Science Policy

Aim:

At Landgate School we create learning opportunities that inspire students to develop an enquiring mind about the world, while achieving their personal yet challenging targets. We enable learners to develop practical skills and an understanding of science knowledge, as well as stimulating curiosity about everyday life.

Objectives:

The National Curriculum for Science aims to ensure that all pupils:

◦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.

◦are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

We follow the requirements of the National Curriculum and deliver lessons in a way that seeks to engage and challenge learners, linking practical experience with scientific ideas. Experimentation and modelling are used to develop and evaluate explanations, encouraging critical and creative thought. The Curriculum has been devised in collaboration with a Department for Education (DfE) Science Advisor, the Science department at our Federated School – Oakfield High School and our Science department to give students the best possible learning experience.

Knowledge, Skills and Understanding:

- To develop pupils' enjoyment and interest in science and an appreciation of its contribution to all aspects of everyday life.
- To develop a knowledge and appreciation of the contribution made by famous scientists to our knowledge of the world including scientists from different cultures.
- To encourage pupils to relate their scientific studies to applications and effects within the real world.
- To develop a knowledge of the science contained within the programmes of study of the National Curriculum.
- To build on pupils' curiosity and sense of awe of the natural world.
- To develop in pupils a general sense of enquiry which encourages them to question and make suggestions.

- To encourage pupils to predict the likely outcome of their investigations and practical activities.
- To use a planned range of investigations and practical activities to give pupils a greater understanding of the concepts and knowledge of science.
- To provide pupils with a range of specific investigations and practical work which gives them a worth-while experience to develop their understanding of science.
- To develop progressively pupils' ability to plan, carry out and evaluate simple scientific investigations and to appreciate the meaning of a 'fair test'.
- To develop the ability to record results in an appropriate manner including the use of diagrams, graphs, tables and charts.
- To introduce pupils to the language and vocabulary of science
- To give pupils regular opportunities to use the scientific terms necessary to communicate ideas about science.
- To develop pupils' basic practical skills and their ability to make accurate and appropriate measurements within practical activities give pupils opportunities to use a range of simple scientific measuring instruments such as thermometers and force meters and develop their skill in being able to read them.
- To develop pupils' use of ICT in their science studies.
- To give pupils opportunities to use ICT (video, digital camera, data logger) to record their work and to store results for future retrieval throughout their science studies.
- To give pupils the chance to obtain information using the internet.

Assessment information by Key Stage:-

Key Stage 1 & 2

At Landgate, primary learners are assessed against Primary Learning Ladders which encompass The P Scales (stages 1-9) and National Curriculum Year expectations (stages 10-15).

Primary classes participate in weekly Science sessions enabling them to acquire, develop and apply their learning. Primary Science is planned and delivered by the lead class teacher.

Key Stage 3

Learners are assessed against Flight Paths which are a breakdown of P scales and National Curriculum year expectations. Learners are placed onto a pathway dependent on their science skills and knowledge; ensuring personalised learning.

Key Stage 4

Learners currently study Science via AQA Pre-entry Level accredited units through to GSCE. All include the study of Biology, Physics and Chemistry which are assessed via teacher devised assignments in the form of investigative and practical work and three externally set assessments.

Risk Assessment

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers and Teaching Assistants will check equipment regularly and report any damage, taking defective equipment out of action. A risk assessment will be carried out for all practical activities and any perceived hazards will be reported to the Head who will determine the appropriateness of the activity.

Monitoring Arrangements

The aims of our monitoring and evaluating are to ensure that:

Self-evaluation and review are based on an organised and structured programme of collecting, analysing and interpreting information about all aspects of Science. Monitoring and evaluation is undertaken to help Landgate School and College:

- promote excellent learning and teaching in Science;
- ensures first-class planning and delivery of the curriculum;
- identify the strengths and needs for professional development;
- offer an opportunity to celebrate progress and success;
- ensure that every child is making good progress and is appropriately challenged to reach their full potential;
- Identify specific areas which need to be looked at/updated to ensure progression throughout the school.

Subject Leaders will:

- Will complete departmental SES in line with each data input.
  Self-Evaluation will take place through whole school systems of scheduled link meetings with staff, SLT and Governors.
- Monitor/ moderate through work sampling, learning walks and lesson observations.
- Review/ update assessment systems based on suitability of use.
- Review/ update Long Term Planning based on suitability of use.
- Create/ update and review a Subject Development Plan
- Monitor the impact of a subject budget.
- Purchase and organise resources.
- Monitor the impact of significant developments.
- Review/ update risk assessments.
- Analyse data.

- Produce a Self-Evaluation Summary.
- Prepare, attend and participate in link meetings.
- Audit and support parents/ colleagues in their CPD.
- Keeping up to date with recent Scientific developments.

Date approved:	
Review Date:	
Signed Executive Headteacher:	