Gulf British Academy

Science Policy

Primary

Introduction

This policy outlines the guiding principles by which Gulf British Academy will implement Science based on the National Curriculum (2014) for England and Wales.

Science is a body of knowledge built up through experimental testing of ideas. Science is also methodology - a practical way of finding reliable answers to questions we may ask about the world around us.

Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills.

SECTION 1: Principles

Aims and purposes

- Preparing our children for life in an increasingly scientific and technological world.
- Fostering concern about, and active care for, our environment.
- Helping our children acquire a growing understanding of scientific ideas.
- Helping develop and extend our children's scientific concept of their world.
- Developing our children's understanding of the international and collaborative nature of science.
- Encouraging the development of positive attitudes to science.

- Building on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and responsibility.
- Building our children's self-confidence to enable them to work independently.
- Developing our children's social skills to work cooperatively with others.
- Providing our children with an enjoyable experience of science, so that they will develop a deep and lasting interest and may be motivated to study science further.
- Giving our children an understanding of scientific processes.
- Helping our children to acquire practical scientific skills.
- Developing the skills of investigation - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Developing the use of scientific language, recording and techniques.
- Developing the use of ICT in investigating and recording.
- Enabling our children to become effective communicators of scientific ideas, facts and data.

Teaching and learning

All teaching and learning must comply with the school's Teaching and Learning Policies.

Science is a core subject of the National Curriculum for England, Wales and Northern Ireland. It has four attainment targets. These are:

- Sc1 Scientific enquiry;
- Sc2 Life and living processes;
- Sc3 Materials and their properties;
- Sc4 Physical processes.

We take a variety of approaches to teaching, learning and attaining the above, including:

- Teaching Science in ways that are imaginative, purposeful, well managed and enjoyable.
- Giving clear and accurate teacher explanations and offering skillful questioning.
- Making links between science and other subjects.
- Giving opportunities for pupils to reflect on their own learning.

Materials used in Science may include, but is not limited to: teacher-prepared; the use of outside speakers with relevant experience; the use of audio-visual material, the Internet and interactive whiteboard resources; educational visits and the use of published schemes. The approach may need to be adapted to meet children's needs.

Equal opportunities

We believe that a broad and balanced Science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability.

All teaching and learning must comply with the school's Equality and Equal Opportunities Policy. All pupils should enjoy equal access to the Science curriculum.

Teachers must provide for children emerging or developing towards the expected standard. Planning must take into consideration pupils with special educational needs. Guidance on this is provided in the Equal Opportunities Policy.

Teachers must seek further advice on teaching methods and resources from the School Counsellor or Key Stage Coordinator whenever necessary. The more able pupils should be given the opportunity to extend their work.

Teachers will endeavour to include activities that will be of interest to both boys and girls in each topic. Any displays and references to Science should show positive role models of gender, race, ethnicity and disabilities.

SECTION 2: Practice

Planning

Science at GBA follows Collins International Primary Science.

Planning for science is a process that all teachers are involved in to ensure that the school gives full coverage of the National Curriculum. Science teaching is about excellence and enjoyment. We adapt and extend the curriculum to match the unique circumstances of our school.

- At Key Stage 1, Science is taught for 2 lessons per week.
- At Key Stage 2, Science is taught for 3 lessons per week.
- These lessons cover a mix of both practical and theory work.

Teachers are expected to adapt and modify the scheme of work plans to suit their children's interests, current events, their own teaching style, the use of any support staff and the resources available. We ensure to:

- Incorporate ICT widely in Science. Where possible we use ICT for enquiry work, including microscopes, digital cameras, video capture of images and activities, and data logging.
- Use the school's GSuite / G-Drive implementation to share science resources.
- Use other resources such as selected videos and wallchart resources; short video sequences. etc.
- Encourage children to ask and answer their own questions.
- Use homework to support school and class activities. This relates to the school's overall homework schedule.
- Use cross-curricular links to Science through literacy and maths where appropriate.
- Develop Science informally through science clubs, school visits, parent meetings and other out-of-school activities.

Assessment, recording and reporting

All assessment should comply fully with the school's Marking and Assessment Policies.

We use Assessment For Learning (AFL) to inform and develop our teaching across five main processes:

1. Questioning enables a pupil, with the help of their teacher, to find out what level they are at.
2. The teacher provides feedback to each pupil about how to improve their learning.
3. Pupils understand what successful work looks like for each task they are doing.
4. Pupils become more independent in their learning, taking part in peer assessment and self-assessment.
5. Summative assessments (e.g. tests or portfolio/coursework submission) are also used formatively to help them improve.

Science topics commonly begin with a discussion of what children already know. Then:

- Children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve.
- Activities during, and at the end of each topic record achievement and celebrate success.
- We mark work positively, making it clear verbally through pupil conferencing, or on paper, where the work is good, and how it could be further improved.
- Children's work is compared with model answers to determine its level.
- Once a term, we moderate work together to ensure that our levelling is consistent.
- Assessment records are reviewed annually.

The school uses scheme end-of-unit tests to assess learning and point out areas where remedial work is needed. Equally important is the continuous assessment of children's work, much of which is informal. This assessment is used to inform teaching throughout the school.

Reports to parents are written each term, describing each child's attitude to science, his/her progress in scientific enquiry and understanding of the content of Science.

Resources

Science resources are located either centrally in the resources room or stored in topic boxes within year groups, under the administration of the class teachers. Resources are reviewed annually.

Health and safety

In their planning of activities, teachers will anticipate likely safety issues. They will also explain the reasons for safety measures and discuss any implications with the children.

Children will also be encouraged to consider safety for themselves, others and the environment and the resources they use, especially when undertaking Science experiments as well as during trips and activities outside of school.

Reviewed:	September 2019
To be reviewed:	Annually by September
Responsibility:	KS1 / KS2 Coordinators