Impact

Teachers quickly establish pupil's knowledge (and gaps) as they are clear about what they need to know to access a unit and the steps in learning.

Teachers select the best timings and pacing to address gaps and further knowledge resulting in lessons being accessible and ensuring coverage of component knowledge.

Teachers select the most he pedagogical approaches (delivery – direct teaching, collaborative work and activities directly linked to the LO) resulting in pupils recalling key knowledge during the units.

Lessons contribute well to delivering the curriculum intent

Teachers have a firm and common understanding of the curriculum intent and implementation.

The Science curriculum is taught in a logical and systematic way.

Pupils recognise a common approach to learning eg Knowledge Organisers and use these to secure their component knowledge in subject areas and make connections.

Disadvantaged, those with SEND and transient pupils achieve highly (and often exceptionally) in science.

Implementation

MT Plans identify component knowledge that they will need to access next steps in learning and vocabulary (EAL/ Disadvantaged).

Substantive and Disciplinary Knowledge carefully sequenced to enable progression from F1 to Y6. Explicit to pupils via Knowledge Organisers.

Assessment is integral to the teaching sequence. Prior Knowledge checks are built into every unit – identifying component knowledge they will need (transient pupils) Misconceptions also flagged before the start of a unit and planned for.

Intent...

Broad and ambitious curriculum – derived from NC and EYFS framework and beyond. Evidence- led - Education Endowment Fund, STEM, ACE, Plan Assessment and the 2021 Ofsted Curriculum Research Review and Feb 23 Ofsted Report.

Emphasis is given

misconceptions are

already planned for

and to avoid thus

developing a more

secure and sound

understanding of

to ensuring

scientific

concepts

Development of Disciplinary Knowledge within 'concepts' (eg. Recording and presenting evidence) is carefully sequenced from F1 to Y6 and widens as they progress through the school. This allows children to get better at working scientifically over time. There is ample opportunities to re-visit and track back where necessary (transience pupils) and gain knowledge of our pupils' gaps. There is appropriate scaffolding with this when necessary for younger pupils with the aim of gradual independence over time.

We have designed our curriculum to ensure well-chosen disciplinary knowledge is embedded within the most appropriate substantive content. For example finding out about the properties of materials (substantive knowledge) and learn why some are more suitable than others for a purpose (comparative testing)

Teachers evaluate MT plans and

feedback to SL – plans adapted

determined. Likewise, curriculum

developed in ways that would

and next cycle of review

can then be refined and

improve it, year on year.

MT plans identify assessment criteria at end of unit to ensure they carefully match component knowledge. An opportunity to check what they know and can remember

and experiences to learn about key substantive concepts such as forces, materials, plants, that become increasingly complex over time and over-lap with between units of work. A coherent curriculum in FS dovetails with that of Y1, knowledge and concepts taught along with experience of natural phenomena support the learning undertaken in Y1. Use of PLAN to ensure this. Key vocabulary is also planned for and developed between years,

Children have ample opportunities to use and

Pupils have the

Sequenced from F1 to Y6, our science 'path' gives the children meaningful opportunities

condition lave ample opportunities to use and become confident in different types of scientific enquiry (Pattern seeking, comparative/fair testing, etc). These are carefully planned, not only to compliment substantive and disciplinary knowledge but also the with the aim of independent enquiry and gaining understanding of which enquiry type will be the most successful when answering a question or proving a theory.

Long Term Plan has been developed in conjunction with other subjects to ensure cognitive load is reduced. For example, the application of maths/computing skills are carefully placed to ensure these skills are not the focus or a barrier to scientific knowledge. It also allows for the secure development of schemas (eg Interconnectedness between weather patterns, seasonal changes, water cycle, states of matter (Geog/ Science plans) over time.

MT plans support teachers in activities carefully matched to LOs and recordings that support assessment against LOs.

Pupils have the opportunity specific scientists, closely linked to the content that they are learning at that time, eg Mary Anning, Evolution and Inheritance

The LTP and structured timetabling allows regular opportunities to revisit and build on their knowledge so that it is not forgotten. Phenomena is also taken into consideration so concepts are taught at relevant times of the year (Plants, light, weather, habitats)

Teacher CPD (generic) on day-to-day assessments enable regular checks of acquisition of component knowledge eg hinge questions which determines re-visits/ reinforcement/ Assessment informs pace and organisation of pacing grids/ pre-loads/ re-teach/ consolidation.

Pupils' work is of consistent high quality.

Pupils are

proactive in

clear about

what they

are learning

and can link

it to prior/

connected

developing

schemas to

them in the

complex

support

future.

learning

thus

engaged

and

their learning. They are

Pupils over time and across the whole school consistently achieve the aims of the curriculum. They know more and remember more. They can apply what they have learnt into different contexts.

identify lesson sequences and are detailed to support teachers in pedagogical approach (eg teacher demonstrati ons, concept cartoons,(EA L/DA), preload

vocabulary,

questioning

re-visits.

MT plans