



SCIENCE CURRICULUM POLICY

Approved by Full Governors on
To be reviewed on or before
Signed.....Chair of Governors
Signed.....Headteacher

School Aims

The aims of Eccleston Lane Ends and how to achieve these aims has been long established. They form part of ELE's **CURRICULUM INTENT**. The breadth and depth of the curriculum offer is underpinned by our school values (as well as fundamental British values). The curriculum has been designed to meet the needs of all of our learners and is bespoke to both the locality of our community as well as meeting national curriculum and EYFS requirements. The curriculum has been designed to ensure learning progression is carefully planned and as a result, pupils develop, master and retain key knowledge, skills and understanding through a range of subjects which connect learning together.

Our aims are that:-

- Each member of our community will develop the confidence to reach his/her full potential in a secure, happy, challenging and rewarding environment so that each is equipped with the necessary knowledge, skills and understanding in order to fulfil his/her hopes and aspirations for the future.
- All members will show respect for their community and ALL others within it.

We will achieve these aims by:-

- promoting positive attitudes such as courtesy, honesty, responsibility, kindness and respect for others; encouraging people to set a good example and be good role models in everything they do
- celebrating our successes
- providing a stimulating learning environment and supporting each other in all we do
- constantly striving for high standards
- providing an environment in which everyone feels secure and is encouraged to be confident
- promoting teamwork and ensuring that all are given opportunities to contribute and that all contributions are valued; continually looking for ways in which to raise self-esteem
- promoting key skills such as communication, problem-solving, self-evaluation and the use of ICT
- ensuring that an effective partnership exists between home, school and the wider community
- dealing with environmental issues that may have an increasing impact on our lives in the future and accepting our share of the responsibility for protecting our planet for future generations

SCIENCE INTENT:

At Eccleston Lane Ends our intent for the Science element of our school curriculum is to inspire children with an inquisitiveness and interest about understanding the world and how this impacts our lives and the world's future successes. Teaching should enable pupils to build their knowledge, methods, processes and uses to develop a sense of excitement and curiosity about natural phenomena. Pupils will cultivate an understanding of the nature, processes and methods of science to help them to answer scientific questions about the world around them.

CURRICULUM IMPLEMENTATION

The ELE Team has developed a coherently planned academic curriculum. Underpinned by our school values (including British values), topics, where appropriate and curriculum drivers, are based around the EYFS or the National Curriculum for content and expectations.

Some of our content is subject specific, whilst other content is combined in a cross-curricular approach. Continuous provision, in the form of daily routines, replaces the teaching of some aspects of the curriculum and, in other cases, provides retrieval practise for previously learned content.

When implementing the curriculum we recognise that learning is effective when it is spaced out; when children see connections in their learning and can layer learning; when retrieval of previously learned content is frequent and regular to increase long-term storage and retrieval strength.

We have structured this so that each year group, YR to Y6, has:

- ✓ A clear overview of what must be covered in every subject/area of learning (curriculum map) over six half terms, including adaptations to EYFS curriculum through emerging interests.
- ✓ The key elements of the curriculum identified to make specific knowledge, skills and understanding stick for every subject, each half term.
- ✓ A curriculum coverage and progression document for each subject/area of learning which is evaluated half-termly.
- ✓ A tracking tool to identify where pupils are in relation to age related expectations for all subjects in each year group.
- ✓ A range of assessment activities to inform teachers' professional judgement as to how children are progressing and attaining.
- ✓ Opportunities to experience and develop learning outside the classroom by participating in activities and events through visits and visitors that have been planned across the whole school.

Successful implementation requires all pupils to participate well by having great learning habits and demonstrating exceptionally positive behaviour for learning.

At Eccleston Lane Ends Primary School, through high quality teaching and learning, we will support pupils in developing the knowledge, understanding and skills that will enable them to fulfil their intellectual and personal potential and thereby help prepare them to make a mature and critical contribution to society as an adult.

We agree that the classroom environment should be stimulating and challenging and encourage resilience and independence.

We recognise that much learning occurs during the interaction of pupils with one another and with the adults who work with them, so we will promote teamwork, ensuring that all contributions are valued and continually look for ways in which to raise self-esteem.

We acknowledge that we need to be professionally reflective in our practice because not all teaching leads to effective learning.

Key areas of knowledge and understanding have also been developed progressively in each year group to fulfil requirements of the national curriculum but we also recognise key skills such as communication, problem solving, reasoning and the use of computing aids the learning process.

Children will be inspired and motivated by staff who will continue to develop professionally themselves and strive for high standards within a community of learners.

The implementation of the curriculum will include the following elements leading to great learning:

1. Quality First Teaching

- Highly focused lesson design with sharp objectives;
- High demands of child engagement with their learning;
- High levels of interaction for all children;
- Appropriate use of teacher questioning, modelling and explaining;
- Emphasis on learning through dialogue;
- An expectation that children will develop resilience and accept responsibility for their own learning and work independently;
- Regular use of encouragement and praise to motivate children.

2. Assessment of Performance

- Individual children's progress tracked;
- Strengths and weaknesses identified supporting planning and intervention
- Data collected on a regular basis and shared with staff and children;
- Children have regular opportunities to discuss their progress. Teachers actively involve children in setting and reviewing their progress;
- Teaching, interventions and revision programmes are adjusted in the light of progress children make;
- Parents are regularly updated on their child's progress;
- Processes run across the whole school to ensure consistency and are regularly evaluated by SLT to ensure that the needs of all children are being met.
- Rigorous assessment and tracking of children's performance takes place to inform classroom practice allowing children to make good progress and close attainment gaps;
- Day to day, periodic and transitional assessments used effectively;

- Assessment for learning (AFL) evident across the school - learning objectives, self and peer evaluation.

3. Intervention and Challenge

- Individuals and groups who are not making sufficient progress are identified;
- Provision for intervention is mapped according to need;
- Detailed plans are put into place;
- Learners are enabled to perform beyond the norms expected for their year group where appropriate;
- Interventions are evaluated for impact and relevant adjustments are made.
- Provision for the more able in challenging through a variety of activities including specific questioning and tasks that demand a deeper understanding.

CURRICULUM IMPACT

The impact of the ELE curriculum goes way beyond national performance measures but we recognise that outcomes in comparing our school with others nationally is an important benchmark. We will therefore measure impact through:

- EYFS % of pupils achieving a 'Good level of development' (GLD)
- Phonics Screening Check at the end of Year 1
- End of KS1 % of children working towards or at the expected standard and at greater depth in reading, writing and maths.
- End of KS2 % of children working towards or at the expected standard and at greater depth in reading, writing, spelling, punctuation and grammar and maths.

The impact of our curriculum is that by the end of each year, the vast majority of pupils have sustained mastery of the content, that is, they remember it all and are fluent in it as well as some pupils having a greater depth of understanding. We track carefully to ensure pupils are on track to reach expectations of our curriculum.

The impact measure of achieving our school aims in the widest sense is very important. By ensuring that pupils develop effectively into well-rounded individuals who embody our values, have a thirst for learning and are well-prepared for the next stage of their education. In turn they become valuable future citizens as the desired impact and a result of an outstanding educational offer at Eccleston Lane Ends.

The Science Curriculum

The curriculum ensures the national curriculum is covered in a progressive and appropriate way. The curriculum on offer is unique to Eccleston Lane Ends and meets the needs of all of our learners and community.

Each year group plans to the national curriculum through a topic based curriculum challenge. Subjects (wherever possible) are linked together through key drivers. Learning Challenge titles are outlined on a long term curriculum map.

Science is a wealth of knowledge built up through experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we may ask about our world and environment. Science develops children's ability to make sense of the world in which they live in, while also developing their own ideas and ways of working through investigation, as well as using and applying skills.

Aims in science include:

- To extend children's natural curiosity and wonder about the world in which they are living and growing.
- To offer a range of learning experiences that which match the needs of the pupils across the key stages.
- To provide opportunities for pupils to investigate ideas and concepts in a range of environments.
- Developing the skills of investigation - which include observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Fostering concern about, and active care for the environment.
- Helping children acquire a growing understanding of scientific ideas.
- Helping develop and extend children's scientific concept of their world.
- Giving our children an understanding of scientific processes.
- Developing the use of scientific language, recording and techniques.

FOUNDATION STAGE AND KS1

Teaching in the Foundation Stage and KS1 will be in line with the EYFS (Understanding of the World). The learning will be play and sensory based, involving a range of resources and learning opportunities based on the children's individual interests. Teaching will also utilise opportunities for learning in all specialist areas throughout the school, such as the wildlife area, the wider school environment etc.

KS2

Topics in Science are detailed in each year groups curriculum map; the children therefore recap and build on knowledge gained in the previous academic year. Planning is differentiated by individual class teachers; this is appropriate to the needs of the children in the class. Pupils are taught Science as whole class groups, in small groups, pairs and individually.

Assessment, Recording and Reporting

An annual report which includes Science is presented to parents outlining curriculum coverage and attainment.

Tracking at the end of term summarises the age related expectations for each year group and whether pupils are working at, working towards or working at a greater depth.

This information informs future planning by the teacher and is passed up to next class teacher.

Key skills, knowledge and understanding for each subject are carefully planned into half termly themes or topics where appropriate.

In Science the following resources are used to aid teachers' professional judgements when assessing pupil progress and attainment at key points during the year:

- Feedback, both verbal and written in the form of marking.
- Year group subject specific objectives to monitor coverage.
- Sticky knowledge.
- End of Unit assessment

Health, Safety and Safeguarding

The school's Health and Safety Policy is reviewed annually along with associated risk assessments. Responsibilities of all stakeholders are included in this document. Special attention is given to any visit related to Science to ensure risks are managed effectively and the safety of all those on a visit is paramount. All teachers make a visual risk assessment prior to teaching particularly if working with unfamiliar equipment.

All practitioners must follow ELEs Behaviour Policy to ensure safety comes first in all lessons.

Everyone is responsible for the safeguarding of children irrespective of their role. The Designated Safeguarding Lead (DSL) is the headteacher, Mrs C.Gowan. Staff are regularly trained in managing child protection and safeguarding matters. All staff must keep up to date with the latest versions of Keeping Children Safe In Education and Working Together to Safeguard Children when carrying out their work. All staff are committed to following the policies and procedures in all aspects of their work.

Additional Needs

This policy should be read in conjunction with the SEND Policy.

Identified pupils with special educational needs have a written plan which identifies needs; sets targets for achievement; outlines support or resources to be adapted and is reviewed at least termly.

Teachers should decide how the material should be adapted to meet the needs of the children in the class, particularly if they are not attaining broadly in line with their age. Adaptations to the Science curriculum may need to be made in order that all children have access to a curriculum that is broad, balanced, progressive and relevant to the needs of each child.

The SENCo will support and advise class teachers, learning assistants and subject leaders in how to adapt a suitable curriculum based on sound pedagogical practice.

Equality

This policy should be read in conjunction with the Single Equality Policy.

Eccleston Lane Ends is guided by a clear set of objectives and values, one of which is equality. We are committed to eliminating unlawful discrimination, promoting equality of opportunity and community cohesion between people within the local community. We are determined to do everything we can to make sure that people are treated fairly and that everyone has access to good quality services.

Unlawful discrimination, which results in unfairness in any aspect of our school's employment policies and practices, curriculum or service delivery, will not be acceptable under any circumstances.

In accordance with our *school ethos* we pledge to respect the equal human rights of our pupils, staff and other members of the school community, and to educate them about equality, diversity and cohesion.

Roles and Responsibilities

The Science Leader Gareth Ellison works with the Mathematics Team to facilitate teaching and learning of Science. A member of the Senior Leadership Team holds accountability for this role.

Regular monitoring and self-evaluating activities are carried out by a range of stake holders, including governors, to hold the school to account for the high quality education of our pupils.

Review and Evaluation

All policies are reviewed at least every three years. Some policies are subject to annual review. This policy will be reviewed and revised, if necessary, at the end of the first year of implementation for the Ofsted revised framework September 2019.

References to Other Policies

This policy should be read in conjunction with:

- Special Educational Needs and Disabilities Policy
- Assessment Reporting and Recording Policy
- Marking and Presentation Policy
- Homework Policy
- Single Equality Policy
- Health and Safety Policy
- Child Protection/Safeguarding Policy
- Early Years Foundation Stage Policy