



# Lyon Park Primary School

Learning and Growing Together



## SCIENCE POLICY FEBRUARY 2020

### INTRODUCTION

#### Purpose

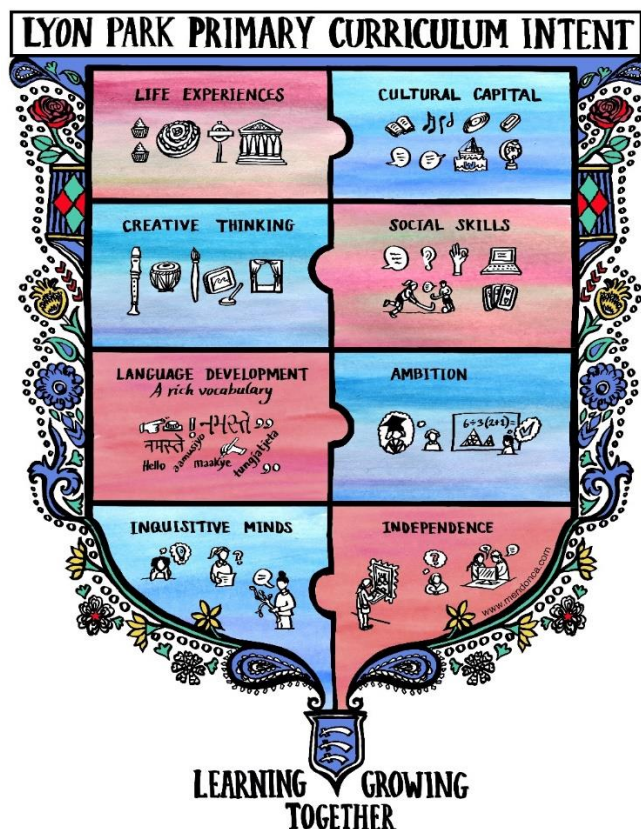
The purpose of this policy is to describe our practice in science and the principles upon which we follow.

#### Aims

Our learning in science enables our pupils to:

- Develop their natural curiosity and allow them to ask questions and develop the skills they need to answer those questions.
- Build key knowledge and understanding of concepts through exploring and investigating the world around them
- Develop the skills needed to plan, carry out investigations, interpret data and make predictions
- Use scientific language and vocabulary accurately

**INTENT**



<p><b>Life Experiences</b></p> <ul style="list-style-type: none"> <li>• Using the local environment</li> <li>• Exploring how science impacts on our everyday</li> <li>• Use their prior knowledge and experiences to further learning</li> </ul>	<p><b>Cultural Capital</b></p> <ul style="list-style-type: none"> <li>• Learning from first hand experiences</li> <li>• Educational visits to enrich learning</li> <li>• Broadening children’s understanding of how science is integrated in every aspect of life</li> <li>• Widening outreach to include parents and community</li> </ul>
<p><b>Creative Thinking</b></p> <ul style="list-style-type: none"> <li>• Teach children how to pose questions</li> <li>• Plan enquiries to answer questions</li> <li>• Show varied ways to solve problems</li> </ul>	<p><b>Social Skills</b></p> <ul style="list-style-type: none"> <li>• Paired and group learning</li> <li>• Discussing and debating</li> <li>• Building presentation skills</li> </ul>
<p><b>Language Development; a rich vocabulary</b></p> <ul style="list-style-type: none"> <li>• Working walls to display scientific vocabulary</li> <li>• Model sentence structures to support explanations</li> <li>• Correct use of scientific vocabulary taught and modelled</li> </ul>	<p><b>Ambition</b></p> <ul style="list-style-type: none"> <li>• Raise awareness of STEM careers</li> <li>• Elevate scientists of different minority group</li> <li>• Explore the history and development of science</li> </ul>
<p><b>Inquisitive Minds</b></p> <ul style="list-style-type: none"> <li>• Provide stimulating experiences to spark curiosity</li> <li>• Use KWL grids to promote curiosity amongst the subject</li> <li>• Predict, infer and analyse data</li> </ul>	<p><b>Independence</b></p> <ul style="list-style-type: none"> <li>• Using and transferring skills</li> <li>• Planning and carrying out investigations</li> <li>• To know where to look for help when needed</li> <li>• To work collaboratively with others</li> </ul>

--	--

## **IMPLEMENTATION**

### **Roles and responsibilities**

#### Governors:

- Be aware of developments in the subject
- To have a role in monitoring teaching and learning
- To be an impartial critical observer within the subject

#### Senior Leadership Team:

- To create an aspirational vision for science
- To provide strategy to the middle leaders
- To challenge and support middle leaders in their role
- To engage in monitoring activities

#### Middle Leader:

- To establish high quality teaching and learning of science
- To be the model of high quality teaching
- To raise the profile of the subject across the school
- To identify and support members of staff who need further development
- Ensure policies are being followed
- To monitor standards of teaching and learning
- To monitor and evaluate progress and attainment
- To manage resources effectively

#### Teachers:

- To follow policy and guidance outlined by middle leaders
- To ensure the subject is taught effectively and the content is covered as outlined in the National Curriculum
- To plan effectively using the Snap Science toolkit
- To promote the use of scientific vocabulary through working walls and flipcharts
- To develop own subject knowledge where needed

#### Support Staff:

- To develop own subject knowledge where needed
- To model the use of scientific vocabulary
- To challenge and support pupils thinking and ideas

#### Pupils:

- To take an active part in every lesson
- To show curiosity and interest
- Ask questions and challenge thinking
- Present their learning with pride

#### Parents/Carers:

- Talk to their children about what they have been learning and share their own knowledge on the subject
- Engage in home learning activities
- Explain every day scientific phenomena as potential experiences arise
- Attend school events

## Aspects

### Equal opportunities:

- All pupils, regardless of age, gender, race, religion, SEND and background have the right to access the curriculum.
- Adjustments must be made to ensure pupils with SEND can access the curriculum.

### Health and safety:

- Pupils must be made aware of safety issues and, where appropriate, the reasons behind them.
- Staff must assess potential risks and seek advice from middle or senior leaders if unsure.
- The Association of Science Education publication Be Safe 4th Edition: Health & Safety in School Science & Technology for Teachers of 3-12 Year Olds is held by middle leaders and should be used as a point of reference for issues regarding health and safety.
- Guidance can also be found at [www.cleapss.org.uk](http://www.cleapss.org.uk)
- Additional information can be found in the health and safety policy.

Safeguarding: Please see the Safeguarding policy.

### Planning:

- Topics are taught in the order outlined in the curriculum overview.
- The Snap Science toolkit must be used to plan lessons. Snap Science is not a scheme and therefore needs to be adapted to meet the needs of pupils.
- Teachers must identify the most appropriate teaching strategy to suit particular learning.
- All lessons for one topic are to be planned on one flipchart using Activ software.
- Flipcharts must include the following:
  - Learning intention(s)
  - Success criteria
  - Key vocabulary
  - Key questions
  - Visuals e.g. pictures, photos, diagrams etc.
  - Differentiated tasks / challenges
  - Lessons must have three parts; Explore, Enquire and Reflect and Review

### Teaching:

- Pupils must acquire a solid knowledge and understanding of concepts and skills that build on previous learning. Pupils must have opportunities to apply these.
- 'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand but must be incorporated into each lesson. Scientific enquiry should include: exploring, observing over time, pattern seeking, identifying and grouping, comparative and fair testing and researching using secondary sources.
- Pupils must have 'first hand' practical experiences where possible to enrich learning.
- Teaching must take into account a range of learning styles.

### Organisation:

- Lesson time per week: KS1 2 x 45 minutes KS2 2x 60 minutes.
- To reduce demand on practical resources, classes in year groups may choose to teach science on different days.
- Resources are stored in The Tower.

### Homework / Wider learning:

- Home learning will be set when appropriate.

### Resources:

- Science is a resource heavy subject and therefore it is essential that all members of staff work together to maintain resources which include; equipment, materials, consumables and books.

- Resources are stored in the tower. These must be returned by a member of staff, once they are no longer needed.
- Teachers must inform middle leaders when consumables are running low.
- If a particular resources, that the school does not stock, is required for teaching, middle leaders must be informed six weeks in advance.
- Pupils need to be taught how to use equipment safely and correctly.

## **IMPACT**

### Assessment:

- Assessment for learning must be built into each lesson.
- SNAP Science lessons have an Evidence of Learning section that can support teachers in making formative assessments.

### Monitoring and evaluation:

- Monitoring exercises which will aid the evaluation of teaching and learning in science will include:
  - Book scrutiny
  - Planning scrutiny
  - Lesson observation
  - Learning walks
  - Working wall check
  - Pupil voice

## **APPENDICES**

Science programmes of study: key stages 1 and 2

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/425618/PRIMARY\\_national\\_curriculum\\_-\\_Science.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/425618/PRIMARY_national_curriculum_-_Science.pdf)