

Intent:

Live:



Children will have the scientific knowledge and a secure understanding of the scientific method to be able to hypothesize and weigh up truth claims and make sense of the world around them.

Love:

Children will develop a sense of deep curiosity and love to investigate and deepen their understanding of how the physical world works.



Learn:



Children will learn to become critical thinkers and approach truth claims with an understanding of the different variables and biases that can influence results.

Due to the high levels of deprivation and unemployment within the ward (of the pupils we serve 59% are eligible for pupil premium funding) OAH have developed a science curriculum that inspires a deep love of science and also raises children's aspirations and understanding and awareness of the different pathways that can lead to a career in science.

- Every child receives a minimum of 1 hour high quality science teaching per week.
- Science is taught accurately and systematically both within and across the each year group so that new knowledge is built upon the secure foundation of established understanding.
- Science Teaching is underpinned by pedagogical knowledge of how teacher questioning can guide learners into the relational and extended abstract realms of the SOLO Taxonomy.
- Pupils develop an understanding of the role science plays in the workplace and the world around them through partnering with Birmingham University, The Scholars Program and Engineering Companies.
- Continuous assessment, intervention and development within science are ensured through the use of pupil target sheets.
- We ensure developmental feedback is consistently high quality throughout the academy and extends and develops pupils ability to link new knowledge into existing understanding through SOLO Taxonomy question stem stickers.
- We are continuously developing an investigation-rich science curriculum which allows pupils to apply their theoretical understanding to a range of experiments and understand how difference variables can affect their results.

'Every Child is an Artist' Programme.

Specialist music technologists deliver high quality teaching covering the science of sound and the development of amplification technology.

Implement:

Coverage through Science curriculum & extra-curricular:

- Class teachers ensure that every pupils receives at least one hour of high quality science teaching every week.
- A whole school science overview is followed by all your groups in order to ensure that the national curriculum is covered thoroughly and systematically throughout the academy and that knowledge and understanding that has been acquired in previous year groups is deepened and built upon in subsequent ones.
- The Plan Bee, Science Bug and CGP schemes of work and resources are available to all teachers to assist with planning and subject knowledge. Teachers are also encouraged to develop bespoke lessons in science based on their deep understanding of the curriculum and the specific needs of their individual classes.
- Partnerships have been developed with the science department of Warwick University, Engineers Without Borders and Rolls Royce Aerospace Engineers to offer pupils opportunities to take part in a wide range of workshops that will both inspire and inform our pupils with regards to the different pathways that can lead to a career in science.
- The Scholars Programme offers our more able year 5 pupils the opportunity to work with University researchers to complete a junior PhD in biomedical engineering. This both develops their skills in scientific enquiry and gives them the experience of working in a university setting for workshops and a graduation ceremony, thus raising their aspirations to go onto further education.
- Hobmoor Science Week takes place every January to inspire our pupils to engage more deeply with science and raise the profile of the subject.

Assessment:

Science Lessons are evidence in Science books every week and science trackers are regularly up dated for each pupil. Microsoft Forms quizzes are used at the end of each science unit in order to inform pupils and teachers about what pupils have understood within the unit and the knowledge they have gained, as well as highlight any areas that need to be refreshed.

Monitoring:

Science book looks to ensure high quality teaching is taking place in every year group every week and to ensure systematic coverage of the science curriculum.

Drop in sessions and lesson observations.

In November 2019, our academy review looked very closely at how science was being taught across the school.

Impact:

Data (2018/19):

93% of pupils had met the expected standard for science by the end of KS2

100% of our pupils enrolled in The Scholars Program passed and 67% were awarded a 1st or 2:1

27% of pupils across the academy achieved greater depth in science in July 2019.

Our internal assessment data informs us that we are on track to be significantly above national average in science by the end of this academic year.

Teacher CPD/monitoring (2019-2020)

CPD staff inset session on using the SOLO taxonomy within science delivered last January.

Science Bug inset delivered to all staff to all staff last October to ensure they can use the resources and integrate the use of horizons ipads into their science teaching.

Collaborative planning and teaching of science lessons developed between NQTs (2019-21) and Science Lead.

Current Priorities and Next Steps

Continue to develop an investigation rich curriculum that allows all pupils in all year groups to deepen their understanding of the scientific enquiry.

Continue to build links with local secondary schools, universities and employers to give our pupils a wide range of opportunities to see how science is applied in the world of work and in further education.