped for further study.

Scientific methods and theories will be taught through procedures and techniques in context. This will be supported by purposeful practical work. Explicit modelling of key techniques by subject experts will further consolidate learning.

How does assessment fit in?

The Science department recognises the importance of high-quality ongoing feedback in supporting the progress of our learners. The purpose of feedback should be to improve the learner, not the task.

The preferred format for feedback in Science is Demonstrate and Connect. Using this strategy, a Demonstrate task assesses progress in relation to the Progress Indicators for that lesson with an appropriate connect task that builds on the progress from the previous lesson. As well as demonstrate and connect a number of formative assessments strategies including the use of hinge questions will be used to identify learner misconceptions. Opportunities are also created for learners to practice and review examination questions.

At the end of a topic in KS4, and at the end of each term in KS3, learners will complete a knowledge check assessment which will be stuck in their books. Whole-class feedback is used to identify misconceptions and address these with a reteach of poorly understood content during lesson time.

Summative assessments in the form of mock examinations will be completed at strategic points in year 10 and 11 using secure papers (as and when directed by the Trust Director for Science) and question level analysis will be completed to identify individual strengths and weaknesses, communicate these to learner and inform future curriculum planning and adapt the schemes of learning.