



# **REGENT PRIMARY SCHOOL**

## **Science Policy**

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Reviewed by Ms Tishi: August 2022  
Previous Review: August 2020

Approved by the Board:

## **What is Science?**

Science is finding out about ourselves and the world around us. It is based on exploration, investigation and making sense of findings so that they relate to the familiar world. A Science curriculum should be designed to stimulate interest, foster enthusiasm and enquiry, and nurture delight in the discoveries thereof. It should encourage both the development of knowledge and the understanding of the physical and living environment as well as the teaching of scientific skills, processes and attitudes.

## **Aims**

In teaching Science we aim to:

- provide a positive learning environment in order to inspire interest;
- foster scientific attitudes such as curiosity, open-mindedness, perseverance and cooperation;
- give children experience in the scientific processes of questioning, planning, predicting, testing, observing, measuring, recording, analysing and interpreting results;
- provide opportunities to manipulate tools, equipment and materials safely;
- improve children's knowledge and understanding of scientific concepts;
- encourage children to use thinking skills and problem-solving strategies.

## **Strategies for Teaching Science**

Activities in Science are planned within a framework of four to five half termly units of study per year, based on the New National Curriculum for England and Wales.

Lessons include opportunities for:

- practical investigations to involve the use of problem-solving strategies;
- whole-class discussion of ideas;
- paired or group discussions;
- instruction/explanation and demonstrations by the teacher to the whole class, groups and individuals;
- experience of using tools, materials and different techniques.

## **Continuity and Progression**

Continuity and progression are ensured by following a detailed scheme of work which is at present the New National Curriculum for England and Wales. Children are given opportunities to revisit concepts, extend experiences and increase their levels of understanding.

## **Assessment and Recording**

Children are assessed at the end of Key Stages One and Two using the GL Assessment's *Progress Test in Science (PTS)*. These are marked online. End of unit tests are carried out by teachers and throughout each course of study, teachers use children's work to make formative assessments.

## **Special Educational Needs**

Children with special needs are provided for by:

- differentiation within the lesson by input, task, resource and /or outcome;
- assistance from a member of the support staff;
- being given extension tasks involving further research, investigation and discussion;

## **Reporting to Parents**

Parents receive a written report of their child's progress in Science in December and July of each year. In addition to this, discussions take place at parent's evenings, which are held each term, and any possible concerns can be discussed informally with class teachers throughout the year.

## **Resources**

Resources are chosen to give the best effect to the planned scheme of work and staff endeavour to ensure that the best possible use is made of these. Resources include:

- voluntary contributors, including parents;
- Science laboratory;
- the school building;
- the school grounds;
- additional facilities such as visits to appropriate establishments or by outside agencies etc.;
- audio-visual aids;
- computers;
- printed materials;
- equipment;

## **Use of Computing**

We recognise that information technology has an increasingly important role in Science education. Children are given opportunities to:

- make use of computer programmes to record, store, analyse and communicate information in the form of tables, graphs, text, pictures etc.;
- make use of multi-media packages to research and develop lines of enquiry;
- use the internet to research information;
- use audio-visual aids to record and communicate information;
- use computer programmes to revise/consolidate their classwork;
- use resources such as data logging equipment, computer microscope wherever possible to enhance the topic being studied.

## **Cross-Curricular Links**

Opportunities for linking Science to other subject areas are looked for when formulating termly plans. Consideration is given to the connection between science and the other core subjects of English and Maths, as well as other areas such as Geography.

## **P.S.H.E.**

Science provides many opportunities for the integration of PSHE into the curriculum. We aim to identify these when planning so that children have the chance to develop skills and knowledge which help maintain physical health and enable them to take a responsible part in society.

## **Safety**

No potentially harmful substances are used. Teachers ensure that children work in a safe, responsible way at all times. Children are taught the need and practice of handling equipment and other resources safely.

## **Science Learning at the Early Years Stage**

The Early Years is comprised of all children in our Playgroup, Nursery and Reception classes. At the Regent School, children are provided with a curriculum that meets the Early Years Learning Goals for Understanding the World. Children experience a variety of activities through firsthand experience. They can explore and discover the world via their senses, as well as through investigations, experiments, listening, watching, social interaction and questioning. During the day, children are given the opportunity to gain confidence and independence through a range of planned activities both in and out of the classrooms.

In the Early Years, teaching and learning of Understanding the World are interesting and motivating for all the children. It is taught through a daily plan and Continuous Provision. This allows the teachers to work with whole classes, groups and individual pupils. In Early Years,

Understanding the World is provided for, daily. Often, our circle time topics are based on it. Investigations and experiments are conducted during the topic hour.

Each lesson starts with an oral/mental starter which lasts for 5 minutes. Investigative activities are provided within the class and outdoors for 30 minutes. This is followed by a plenary session of 5 minutes. This affords the children the opportunity to consolidate on concepts being taught. Some learning opportunities last more than one session.

However, in all classes, we recognise the fact that children learn in different ways and at different paces and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. This we achieve through differentiated tasks and group work. The adults in class are available to provide support to some children and ensure that the daily lesson plan is followed through. The adults in class encourage discussions of scientific ideas by modelling and intervening sensibly in their play through high order questioning. In the Early Years, Understanding the World is learned through role play, demonstrations, excursions, stories, songs, games, puzzles and imaginative play, building on what children know, understand and are able to do.

- **Planning for Understanding the World in the Early Years**

When teachers are planning in the Early Years, they take into consideration the different ways that children learn and reflect this in their practice. Curriculum planning in Understanding the World is carried out in three phases- Long Term, Medium Term and Short Term.

**Long Term plan (LTP)** - The Early Years Foundation Stage Document and the New National Curriculum for England and Wales (Primary) give a detailed outline of what to teach in Understanding the World.

**Medium Term Plan (MTP)** - This is adapted from the Long-Term Plan to match the topics being taught. This ensures an appropriate balance and distribution of work across the term.

**Short Term Plan (STP)** - The class teacher completes the weekly plan for the teaching of Understanding the World. The weekly plan lists the specific learning objectives for each lesson and gives details of how lessons are to be taught. However, in planning the weekly activities in all Early Years classes, careful consideration is given to the ability of the children. The framework is adapted to suit the needs of the children.

- **Assessment and Reporting in the Early Years**

In the Early Years, we assess children's work from three aspects- Short term, Medium Term and Long Term. Short term helps us to adjust our daily plan. This form of assessment is closely matched to the teaching objectives. Medium term assessment (formative) measures progress against key objectives and helps us plan the next unit of work. This we do by evaluating children's weekly performance and highlighting children's performance on Tapestry.

Long term assessment (summative) is done at the end of terms 1 and 3 in the form of report writing and Portfolio Presentations in Term 2. This is used to measure progress against the medium-term targets. Targets are then set for the following term and a summary of each child's progress in Understanding the World is made and discussed with parents during the 'Parents Conference'. This information is filed and passed on to the next class at the end of the school year. Tapestry is highlighted to show the areas of achievement in Understanding the World. All data that has been generated from Online Assessments are to be passed on to the next class at the end of the school year.

At the end of the Reception year, each child's level of development is assessed against the Early Years Learning Goals. The Early Years Foundation Stage Profile indicates whether children are meeting expected levels of development, if they are exceeding the expected levels or not. All teachers in a child's previous class meet with the child's next class teacher to discuss the child's achievements in Understanding the World. This helps the new teacher to plan activities for each child in the new class.

### **Role of the Science Subject Coordinator**

The Curriculum coordinator should:

- be responsible for updating the policy for Science in consultation with other members of staff and the Headmaster;
- have an overall view of planning and practice throughout the school to ensure progression and continuity;
- monitor standards in progression and learning by observing teaching where possible and by collecting samples of children's work;
- be available to help and advise other members of staff including the induction of new staff and supply teachers;
- keep up to date on recent developments in Science;
- be responsible for auditing and purchasing science resources within the agreed financial limit after consultation with other staff members regarding needs.

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