

Cheadle Primary School

Science

We believe this policy relates to the following legislation:

- Education Act 1996
- Education Act 1997
- Standards and Framework Act 1998
- Education (National Curriculum) (Temporary Exceptions for Individual Pupils) (England) Regulations 2000
- Education Act 2003

The following documentation is also related to this policy:

- Be safe science guide ASE

At Cheadle Primary School, Science is about developing an understanding and making sense of our environment, primarily through firsthand experience, exploration, interaction with scientific phenomena and developing scientific language.

Children gain scientific knowledge from the moment they begin to interact with their world. In the early stages of movement, hearing, watching and playing, children begin to establish rules about how things in their environment react and behave. From this they develop their judgements about safety and risk; about their ability to explore, to create, to invent and to enjoy. They discover and employ their senses of hearing, seeing, touching, smelling and tasting.

Our well-balanced curriculum promotes the spiritual, moral, cultural, cultural, mental and physical development of pupils and prepares them for the opportunities, responsibilities and experiences of later life. We will develop pupils' spoken language, reading and writing in all subjects and will develop pupils' mathematical fluency.

We wish to work closely with the School Council and to hear their views and opinions as we acknowledge and support Article 12 of the United Nations Convention on the Rights of the Child that children should be encouraged to form and to express their views.

We as a School community have a commitment to promote equality. Therefore, an equality impact assessment has been undertaken and we believe this policy is in line with the Equality Act 2010.

We believe it is essential that this policy clearly identifies and outlines the roles and responsibilities of all those involved in the procedures and arrangements that is connected with this policy.

Aims

- To increase the child's knowledge and understanding of the world.

Cheadle Primary School

- To develop attitudes of curiosity, originality, co-operation, perseverance, open mindedness, self-criticism, responsibility and independence in thinking.
- To enable children to effectively and confidently communicate their scientific predictions and discoveries as they are given the opportunity to observe, describe, illustrate, hypothesise, evaluate and interpret, using appropriate scientific vocabulary.
- To develop pupils' understanding of the effects of their actions on the environment.
- To develop the child's ability to observe and find patterns in observation, raise questions, experiment and investigate reasons systematically and logically, solve problems and communicate.
- To develop manipulative skills using appropriate equipment.
- To complement other areas of the curriculum.
- To ensure that pupils know how to access relevant scientific information.
- To develop the ability to work in a variety of ways including, working together in groups, independently, in partnerships and as a whole class.
- To follow the programs of study at each Key Stage of the National Curriculum, including the Early Learning Goals for the Foundation Stage, in order to develop scientific skills, knowledge and understanding.
- To provide a scientifically stimulating environment.

Roles and Responsibility for the Policy

Role of the Governing Body

The Governing Body has:

- appointed a member of staff to be responsible for the curriculum leadership of science;
- delegated powers and responsibilities to the Headteacher to ensure all School personnel and stakeholders are aware of and comply with this policy;
- responsibility for ensuring compliance with the legal requirements of the National Curriculum;
- responsibility for ensuring that the school complies with all equalities legislation;
- nominated a designated Equalities governor to ensure that appropriate action will be taken to deal with all prejudice related incidents or incidents which are a breach of this policy;

Cheadle Primary School

- responsibility for ensuring funding is in place to support this policy;
- responsibility for ensuring this policy and all linked policies are maintained and updated regularly;
- responsibility for ensuring all policies are made available to parents;
- nominated a link governor to visit the School regularly, to liaise with the Headteacher and the coordinator and to report back to the Governing Body;
- responsibility for the effective implementation, monitoring and evaluation of this policy

Role of the Headteacher and School Leadership Team

The Headteacher and the School Leadership Team will:

- ensure all School personnel are aware of and comply with this policy;
- work closely with the subject leader and the link governor;
- encourage parents to take an active role in curriculum development;
- provide leadership and vision in respect of equality;
- provide guidance, support and training to all staff;
- monitor the effectiveness of this policy by;
 - observing teaching and learning
 - discussions with pupils and members of the School Council
- annually report to the Governing Body on the success and development of this policy

Role of the Subject Leader

The Subject Leader will:

- lead the development of this policy throughout the School;
- work closely with the Headteacher, the nominated governor and SENCO;
- be accountable for standards in this subject area;
- monitor standards by;
 - auditing the subject area
 - review of the scheme of work
 - monitoring teachers planning
 - lesson observations
 - scrutinising children's work
 - discussions with pupils
- ensure continuity and progression throughout the School;
- devise a subject improvement plan;
- provide guidance and support to all staff;

Cheadle Primary School

- provide training for all staff on induction and when the need arises regarding;
- attend appropriate and relevant INSET;
- keep up to date with new developments;
- undertake an annual audit and stock take of resources;
- purchase new resources when required and in preparation for the new academic year;
- manage the subject budget effectively;
- undertake risk assessments when required;
- review and monitor;
- annually report to the Governing Body on the success and development of this policy

Role of the Nominated Governor

The Nominated Governor will:

- work closely with the Headteacher and the subject leader;
- ensure this policy and other linked policies are up to date;
- ensure that everyone connected with the School is aware of this policy;
- attend training related to this policy;
- annually report to the Governing Body on the success and development of this policy

Role of Pupils

Pupils will:

Children will follow a programme of study and cross-curricular themes suitable to their stage of development in Science, which will encompass all areas of the subject in accordance with the Early Learning Goals for the Foundation Stage and programme of study in the National curriculum. They will do this by:

- Using and applying Science in practical, real-life and problem-solving situations using the appropriate scientific language.
- Developing flexible and effective methods of measuring and recording their findings both verbally and in written form.
- Developing their skills of questioning and enquiry.
- be aware of and comply with this policy;
- be encouraged to work in partnership with the school by making decisions and exercising choice in relation to their educational programme;
- listen carefully to all instructions given by the teacher;
- ask for further help if they do not understand;
- participate fully in all lessons;
- participate in discussions concerning progress and attainment;
- treat others, their work and equipment with respect;
- support the School's expectations of good behaviour to ensure the smooth running of the school;
- liaise with the School Council;
- take part in questionnaires and surveys

Cheadle Primary School

Role of the School Council

The School Council will be involved in:

- organising surveys to gauge the thoughts of all pupils;
- helping in reviewing the effectiveness of this policy with the Governing Body

Role of Parents

Parents will:

- be aware of and comply with this policy;
- be encouraged to take an active role in the life of the School by attending:
 - parents and open evenings
 - parent-teacher consultations
 - curriculum development workshops
- be encouraged to work in School as volunteers;
- be encouraged to respond to curriculum information newsletter;
- be informed via termly newsletters of their child's topics;
- asked to provide suggestions and ideas for improving this subject;
- be asked to take part periodic surveys conducted by the School on curriculum development;
- be invited to make presentations to pupils on aspects of this subject area;
- encourage effort and achievement;
- encourage completion of homework and return it to School;
- provide the right conditions for homework to take place;
- expect their child to hand in homework on time;
- join the School in celebrating success of their child's learning;

Teaching and Learning Style

All teaching staff are responsible for the teaching of Science to their own class. Learning Support Assistants – where funding permits – will carry out learning activities, directed by the class teachers, with small groups or individuals. Classes are of mixed ability, with some overlapping age groups. The length of each lesson will match the time allocation recommended by the DfE and will be delivered either weekly or blocked lessons according to topic and Key Stage.

We use a variety of teaching and learning styles in order to develop children's knowledge, skills and understanding.

Cheadle Primary School

Curriculum Planning and Organisation

Teachers collaborate on the planning of the subject to ensure parity in provision and to share expertise. Curriculum planning is managed in three phases namely:

Long Term Planning

- details what is to be taught over the year
- provides teaching guidelines and overall objectives for each year group for the whole year

Medium Term Planning

- organises the subject into termly or half-termly sections
- is more detailed and the objectives are more specific in nature
- is developed by the teachers, who respond to the needs of their pupils
- ensures a balanced distribution of work is undertaken across each term

Short Term Planning

- details the subject curriculum over the week
- plans lessons in detail with specific class objectives
- sets individual learning goals for each pupil
 - The school will provide these scientific experiences through:
 - ☐☐The Foundation Stage curriculum and the early learning goal – knowledge and understanding of the world;
 -
 - ☐☐KS1: A scheme of work developed from the National Curriculum, in combination with Staffordshire Planning Scheme that encourages explorative learning focussing on SC1.
 -
 - ☐☐KS2: A scheme of work developed from National Curriculum reference to the Long Term Planning which is ‘Themed’ and cross-curricular, alongside the Staffordshire Planning Scheme that encourages explorative learning focussing on SC1.
 -
 - ☐☐Make Science an integral part of the school experience.

Links with ICT

The use of information and communication technology will promote, enhance and support the teaching of this subject area.

Inclusion

Cheadle Primary School

We believe that we are an educationally inclusive School as we are concerned about the teaching and learning, achievements, attitudes and well-being of all our pupils. We aim to provide places for all pupils who express a preference to join this School.

We work hard to offer equality of opportunity and diversity to all groups of pupils within School such as children:

- from both sexes;
- who have Special Educational Needs;
- who are looked after;
- from minority faiths, ethnicities, travelers, asylum seekers, refugees;
- who are gifted and talented;
- who are at risk of disaffection;
- who are young carers;
- who are sick;
- who have behavioral, emotional and social needs;
- from families who are under stress

We believe we have a duty to ensure that all children have equal rights to the opportunities offered by education and that all children will be encouraged to fulfil their potential in their academic, physical and creative achievements.

We want to give all children the right to access high quality educational experiences, to take part in a broad and balanced curriculum and to be part of the social life of the School.

We recognise that within the School we have more able, very able and talented children. We believe that:

- more able children demonstrate a higher ability than average for the class and often require differentiated tasks and opportunities to learn through challenges;
- very able children are those who have the ability to do well in more than one subject;
- talented children demonstrate an innate talent or skill in creative, cultural or sporting fields

We have an even greater obligation to plan and deliver well-structured lessons with appropriate assessment plus ambitious targets for pupils who have low levels of prior attainment or come from disadvantaged backgrounds.

Also, we have a duty to cater for pupils whose first language is not English by planning teaching opportunities to help them develop their English and to gain full access to the National Curriculum.

Differentiation

Cheadle Primary School

Differentiation is best defined as 'the process by which differences between learners are accommodated so that all students in a group have the best possible chance of learning.' (Geoff Petty)

The main purpose of differentiation is to challenge and raise standards of learning by ensuring that curriculum objectives are accessible to all our children despite their backgrounds or abilities. We see differentiation as a form of integration and not exclusion.

Differentiation must reflect the learning objective and can be achieved in a variety of ways either by task, by support or by outcome and should be chosen by fitness for purpose.

We want all children to achieve success, therefore we will ensure they are given differentiated tasks that are matched to their level of attainment so that they can demonstrate successfully what they know, understand and can do.

The main feature of effective differentiation is good planning resulting in effective teaching and learning with children making good progress. Also we expect to see in all classes interested well motivated children responding to challenges, children working productively on task and being aware of their own progression.

Special Educational Needs

We want pupils with identified special educational needs to have full access to all subjects of the School curriculum with teachers planning lessons that have no barriers to pupils achieving and with appropriate targets relating to the subject.

Assessment for Learning

Teachers will:

- carry out continuous assessment;
- use short-term assessments matched to the teaching objectives to adjust their planning;
- make comments in pupil's books related to the teaching objective;
- carry out medium-term assessments to measure progress against key objectives to adjust planning;
- carry out long-term assessment to assess progress against school and national targets;
- administer national tests and assessment in Y2 and Y4;
- use long-term assessments to help them plan for the next academic year;
- inform parents and carers of their child's progress and targets
- The Foundation Stage (FS) class teacher will record progress with the Early Learning Goal, 'Knowledge and Understanding of the World', using Foundation Stage Target Tracker's (FSTT). Each half term, for years 1-4, a level is recorded on a Tracker, which allows the subject leader to track age

Cheadle Primary School

related progress in Science across the school. At the end of Key Stage 1 and 2 Teacher Assessment (TA) is reported to the Local Authority (LA). The QCA guidance on standards, NC level descriptors provide exemplifications of standards in Science and this ensures consistency in TA.

Monitoring & Review of the Subject

Monitoring of standards of children's work and the quality of teaching is the responsibility of the subject coordinator supported by the Headteacher and the SLT.

Standards will be monitored by:

- looking at pupils work
- subject observations
- pupil discussions
- audit of subjects
- scrutiny of planning
- general curriculum discussions

Contribution of the Subject to other Areas of the Curriculum

Wherever possible and appropriate, Science should be used in other areas of the curriculum and in particular the outdoor learning environment. It should also include *Citizenship, and Spiritual, moral, social and cultural development*.

Resources

The School has a full range of resources to support the teaching of this subject throughout all year groups. Resources are upgraded and replenished when the need arises. An annual stock take and audit is undertaken by the subject coordinator in the summer term in preparation for the next academic year.

The Science leader is responsible for completing an audit of available resources. There is a central store of resources, based in the resources room. The school's outdoor learning policy, local environment. The garden and grassed areas provide excellent opportunities for the children to explore Science in a more concrete and practical way.

Raising Awareness of this Policy

We will raise awareness of this policy via:

- the School website
- meetings with parents such as introductory, transition, parent-teacher consultations and periodic curriculum workshops
- School events
- meetings with school personnel

Cheadle Primary School

- communications with home such as newsletters
- reports such as reports to the Governing Body
- information displays

Training

All School personnel:

- have equal chances of training, career development and promotion
- receive training on this policy on induction which specifically covers:
 - the new National Curriculum
 - teaching and learning
 - planning
 - assessment
 - key skills
- receive periodic training so that they are kept up to date with new information
- receive equal opportunities training on induction
- Children are made aware of the need for personal safety and the safety of others during Science investigations. Each unit gives guidance on health and safety and is consistent with the advice given in the "Be Safe!" Guide.

Equality Impact Assessment

Under the Equality Act 2010 we have a duty not to discriminate against people on the basis of their age, disability, gender, gender identity, pregnancy or maternity, race, religion or belief and sexual orientation.

This policy has been equality impact assessed and we believe that it is in line with the Equality Act 2010 as it is fair, it does not prioritise or disadvantage any pupil and it helps to promote equality at this School. (See Initial Equality Impact Assessment)

Monitoring the Effectiveness of the Policy

The practical application of this policy will be reviewed annually or when the need arises by the subject leader, the Headteacher and the nominated governor.

A statement of the policy's effectiveness and the necessary recommendations for improvement will be presented to the Governing Body for further discussion and endorsement. (See Policy Evaluation)

The head teacher has overall responsibility for monitoring and evaluating the curriculum, in consultation with the subject leader and the teaching staff.

Cheadle Primary School

Science is included in the school's monitoring cycle. This process involves, lesson observations, pupil interviews, work scrutiny, environment and LTP, MTP and STP. All monitoring is fed back, as soon as possible, to class teachers and the head teacher. Areas for improvement / development, these can be individual or whole school, are identified and the class teacher is responsible for 'actioning' by the agreed deadline.

Linked Policies

▪ Curriculum	▪ Teaching and Learning
▪ Differentiation	▪ Assessment
▪ Monitoring and Evaluation	▪ Self-Evaluation & School Improvement
▪ Special Educational Needs	▪ Gifted and Talented
▪ English as an Additional Language (EAL)	▪ Disability Non Discrimination