PARKSIDE MIDDLE SCHOOL
SCIENCE POLICY

Dated: September 2022

Review date: September 2024

Headteacher……

Chair of Governors……

Parkside Middle School
Science Policy

Introduction

This handbook has been written by the Head of Department. It should be given to all existing members of the Science Department and all new science teachers on arrival.

Staff

Head of Science	Miss E. Doherty
KS2 Science Teacher	Mrs V. Dallaway
KS2 Science Teacher	Miss C. Wallis
KS2 Science Teacher	Mrs K. Wright
KS2 Science Teacher	Miss H. Pickett
KS2 Science Teacher	Mrs H. Devereux
KS2 Science Teacher	Miss R. Sumner
KS2/3 Science Teacher	Miss B. Padley
KS2/3 Science Teacher	Mrs K. Williams-Sharpe
KS3 Science Teacher	Miss A. Field
KS3 Science Teacher	Mr E. Spalding

Science Department Aims

The Science Department aims to:

- Provide an excellent, enjoyable, broad and balanced science education for all pupils.
- Encourage pupils to become independent learners at a level suitable for their ability.
- Raise standards of independent writing.
- Give clear guidance to all pupils on how to reach their target levels.
- Develop knowledge, skills and experience of scientific methods in order to allow pupils to evaluate scientific issues in the real world.
- Allow pupils to explore the ethical, economic and environmental implications of scientific discovery (KS3).

National Curriculum Aims

Science is a core subject in the National Curriculum (for England, Wales and Northern Ireland).

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.

It is vitally important that they develop secure understanding of each key block of knowledge and concepts. Pupils should be able to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely. They should build up an extended specialist vocabulary. They should also apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. The national curriculum for science reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Overview of science in KS2 science

Scheme of Work
The following things are included in the Science department's curriculum:

- All statutory the national curriculum points
- Assessment for learning strategies
- Science investigations within each topic
- Routes through the unit with suggested differentiated learning objectives
- Differentiated worksheets and supports that can be further adapted to meet the needs of individual learners in science
- Suggested starter, main and plenary activities
- Background information for non-specialists
- An overview of each unit and information with how it builds on KS1
- Skills development opportunities including investigative skills, literacy skills, numeracy skills, ICT skills and thinking skills
- Extension activities
- Misconceptions

Additional Resources
The following resources are made available by the subject leader to all members of the KS2 science team:

- Milestones and Key Performance Indicators
- Various computer programmes (found on the school system) including test base
- Individual Lesson plans for non-specialist teachers to provide high quality learning
- Comprehensive Medium Term Plans which can be used to inform planning
- Progression maps to indicate prior and future learning
- Tracking grids to show summative assessment of pupils

Assessment in Year 5 and 6
Summative
Pupils complete a baseline test in September to show prior attainment. Activities should be split into at least three different abilities within a class and differentiation should be provided by the Class Teacher in all lessons. It is the responsibility of the class teacher to further differentiate for pupils who need it with support from the subject leader where appropriate.
Pupils also complete an end of unit test after each topic.

Formative
Formative assessment from each lesson will include children's work, the feedback that is given and responded to and any additional observation notes that the teacher makes. At identified points during a module a teacher must review any observation notes on a child, their written work, their self-assessment judgements and their answers to the activities to ascertain if they are emerging (-) developing (^) have secured (=) or have mastered (+) their age related expectations.

Overview of science in KS3 science

Scheme of Work
Teachers follow the Activate science scheme of work in Year 7 and 8
The following things are included in the scheme

- Information on how the scheme fits in with the national curriculum
- Assessment for learning strategies
- Accompanying pupil text books
- Science investigations within each topic
- Routes through the unit with suggested differentiated learning objectives
- Differentiated worksheets that can be further adapted to meet the needs of individual learners in science
- Suggested starter, main and plenary activities
- Background information for non-specialists
- An overview of each unit and information with how it builds on KS1
- Skills development opportunities including investigative skills, literacy skills, numeracy skills, ICT skills and thinking skills
- Extension activities
- Misconceptions

Additional Resources
The following resources are made available by the Subject Leader to all members of the KS3 Science Team:

- Milestones and Key Performance Indicators
- End of KPI Evaluation sheets
- Various computer programmes (found on the system) including test base
- Individual Lesson plans for non-specialist teachers to provide high quality learning
- Comprehensive Medium Term Plans which can be used to inform planning
- Progression maps to indicate prior and future learning
- Assessment grids to show summative assessment of pupils

Assessment in Year 7 and 8

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Each topic has an assignment based homework. This allows pupils to show their learning of the topic, in a different format. It provides the teacher with a more accurate overall assessment.

Pupils complete a GL Science test at the end of Year 8. This is in line with the Maths and English department and gives us a clear outline of the progress made by pupils from the beginning of Year 5 to the end of Year 8.

General Overview

Science Investigation
In each module pupils have the opportunity to complete a science investigation. We take guidance on terminology from the high schools, as 10% of their GCSE is based on science investigations. As a department we feel it is necessary to have science investigations taught throughout the modules.

G&T Provision
There is a KS3 gifted and talented/more able extension group which runs every other week during KS2 assembly time. This is currently being run by a science specialist T.A. who plans work at an appropriate level.

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There are Science Clubs for each year group to extend and push those children whom are avid Scientists.

We have strong transition links with the North Bromsgrove High School Science Department and pupils take part in many transition events for science.

Marking
Staff should follow the whole school marking policy. Pupils should be given clear guidance on what they have achieved and how to improve.

Health and Safety
Students are required to learn laboratory rules and, at all times, act in a way which shows consideration and thought for their own and others' safety.

General Rules
1) Pupils are not allowed to enter a laboratory unless a member of staff is present.
2) Laboratories should be locked when a member of staff is not present.
3) Pupils should not touch any laboratory equipment unless given permission by a member of staff.
4) Excellent behaviour is required of all pupils at all times when in the laboratory.
5) Eating and drinking are not allowed in the laboratory.
6) Any particular hazards in an experiment should have pupils' attention drawn to them - in written form if possible, e.g. hot apparatus in heating experiments.
7) Any potentially hazardous apparatus in the laboratory should be clearly labelled and steps taken to keep pupils away from it e.g. safety screens.
8) Staff should ensure that experiments and demonstrations are tested for possible risk and a written risk assessment made either in their lesson plan, teachers' planner or elsewhere if there is any reasonable risk.
9) Pupils doing practical investigations should be encouraged to include where relevant comments on safety in their investigations.
10) Pupils should wear the necessary eye protection when appropriate.

Please refer to the current CLEAPSS site for further health and safety guidelines.

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