**RFSN SCIENCE Policy**

#### Rationale

Science and scientific ideas help us to understand the world around us and how it works. Pupils have a natural curiosity about the world and the phenomena they observe. It is important, then, that they start to develop, from an early age, both the skills of looking at the world scientifically and a knowledge base that will enable them to explain and explore the world they encounter. The Farm Schools Network teaches methods of enquiry and investigation to stimulate creative thought, and encourages children to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national, and global level.

As pupils progress through our science programme, they learn about a wider range of scientific ideas and consider them in greater depth, laying the foundations for further study. They explore how technological advances relate to the scientific ideas underpinning them. They consider the power and limitations of science in addressing industrial, ethical and environmental issues, and how different groups have different views about the role of science. When they carry out investigations they use a range of approaches and select appropriate reference sources, working on their own and with others. They do more quantitative work and evaluate critically the evidence collected and conclusions drawn. They communicate their ideas clearly and precisely in a variety of ways. They see how scientists work together to develop new ideas, how new theories may, at first, give rise to controversy and how social and cultural contexts may affect the extent to which theories are accepted.

#### Aims

The school aims to provide a broad science curriculum suited to individual needs. In particular, the science curriculum aims to help our pupils:

* Develop positive responses to a broad range of science activities and experiences in a wide variety of settings including the multi-sensory environment
* Provide learning opportunities for all children that are at an appropriate level and

contribute to IEP targets

* Develop capability to use science equipment safely and with increasing independence;
* Use science to experience, access and apply a wide range of ideas and information in a variety of different contexts
* Use science to develop skills across the curriculum with increased confidence,

understanding and independence

* Plan and carry out scientific investigations, using equipment, including computers,

correctly

* Evaluate evidence and present conclusions clearly and accurately With their learning in mathematics, literacy, ICT and PSHE
* Make connections between the knowledge they already have, and new experiences and knowledge

##### Curriculum Organisation

The Farm Schools Network provides students with a broad, balanced and ability appropriate science curriculum in keeping with our distinctive child-centred practice.

All Pupils have a minimum of two timetabled (45 minute) sessions per week, and follow a science syllabus derived from the National Curriculum for England and Wales (key stages 14). An emphasis placed on developing scientific capability relative to individual ability.

Science learning is further augmented through regular practical sessions where appropriate.

##### Programme of Study

The Farm Schools Network programme of study for pupils with emotional, behavioural and learning difficulties, identifies four key areas where students will make progress across all Key Stages. Life Processes and Living Things, Materials and their Properties and Physical Processes are taught discretely, whilst Scientific Enquiry runs throughout each of these areas. Key stage 3 pupils follow the 'Exploring Science' scheme of work. Two programmes are available for pupils in key stage 4: OCR Gateway Science GCSE and OCR Entry Level Science. Pupils study the programme that is best matched to their ability.

##### Assessment

Evaluation and assessment of pupils takes place in a variety of ways to ensure they are making progress in their knowledge and understanding. Progression is measured in relation to the increasing complexity of scientific language used, to a widening knowledge base, in the increased understanding of generally accepted models, in more systematic investigative work, in increasingly more complex descriptions of understanding and findings. Individual pupil progress is monitored by pupils and staff, through 'Assessment for Learning', careful observation, and summative assessment. Assessment and record keeping in National Curriculum levels and PIVATs (Performance Indicators for Value Added

Target Setting) are undertaken (annually), and each unit of work is assessed and filed.

Student's work and assessment record is passed on to any school to which the student moves.

**Monitoring and Review**

##### Subject leader

The science teacher at the satellite farm schools runs the science program under the guidance of the subject leader at the Roaches School and is jointly responsible for improving the standards of teaching and learning in science through monitoring and evaluating:

* Pupil progress
* The quality of the learning environment
* The deployment and provision of support staff
* Policy development
* Purchasing and organising resources
* Keeping up to date with recent science teaching and learning developments

#### Equal opportunities

All pupils are provided with equal access to the science curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or background.

#### Inclusion

We aim to provide for all pupils so that they achieve as highly as they can in science according to their individual abilities. We identify pupils that are under-achieving and take steps to improve their attainment. Higher ability pupils are identified and suitable learning challenges provided.

#### Health and Safety

Safety information is provided on student activity sheets and teacher and technician notes. We attempt to ensure that:

* All recognised hazards have been identified
* Appropriate strategies to reduce the risk to acceptable levels are suggested
* Where possible, the proposed procedures are in accordance with commonly adopted General Risk Assessments.
* Eye protection to BS EN166 is worn by both students and teachers/lecturers whenever risk assessment requires it
* Other protective control equipment (e.g. safety screens) is used when risk assessment requires it
* Long hair is tied back, students do not wear 'wet-look' hair preparations, and ties, scarves and cardigans are not allowed to hang freely
* Pupils are taught how to heat chemicals safely
* Pupils are taught how to smell gases safely
* Pupils are taught how to handle micro-organisms safely
* Containers of chemicals are clearly labelled with an appropriate name and any hazards
* All chemicals are handled according to good laboratory practice
* Eating, drinking and chewing are not permitted during practical work
* Electrical and other equipment is well maintained and subject to regular checks.
* Students at particular risk (for example asthmatics, those with allergies and those with known disabilities or behavioural difficulties) are identified and catered for
* Science staff have received appropriate training in the activities, including hazard identification and Risk Assessment.

This policy was agreed and adopted in December 2013. Latest review period March 2020

As part of the school's development cycle

Prior to this date should there be any changes to statutory requirements