

Intent

GROWTH: We hope to develop children's skills and knowledge. They will also learn about a range of alongside their practical work.

All children, regardless of starting point, will make progress and grow in Science.

RESILIENT: Biology allows children to be exposed to how to eat healthy. Pupils will be encouraged to develop a positive mind-set, through practical activities, whilst gaining new knowledge and skills. Practical investigation skills helps us to be able to work scientifically.

OPPORTUNITIES: Science gives children opportunities that can be taken forward into careers within Biology, Chemistry and Physics.

Children will have the opportunity to take part in a range of different scientific experiments and activities to develop

WONDER: The world is full of awe and wonder. We try to make the most of this by providing the children with practical opportunities.

Wonder is further developed through Science week will immerse pupils in the learning of Science.

TEAM WORK: When children are participating in Science there should be plenty of opportunities for paired and group work especially when working scientifically.

We Provide feedback to each other to improve on our Scientific investigations and fair testing.

HEAD, HEART, HANDS: Biology allows children to be exposed to how to eat healthy. Pupils will be encouraged to develop a positive mind-set, through practical activities, whilst gaining new knowledge and skills.

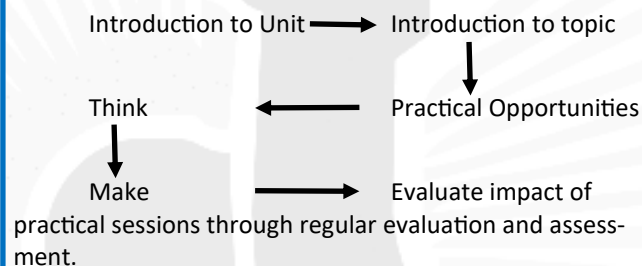
Subject on a Page

Science

Implementaton: Planning

Utilising the Plymouth Science Curriculum as the basis of our science scheme of work, we have made it bespoke to our school, written as a collaboration between subject leaders and class teachers, designed to meet all requirements of the National Curriculum. The scheme enables learners to have practical opportunities to develop their curiosity and enthusiasm for the subject.

Implementation: Learning Sequence (unit of work)



Implementation: Teaching and Learning Pedagogies

Each theoretical science lesson begins with a 'Blast'; an opportunity for children to retrieve prior knowledge which will aid them with their learning in that lesson/ topic.

Children revisit the different knowledge and skills throughout their time at Roe Farm, allowing them to build upon what they already know. Children will have regular practical opportunities to explore and divulge into the subject.

Implementation: Resources

Science store room containing practical resources for practical lessons for KS1 and KS2. This list is not extensive.

- ⇒ Magnets, Magnifying Glasses.
- ⇒ Teeth, human body
- ⇒ Rocks, Solar system and life cycles.
- ⇒ Educational Visits to enhance learning.

Implementation: Curriculum Links

In KS1 and KS2, Science is taught through the Plymouth Science scheme with practical opportunities in mind. Lessons are planned in line with the national curriculum for science and aim to enable all students to flourish within the subject. Through practical opportunities students will develop the skills they need for lifelong learning.



Implementation: Environment

Classroom displays are expected to be functional working walls that aid teachers in their delivery and pupils in their learning.

Each classroom displays:

- Examples of work
- Vocabulary for each unit
- Symbols for scientific enquiry
- Knowledge Navigator (to also be stuck in books at the start of each unit)

Displays can be used by pupils to familiarise themselves with each science unit and spark enthusiasm. The working wall is also a resource for children to use as a aid when completing work.

The classroom environment may need to be adapted to ensure that practical sessions are run in a safe manner conducive to good learning. For example minimising potential trip hazards or excessive movement of pupils around the classroom.

When using tools or other potentially dangerous equipment, suitable staff supervision should be in place at all times.

Scientific experiments must be monitored and equipment must be regularly checked to ensure there is safety at all times.

Implementation: Feedback Pupils are given regular, immediate feedback in lessons as this can have the biggest impact on learning.

In most cases this is going to be verbal feedback, especially during the practical stages.

Where any written feedback is required, this will be done in a timely fashion in red pen.

In some situations, pupils may provide peers with feedback such as during the evaluation process.

Blasts and Challenges are completed in science which allows teachers to understand whether the learning has been developed.

In some situations, pupils may provide each other feedback.

Implementation: Support

Quality first teaching strategies to support all learners to reach their full potential.

Use of questioning to guide pupils to self support.

Scaffolding of tasks where appropriate to support independence whilst continuing to access the intended learning outcomes.

Direct adult support on a 1:1 or small group as required.

Formative and summative assessments to inform next steps for individuals or groups.

Differentiated questioning to support or challenge as required.

Learning challenges to stretch the more able.

Impact: Evidencing

Floor books in EYFS and KS1, which will outline a range of practical opportunities.

Some non-written outcomes e.g. practical skills may be photographed or videoed.

Evidence to be shown in floor books or science books.

Impact: Assessment

Science Blast retrieval tasks at the start of lessons to assess prior learning and retention.

Assessment for learning strategies employed throughout the practical lessons. Live marking implemented.

End of unit assessments of our 'I can' statements by pupil and teacher.

Summative teacher assessments based around our 'Head, Heart, Hands' principles of assessment on O'Track.

Impact: Monitoring

Following the school's tiered approach to monitoring.

Work scrutiny, pupil voice, learning walks and staff voice play an important part of our tier 1 monitoring. Training needs may be met through staff meetings. Deep dive will take place to understand the impact of the subject. This will be conducted by subject leaders and SLT.

