

Science

Policy

September 2016

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1. Policy Overview

- To establish an educational entitlement for all students.
- To set an expected standard that is to be achieved.
- To build upon what students have learnt previously and promote continuity and coherence across the school.
- To state the school's approach to this curriculum subject.

2. Importance of science in the curriculum

At SSiS, we adopt a hands-on approach to Science that fosters student's critical and creative thinking skills. Teaching Science in English at SSiS gives students the opportunity to be immersed in the English language in a fun and practical environment, and offers a solid foundation for those students who wish to follow on to UWCSEA.

3. Aims of science at SSiS

At SSiS, we aim to:

- Stimulate and excite pupils' curiosity about changes and events in the world.
- Satisfy this curiosity with knowledge.
- Engage students as learners by linking ideas with practical experience.
- Help students to learn to question and discuss scientific issues that may affect their own lives.
- Develop sorting, classifying, planning, predicting, questioning, inferring, concluding and evaluating skills through investigations.
- Help students make informed decisions based on evidence and their own experiences, and to be able to apply scientific knowledge to new situations.
- Show students how major scientific ideas contribute to technological change and how this impacts on improving the quality of our everyday lives.
- Establish a curriculum which provides students with a scientific experience in-line with [UK Science Programmes of Study](#).

3.1 Working Scientifically in Primary 1 and 2

Students are taught to:

- Ask questions and find different ways to find their own answer.
- Recognise that there may be alternative ways to answer questions.
- Make observations using simple scientific equipment to help answer questions and to link simple scientific ideas.
- Complete simple scientific investigations and experiments.
- Identify and classify scientific information.
- Use their ideas and observations to suggest answers to questions.
- Collect and record information to help answer questions including using reference materials such as books and the internet.
- Share and communicate their scientific knowledge by using scientific language, drawings, charts and tables.

3.2 Working Scientifically in Primary 3 and 4

Students are taught to:

- Ask relevant questions and use various scientific methods of enquiry to answer them.
- Set up simple scientific fair tests, experiments, investigations and enquiries.
- Make simple and accurate observations, using standard units of measurements including temperature and distance.
- Make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.
- Identify and classify scientific information.
- Use their ideas and observations to suggest answers to questions.
- Collect, record and present information to help answer questions including using reference materials such as books and the internet.
- Share and communicate their scientific knowledge by using scientific language, drawings, charts and tables.
- Report on findings from enquiries through: spoken and written explanations; displays; presentations of results and conclusions.
- Use results from scientific enquiries to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

3.3 Working Scientifically in Primary 5 and 6

Students are taught to:

- Ask relevant questions and use various scientific methods of enquiry to answer them.
- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Set up simple scientific fair tests, experiments, investigations and enquiries.
- Make simple and accurate observations using a range of scientific equipment and standard units of measurements including temperature and distance.
- Identify and classify scientific information.
- Use their ideas and observations to suggest answers to questions.
- Collect and record information to help answer questions including using reference materials such as books and the internet.
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- Report and present findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.
- Identify scientific evidence that has been used to support or refute ideas or arguments.

4. Strategy for implementation

4.1 Entitlement and curriculum provision

Students undertake some science activity every week.

P1 and 2 = 1 lessons per week

P3 and 4 = 2 lessons per week

P5 and 6 = 3 lessons per week

The programmes of study are covered in units of work using the school's agreed scheme of work based upon the [British National Curriculum's framework](#).

4.2 Science Curriculum

See file [Science Curriculum](#)

4.3 Science Resources

Our Science program of study is based upon interactive learning experiences through the UK Curriculum. Unit based workbook's are devised by the teachers in line with the UK Curriculum.

5. Assessment

P1 - P2

Summative assessment is not required in P1 and P2. However, ongoing formative assessment is carried out throughout the year by the subject teacher to reflect the learning needs of each student. The subject teacher informs the class teacher about each student's ongoing progress.

P3

Summative assessment of scientific skills commences in P3. These skills are essential for each student's learning progression in Science. Assessment reflects the activities conducted in class. Assessment of scientific knowledge is not required at this stage. Each semester, the students will receive one mark for a short portfolio work including a presentation and a second mark for a written summary at the end of a unit of work.

P4

Summative and formative assessments of scientific knowledge and scientific skills are carried out. Assessment includes one research project per semester as well as unit tests. The research projects consist of a short portfolio work and presentation. The research project makes up one of the Science marks with the remaining marks based upon unit tests at the end of each unit to demonstrate scientific knowledge.

P5

Summative assessments, formative assessments and research projects are conducted in P5. The research projects consist of portfolio work and oral presentations, and are completed at least once per semester. Unit tests are conducted to demonstrate scientific knowledge. Formative assessments are conducted to show practical application of scientific knowledge.

P6

Assessment in P6 is similar P5, however, involves the completion of additional research projects. Research projects consist of portfolio work, presentations and practical/ hands-on demonstrations of skills learned in class. There will be no less than two research projects per semester. Unit tests will be conducted to demonstrate scientific knowledge and will provide the remainder of the assessment marks.