Placing children's rights at the heart of all we undertake.
respect integrity humility equality care towards all

Dosthill Primary Academy

Science Policy

Reviewed by: Catherine Blewitt **Date: June 2019**
Approved by: Governing Body **Date: 25th June 2019**
Next review due: June 2020

Aims and Values

Our core moral purpose is encapsulated in the vision statement for the school: Striving for excellence in an inspirational climate where learning is nurtured and secured. Our core values permeate our every breath at Dosthill Primary Academy where everyone is selflessly committed to:

◦ Promising Academic Achievement.

◦ Crafting Character Skills for Life.

◦ Ensuring Excellence for All.

◦ Inspiring Each other/Achieving Together.

Our aim is that everyone in our Dosthill Family grows in confidence to achieve their ambitions and dreams with courage and kindness. We promise to provide a caring ethos where all children have the confidence to explore, dream and discover so that every valuable second of the day is a learning adventure.

Rights Respecting School

In 2011 Dosthill School registered to obtain the Rights Respecting Schools Award (RRSA). This award recognises achievement in putting the United Nations Convention on the Rights of the Child (CRC) at the heart of a school's planning, policies, practice and ethos. As a rights-respecting school we not only teach about children's rights but also model rights and respect in all of the relationships: between teachers/adults and learners, between adults and between learners.

This Policy relates most directly to the following article from the 'UN Convention on the Rights of the Child':

Article 3: *The best interests of the child must be the top priority in all actions concerning children.*

Article 28: *Every child has the right to an education.*

Article 29: *Education must develop every child's personality, talents and abilities to the full.*

Public Sector Equality Duty

We have carefully considered and analysed the impact of this policy on equality and the possible implications for pupils with protected characteristics, as part of our commitment to meet the Public Sector Equality Duty requirement to have due regard to the need to eliminate discrimination, advance equality of opportunity and foster good relations.

Rationale/principles

The National curriculum for Science states 'A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics.'

We believe that Science at Dosthill Primary Academy gives our learners an opportunity to do this in a fun and exciting environment. Learners are challenged and are taught methods of enquiry and investigation to stimulate creative thoughts. Learners are encouraged to ask questions to challenge themselves further and begin to understand and appreciate the way Science will affect their future on a personal, national and global level. It aims to stimulate a learner's curiosity in finding out how things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Learners should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Approaches to Learning & Teaching

In line with Teaching and Learning Policy at Dosthill Primary School teachers consistently**:**

- Encourage children to enjoy being challenged, to take risks and not be afraid of making mistakes.
- Use children's specific interests, prior knowledge assessments, questions to guide learning and teaching.
- Use a range of visual, auditory and kinaesthetic styles in order to meet but also develop children's less preferred learning style.
- Provide children with a range of learning outcomes (where appropriate offering a choice), such as debates, role-plays and oral presentations; investigation and problem solving; research and self-discovery, designing and making things, not always written outcomes.
- Introduce learning in the most effective way for the objective.
- Adopt a flexible, imaginative, creative and inspiring teaching style.
- Where appropriate provide all learners with specific challenge/extension tasks and encourage/motivate children to reach their challenge in order to motivate and extend children's learning potential.
- Use time targets and minimum expectations so that all learners are productive.
- Use oral and written feedback as well as peer and self-assessment to motivate, guide and challenge all learners as part of our commitment to assessment for learning.
- Plan for and encourage children to extend their learning at home, valuing and sharing children's contributions and home learning; sharing these with their peers.
- Use other adults, including visitors from the local and wider community, within the classroom effectively sharing their experience and expertise.
- Use focused displays to motivate, support and enhance learning in classrooms and around school, checking with children that displays are accessible for all levels of ability.
- Use Building Learning Power to support pupil understanding of science learning objectives, and their role as global citizens.

- Use a multi-sensory approach to learning *(E.g.: Film clips, music, sounds, ICT, the environment, artefacts, and interesting items).*
- Identify and gather appropriate resources for the lesson, modify materials and organisation to accommodate pupils' specific needs and abilities.
- Provide and encourage children to independently use a range of resources to maximize their learning.
- Use the environment most effectively to maximise learning (inside and outside).
- Use educational visits and visitors to enhance learning.
- Provide extra-curricular opportunities for higher ability learners through a Gifted and Talented club.
- Science weeks and days are used to enhance science provision along with Trust events.

But most importantly of all, teachers at Dosthill love learning with their children.

Our aims for teaching and learning in science are to enable children to:

- ask and answer scientific questions;
- carry out scientific investigations using equipment correctly and safely;
- evaluate evidence and present conclusions clearly and accurately;
- know and understand the processes of living things;
- know and understand the physical processes of materials, electricity, light, sound and natural forces;
- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics;
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them, and;
- equip learners with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

This is in accordance with the National Curriculum programmes of study for Key Stages 1 and 2 and the Early Years Curriculum Guidance.

Planning

In line with our new curriculum, planning includes long, medium and weekly plans. We follow the 'Cornerstones' scheme and use this to support our planning for Science. We also use 'Love To Investigate' to support teaching and the planning of investigations. The school uses the Foundation Stage Guidance (Knowledge and Understanding of the World) together with the National Curriculum framework for Key Stages 1 and 2. Planning is amended on a regular basis to support the needs of learners.

Meeting the needs of all learners

At Dosthill Primary School teachers consistently:

- Differentiate and adapt their planning in order to meet the needs of all the learners in their class, regularly annotating plans to ensure that specific needs are considered. *(See Gifted and talented/SEN policy).*
- Use questioning throughout a lesson to assess and review learning in order to challenge and support to all learners. If necessary adapt a lesson to meet all learners' needs. *(E.g.: if an activity is too easy/hard adapt it for specific children there and then).*
- Use and value children's own self/peer assessments in order to assist planning and future differentiation.
- Judge the pupils' understanding with accuracy and use this to inform future learning opportunities/planning: through the use of success criteria, self and peer assessment, questioning, prior knowledge assessments as well as subject specific assessment procedures.
- Be able to identify where a pupil is, and provide necessary stimulus to ensure that pupil recognises and accepts the next stage of learning.
- Have high expectations and use of personal and social targets (linked to the Behaviour Policy) to motivate all learners to achieve to their full potential.
- Demonstrate awareness and sensitivity towards religious, racial and sexual issues and adapt planning and structure of lessons accordingly.

Assessment, Recording and Reporting

Assessment in science is on-going. We assess children's work in science by making informal judgements as we observe them during lessons and through assessment focussed activities. Throughout the year, teacher assessments are recorded on skills ladders called 'Building Blocks' which are then entered on to DCPro. Records are updated continuously throughout the year and bearings or snapshots are taken in January, April and July to re-evaluate where each child is currently attaining and to inform next steps.

In the Foundation Stage, staff carry out regular observations of the children and makes notes to inform their assessments for the Nursery Learning Record and Foundation Stage Profile.

Science is reported on to parents and carers in the end of year reports.

Roles & responsibilities

Subject Leader: Catherine Blewitt
Subject Leader – supports staff with their subject delivery and is up to date with current initiatives in order to cascade information to the staff as a whole. The Science lead liaises with other leaders across the trust to enhance practise and standards in science.

Headteacher – ensures staff are fully able to deliver the subject appropriately and that learners are receiving their entitlement.

Teachers and Teaching Support Staff - ensure appropriate delivery of the subject.

Governors - agree and review the Science Policy on a regular basis. Question the Head teacher and others to ensure that the policy is implemented and impacts positively on learning and teaching. Appoint a nominated Governor who liaises with the Science Area of Learning Leader at least on an annual basis.

Learners - take an active part in their learning responding positively; active participants in personalising and extending their own learning at school and at home.

Other adults including parents - realise that learning constantly takes place, not only within the classroom but in all environments. Value and recognise their role in shaping children's attitudes and lifelong learning experiences. Create positive relationships with all children. Recognise their impact on children's self-esteem.

Learning Environment and Resources

A collection of science equipment is kept within year groups. There is also a central store which provides additional resources for all year groups.

Monitoring and evaluation of the Policy

- **Annual review of Policy.**
- **In-depth review of Policy** for approval by Governors **three yearly**.
- **Annual review of medium term planning** by Science leader.
- **Analysis of Science 'Building Blocks' data using 'DCPro' .** Evaluative report produced.
- **Learning Walks and lesson observations** – determined by the Subject Leader in consultation with the SLT; specified in the Science Monitoring and Evaluation plan within the Science Development Plan.
- **Learner conferencing** – yearly.
- **Book look** – determined by the Subject Leader in consultation with the SLT; specified in the Science Monitoring and Evaluation plan within the Science Development Plan.

Dissemination

April 2008 new policy presented to Staff and Governors.
Reviewed annually thereafter.

Added teams for staff and governors once agreed so that staff have access to the latest version of the Policy.