



North Dublin Muslim National School

Ratoath Road

Dublin 7

**Science Policy**  
Revised June 2017

## **Introductory Statement and Rationale**

### **A. Introductory Statement**

The policy was formulated in June 2017 by the whole teaching staff of North Dublin Muslim Primary School in accordance with the guidelines set out in the revised Primary School Curriculum 1999 and in accordance to the Islamic Ethos of the school. Through the formulation of this policy, a common understanding of the purpose of the subject and how it will be implemented in this school has been created among the staff. This policy should form the basis of teachers plans, both long and short term.

### **B. Rationale**

This policy was formulated to provide opportunities for the development of the pupil's knowledge and understanding of the biological and physical aspects of the world in a child-centred and enjoyable way. The emphasis is on practical investigation with the pupils working scientifically. A scientific approach to investigations fosters the development of important skills, concepts and knowledge through which pupils can observe, question, investigate, understand and think logically about living things and their environments, materials, forces, everyday events and problems.

The policy also takes into account that scientific education is part of SESE and that science, history and geography have a distinctive role to play in enabling the child to explore and understand the natural, human, social and cultural environments in which he/she lives.

## **Vision and Aims**

### **A. Vision**

It is hoped that this plan will ensure that pupils will experience a broad and balanced curriculum. It is intended that over a two-year period all strand units from each strand should be covered. There should also be a balance between the development of scientific knowledge and understanding and the processes of working scientifically. This policy should ensure continuity and progression in the development of scientific ideas and the application of investigative skills.

### **B. Aims**

We implement the aims of the science curriculum as outlined in the Primary School Curriculum 1999:

- To develop knowledge and understanding of scientific and technological concepts through the exploration of human, natural and physical aspects of the environment.
- To develop a scientific approach to problem-solving which emphasises understanding and constructive thinking.
- To encourage the child to explore, develop and apply scientific ideas and concepts through designing and making activities.
- To foster the child's natural curiosity, so encouraging independent enquiry and creative action.
- To help the child to appreciate the contribution of science and technology to the social, economic, cultural and other dimensions of society.
- To cultivate an appreciation of, and respect for, the diversity of living and non-living things, their interdependence and interactions.

- To encourage the child to behave responsibly to protect, improve and cherish the environment and to become involved in the identification, discussion, resolution and avoidance of environmental problems and so promote sustainable development.
- To enable the child to communicate ideas, present work and report findings using a variety of media.

## Strands and Strand Units

North Dublin Muslim National School has adopted a two-year science programme. Over the course of the two years, each class will cover all the strands and strand units outlined in the curriculum.

### Junior & Senior Infants

	Year 1	Year 1 and year 2	Year 2
<b>Strand: living things</b>  <b>Strand unit: myself</b>	<ul style="list-style-type: none"> <li>Become aware that people have a variety of needs for growth</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and measure physical similarities and differences between people</li> <li>Become aware of changes that occur as children grow older or mature</li> </ul>	<ul style="list-style-type: none"> <li>Identify parts of the male and female body</li> <li>Develop an awareness of human birth</li> <li>Use all the senses to become aware of and explore environments</li> </ul>
<b>Strand: living things</b>  <b>Strand unit: plant and animals</b>		<ul style="list-style-type: none"> <li>Observe and identify a variety of plants and animals in different habitats in the immediate and other environments</li> <li>Sort and group living things into sets</li> <li>Recognise and identify the external parts of living things</li> <li>Observe growth and change in</li> </ul>	<ul style="list-style-type: none"> <li>Explore conditions for growth of bulbs and seeds</li> </ul>

		<p>some living things</p> <ul style="list-style-type: none"> <li>• Become aware that animals and plants undergo seasonal change in appearance or behaviour.</li> </ul>	
<b>Studies:</b>			
<b>Tree</b>	Oak		Horse chestnut
<b>Flowers/plant</b>	Daffodil		Daisy
<b>Mini-beast</b>	Spider		Caterpillar
<b>Bird</b>	Duck		Swallow
<b>Wild animals</b>	Hedgehog		Squirrel
<b>Habitat</b>	Hedge		Tree
<b>Strand: energy and forces</b>	Light (pg. 25 curriculum)		Magnetism (pg. 26 curriculum)
<b>Strand units:</b>	Sound (pg. 25 curriculum)		Electricity (pg.26 curriculum)
	Heat (pg. 25 curriculum)		Forces (pg. 26 curriculum)

<b>Strand: materials</b>  <b>Strand units:</b>	Properties and characteristics of materials (pg. 27 curriculum)		Materials and change  (pg.27 curriculum)
<b>Strand:</b> <b>environmental awareness and care</b>		Caring for my locality  (pg. 28 curriculum)	

**First and Second Class**

	<b>Year 1</b>	<b>Year 1 and year 2</b>	<b>Year 2</b>
<b>Strand: living things</b>  <b>Strand unit: myself</b>	<ul style="list-style-type: none"> <li>Variety and characteristics of living things</li> </ul>		<ul style="list-style-type: none"> <li>Human life processes</li> </ul>
<b>Strand: living things</b>  <b>Strand unit: plant and animals</b>		<ul style="list-style-type: none"> <li>Observe, identify and explore a variety of living things in local habitats and environments</li> <li>Develop some awareness of plants and animals from wider environments</li> <li>Recognise and describe the parts of some living things</li> <li>Recognise that trees are plants</li> </ul>	
<b>Studies</b>  <b>Flowers/plants</b>  <b>Mini-beasts</b>	Sycamore  Beech  Dandelion  Snowdrop  Earthworm  Wasp		Ash  Maple  Tulip  Bluebell  Snail  Ladybird

<b>Birds</b>	Robin Magpie		Owl Thrush
<b>Wild animals</b>  <b>Habitat</b>	Fox Rabbit  Rocks  Group and sort living things into sets according to certain characteristics		Fieldmouse Badger  Forest <ul style="list-style-type: none"> <li>• Appreciate that living things have essential needs for growth</li> <li>• Explore, through the growing of seeds, the need of plants for water and heat</li> <li>• Investigate how plants respond to light</li> </ul>
<b>Strand: energy and forces</b>  <b>Strand units:</b>	Magnetism (pg. 44 curriculum)  Electricity (pg. 44 curriculum)  Forces (pg. 45 curriculum)		Light (pg. 43 curriculum)  Sound (pg. 43 curriculum)  Heat (pg 44 curriculum)
<b>Strand: materials</b>  <b>Strand units:</b>	Properties and characteristics of materials (pg. 46 curriculum)		Materials and change (pg.46curriculum)
<b>Strand: environmental</b>		Caring of the environment (pg. 48)	



<b>awareness and care</b>		curriculum)	
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**Third and Fourth**

	<b>Year 1</b>	<b>Year 1 and year 2</b>	<b>Year 2</b>
<p><b>Strand: living things</b></p> <p><b>Strand unit: myself</b></p>	<ul style="list-style-type: none"> <li>• Recognise and measure physical similarities and differences between people</li> <li>• Become aware of changes that occur as children grow older and mature</li> <li>• Become aware that people have a variety of needs for growth</li> </ul>		<ul style="list-style-type: none"> <li>• Identify parts of the male and female body</li> <li>• Develop an awareness of human birth</li> <li>• Use all the senses to become aware of and explore environments</li> </ul>
<p><b>Strand unit: plant and animals</b></p>		<ul style="list-style-type: none"> <li>• Observe, discuss and identify a variety of animals in different habitats in the immediate and other environments</li> <li>• Develop an increasing awareness of plants and animals from wider environments</li> <li>• Sort and group living things into sets</li> </ul>	

		<p>according to observable features</p> <ul style="list-style-type: none"> <li>Use simple keys to identify common species of plants and animals</li> </ul>	
<b>Studies</b>	Oak		Rowan
	Ash (revised)		Silver birch
<b>Flowers/plants</b>	Buttercup		Water plants
<b>Mini-beasts</b>	Caterpillar		Earthworm (revised)
	Frog		Spider
	Wasp (revised)		Mayfly
<b>Birds</b>	Swan		Blackbird
	Owl (revised)		Pheasant
<b>Wild animals</b>	Squirrel		Deer
	Mouse		Otter
<b>Habitat</b>	Urban-local environment		Pond/lake
	<ul style="list-style-type: none"> <li>Understand that plants use light energy from the sun</li> <li>Come to appreciate that animals depend on plants and indirectly on</li> </ul>		<ul style="list-style-type: none"> <li>Observe and explore some ways in which plant and animal behaviour is influenced by, or adapted to environmental</li> </ul>

	<p>the sun for food</p> <ul style="list-style-type: none"> <li>• Become aware of some of the basic life processes in animals</li> <li>• Investigate the factors that affect plant growth</li> </ul>		<p>conditions</p> <ul style="list-style-type: none"> <li>• Discuss simple food chains</li> </ul>
<p><b>Strand: energy and forces</b></p> <p><b>Strand units:</b></p>	<p>Light (pg. 63 curriculum)</p> <p>Sound (pg. 3 curriculum)</p> <p>Heat (pg. 64 curriculum)</p>		<p>Magnetism (pg. 64 curriculum)</p> <p>Electricity (pg. 64 curriculum)</p> <p>Forces (pg 65 curriculum)</p>
<p><b>Strand: materials</b></p> <p><b>Strand units:</b></p>	<p>Properties and characteristics of materials</p> <p>(pg. 66 curriculum)</p>		<p>Materials and change</p> <p>(pg.a69 curriculum)</p>
<p><b>Strand: environmental awareness and care</b></p> <p><b>Strand units:</b></p>	<p>Environmental awareness (pg.68 curriculum)</p>	<p>Caring of the environment</p>	<p>Science and the environment (pg.69 curriculum)</p>

**Fifth and Sixth**

	<b>Year 1</b>	<b>Year 1 and year 2</b>	<b>Year 2</b>

<p><b>Strand: living things</b></p> <p><b>Strand unit: human life</b></p>	<ul style="list-style-type: none"> <li>• Develop a simple understanding of food and nutrition</li> <li>• Become aware of and investigate breathing</li> </ul>	<ul style="list-style-type: none"> <li>• Develop an understanding of the structure of some of the body's major internal and external organs</li> </ul>	<ul style="list-style-type: none"> <li>• Develop an understanding of the reproductive systems and of the physical changes taking place in both male and female during growth to adulthood</li> <li>• Identify and understand ways in which the body protects itself against disease and infection</li> </ul>
<p><b>Strand unit: plant and animals</b></p>		<ul style="list-style-type: none"> <li>• Observe, identify and examine the animals and plants that live in local habitats and environments</li> <li>• Develop an increasing awareness of plants and animals from wider environments</li> <li>• Observe and explore some ways in which plant and animal behaviour is</li> </ul>	

		influenced or adapted to environmental conditions	
<b>Studies</b>  <b>Flowers/plants</b>  <b>Mini-beasts</b>  <b>Birds</b>  <b>Wild animals</b>  <b>Habitat</b>	Sycamore (revised)  Beech (revised)  Waterplants (revised)  Snowdrop  Ladybird (revised)  Swan  Owl (revised)  Duck  Fox (revised)  Hedgehog  Stream/river	<ul style="list-style-type: none"> <li>Group and compare living things into sets according to their similarities and differences</li> <li>Construct and use simple keys to identify locally occurring species of plants and animals</li> </ul>	Oak (revised)  Ash (revised)  Daisy (revised)  Buttercup (revised)  Snail (revised)  Caterpillar (revised)  Robin (revised)  Magpie (revised)  Rabbit (revised)  Badger (revised)  Sea shore
<b>Strand: energy and forces</b>  <b>Strand units:</b>	Magnetism (pg. 86 curriculum)  Electricity (pg. 86 curriculum)  Forces (pg. 87 curriculum)		Light (pg. 85 curriculum)  Sound (pg. 85 curriculum)  Heat (pg 86 curriculum)
<b>Strand: materials</b>	Properties and characteristics of		Materials and

<b>Strand units:</b>	materials (pg. 88 curriculum)		change (pg.89curriculum)
<b>Strand: environmental awareness and care  Strand units:</b>	Environmental awareness (pg.90 curriculum)	Caring of the environment	Science and the environment (pg.91 curriculum)

## **Methodologies**

The pupils at the North Dublin Muslim National School will begin Science lessons with their exploration of their existing knowledge. They will be given opportunities to change and develop these ideas from testing them in the practical investigations. During their scientific activities, the pupils will be encouraged to try out, challenge, change, or replace their ideas.

The teaching staff will use the following strategies to decide what the pupils already know about Science:

- Play scenarios
- Talk and discussion
- Questioning
- Listening
- Problem solving tasks
- Annotated drawings
- Teacher designed tests and tasks
- Concept mapping

Strategies used to encourage the pupils to pose their own questions are:

- Exploring
- Planning
- Making and evaluating objects that have practical purposes
- Observations
- Discussions
- Listening
- Practical investigation

In North Dublin Muslim National School, pupils will be encouraged to practically investigate and apply scientific concepts to everyday situations by:

- Observing
- Classifying
- Recognising Patterns
- Estimating and measuring
- Questioning
- Making and testing hypotheses



- Predicting
- Closed Activities
- Open Activities

### **Classroom Management**

A combined approach of whole class work, small group work and individual work on chosen topics and projects will be used in each class. Pupils will be given opportunities to work together collaboratively and share their own ideas. The safety of the pupils should always be kept in mind. We encourage both the investigative approach and the teacher-directed approach. The school has resource boxes for the various stands, which are kept in the science press.

### **Linkage and Integration**

Integrated learning, both within subjects and between curricular areas, is an important principle of the curriculum. Integration allows blocks of time to be utilised in the most efficient way and is particularly important where there are varying degree of abilities within the classroom. For integration and linkage to work successfully at North Dublin Muslim National School, a number of factors will be taken into consideration. These include:

- Systematic planning by the teacher in order to ensure continuity and progress
- Taking careful account of curricular requirements
- The structuring of topic work
- Whole school planning to ensure adequate subject coverage and a balanced range of content within each subject.

### Linkage

Although the curriculum is presented in four strands, many topics/studies within the science curriculum allow for linkage between strands. Some scientific studies may encompass elements from more than one strand. While covering topics we will endeavour to make links between different strands and strand units.

## Integration

At North Dublin Muslim National School many opportunities exist for valuable links to be made between geography, science and history.

In addition, many content elements have close links with other curricula:

### Junior/Senior Infants

Strands	Strand Units	Integration
Living things	Myself	<b>S.P.H.E.</b> – Myself
	Plants and animals	<b>History</b> – Local studies
Energy and Forces	Light	<b>Geography</b> – Natural environments
	Sound	<b>Music</b> <b>Geography</b> – Natural environments
	Heat	<b>Geography</b> – Natural environments
	Magnetism and Electricity	<b>Geography</b> – Natural environments <b>S.P.H.E.</b> – Stay Safe Programme
	Forces	<b>Geography</b> – Natural environments
Materials	Properties and characteristics of materials	<b>Materials</b> – Materials and Change
	Materials and change	<b>Geography</b> – Weather
Environmental Awareness and care	Caring for my locality	<b>History</b> – Local Studies

### First/Second Class

Strands	Strand Units	Integration
Living things	Myself	<b>S.P.H.E.</b> – Myself
	Plants and animals	<b>History</b> – Local studies
Energy and Forces	Light	<b>Geography</b> – Natural environments
	Sound	<b>Music</b> <b>Geography</b> – Natural environments
	Heat	<b>Geography</b> – Natural environments
	Magnetism and Electricity	<b>Geography</b> – Natural environments <b>S.P.H.E.</b> – Stay Safe Programme
	Forces	<b>Geography</b> – Natural environments
Materials	Properties and characteristics of materials	<b>Materials</b> – Materials and Change
	Materials and change	<b>Geography</b> – Weather
Environmental	Caring for my locality	<b>History</b> – Local Studies

Awareness and care		<b>English</b> – Creative writing
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### Third/Fourth Class

<b>Strands</b>	<b>Strand Units</b>	<b>Integration</b>
Living things	Human Life	<b>SPHE:</b> Myself <b>History:</b> Local Studies
	Plants and animals	<b>Geography:</b> Natural Environments
Energy and Forces	Light	<b>Geography:</b> Human Environments
	Sound	<b>Music:</b> Exploring Sounds
	Heat	<b>Geography:</b> Natural Environments – Weather Human Environments
	Magnetism and Electricity	<b>Geography:</b> Human Environments
	Forces	<b>P.E. :</b> Games e.g. tug of war <b>History:</b> Norman builders
Materials	Properties and characteristics of materials	<b>Geography:</b> Natural Environments
	Materials and change	<b>Geography:</b> Natural Environments
Environmental Awareness and care	Caring for my locality	<b>Geography:</b> Natural Environments Human Environments

### Fifth/Sixth Class

<b>Strands</b>	<b>Strand Units</b>	<b>Integration</b>
Living things	Human Life	<b>SPHE:</b> Myself
	Plants and animals	<b>Geography:</b> Natural Environments
Energy and Forces	Light	<b>Visual Arts:</b> Construction
	Sound	<b>Music:</b> Exploring Sound
	Heat	<b>Geography:</b> Natural Environments
	Magnetism and Electricity	<b>Geography:</b> Human Environments
Materials	Materials and change	<b>Geography:</b> Natural Environments
Environmental Awareness and care	Caring for the environment	<b>SPHE:</b> Myself and the wider world

**Using the Environment**

It is important that pupils realise that the world they live in is precious and needs to be sustained. Every action they make in their local environment has wider-reaching effects. The grassland in the school ground with mature trees allows the pupils access to nature within the school.

Recycling and the environment

We have received our Green Flag for recycling. Recycling is a major part of our daily school life. Each class has two recycling bins- a black bin for compost friendly materials and a white bin for clean paper and plastic. There is a Green School Committee composed of two pupils from each class. This committee works in tandem with the Green Schools Co-ordinator, reporting progress and plans of action to their classmates.

**Balance between Knowledge and Skills**

Science is not only concerned with the acquisition of knowledge but the understanding of concepts. We at the North Dublin Muslim National School can nurture this understanding by developing skills of:

- Questioning
- Observing
- Predicting
- Investigating
- Analysing and recording

Pupils will explore, plan and analyse materials through “design and make” activities. Pupils will be given the opportunity to engage in “design and make” activities appropriate to their ability and area of study.

**Assessment and Record Keeping**

The assessment of science at North Dublin Muslim National School will enhance teaching and learning in a number of ways. It will:

- Assist in planning and support future learning for the pupils

- Indicate positive achievements of each pupil engaged in the scientific topics
- Indicate possible areas of development in the pupil's learning
- Indicate areas of learning difficulties encountered by the pupils
- Help the teacher to identify teaching approaches/methods that could help the pupils improve their learning
- Provide an indication of the child's overall achievement in a systematic way at regular intervals
- Help to evaluate the suitability of the science policy created by the staff at the North Dublin Muslim National School.
- Display a continuity between classes and schools (primary and post-primary) in relation to such procedures

*Assessment in science must be valid and seek to measure and report on the child's progress and achievements throughout all aspects of the curriculum. The assessment techniques in science must focus on:*

- Knowledge objectives
- Understanding of scientific concepts
- Competence in the application of experimental and investigative skills
- The cultivation of important attitudes

The assessment of science will be a continuous process and will be part of every lesson.

The following the methods are used in North Dublin Muslim National School in science lessons:

- Observation
- Tasks and tests
- Concept mapping
- Work samples, portfolios and projects
- Self-assessment strategies
- Curriculum profiles
- Peer assessment

Records of the pupil's progress will be kept to assess further needs of the group and/or the individual pupil. Parents will be informed of their child's progress through:

- Parent/teacher meetings

- The homework journal
- Signing of all class tests

### **Differentiation**

It is important that all pupils experience a rounded environmental education. Science plays a pivotal role in this education and so we at the North Dublin Muslim National School will do our best to ensure that every child will have opportunities to engage in learning activities appropriate to their abilities.

A number of techniques will be used to provide a different range of learning activities appropriate to the individual needs of the pupils.

We at the North Dublin Muslim National School aim to ensure that:

- Teachers will use a mixture of whole-class teaching, paired work and group work, with different groups set tasks of various complexities.
- Teachers use a variety of questioning techniques spanning from simple recall to higher order questioning enhancing complex and analytical skills so that all pupils will have opportunities for success.
- Different ways of recording and communicating findings will be encouraged.
  - Drawing
  - ICT
  - Written records
  - Oral reports
  - 3D Models
- SNA support for designated pupils.
- All pupils benefit from active involvement in the environment so all will be encouraged to participate in fieldwork.
- The exceptionally able pupils will be encouraged to undertake additional research and record their scientific findings in a variety of ways

### **Equality of Participation and Access**

Provision will be made to ensure that the staff of North Dublin Muslim National School will identify and ensure that provision is made, as and where necessary for the following:

- Families with literacy problems
- Families for whom English is not the first language
- Pupils experiencing any form of disadvantage

- Pupils with disabilities

### **Timetable**

In keeping with the recommendations in the Primary School Curriculum Introduction (pg 70) and the increased Literacy and Numeracy time allocations a minimum of 105 minutes will be allocated to S.E.S.E. in the Infant classes and 135 minutes will be allocated to S.E.S.E. from First to Sixth classes per week. Science is often taught through Aistear in the infant classes.

On occasions, time will be blocked as appropriate. This might occur when:

- using a thematic approach
- working on a project
- exploring the local environment
- Devising and undertaking a local trail

Teachers will consider the use of discretionary curriculum time for S.E.S.E. where appropriate.

Our Science plan is based on a two year cycle. For this reason, it is not intended that all strand units be taught in each class each year but that over a two-year period all the areas will be covered. The units may be supplemented by extension work at the discretion of the class teacher.

### **Resources and Equipment**

Access to an adequate supply of suitable teaching materials is essential for the development of a holistic approach to the teaching of Science.

- Posters are stored in classrooms appropriate to their level.
- Teachers are provided with teacher's manuals and resource books to supplement the class text.
- Science resource boxes are stored according to strands and strand units. A list of resources and their locations are provided in each teacher's information folder and at the appendix of this plan. These are stored in the science press.
- Teachers are encouraged to share materials and ideas with their colleagues.
- Each class is equipped with a computer with internet access and a projector. In addition, all classrooms have an interactive whiteboard.
- SMART software is available on all computers. There is a folder dedicated to science in the gallery section of the software programme.
- Class textbooks are evaluated each year and changed if necessary.

### **Health and Safety**

We have a Health and Safety policy in place in our school which teachers should adhere to at all times. Safety is a concern for all members of the school community. Safety measures to be taken are highlighted to the pupils at the start of each lesson.

Teachers will consult with the Principal of North Dublin Muslim National School whenever it is proposed to engage in fieldwork. Preliminary visits to the site by teachers may be necessary to

identify possible hazards. If there are apparent dangers then a more suitable habitat will be selected for study. Habitat work involves pupils working with plants and animals, and teachers are aware that some pupils may be allergic to some plants and animals.

All safety measures/guidelines are highlighted in the Teacher Guidelines :

Safety in general	p27
Outdoor exploration and investigation	p58-59
Light	p86
Electricity	p97
Magnetism	p105
Forces	p107
Heat	p129

### **Homework**

Our homework policy recommends a maximum amount of time each class level should spend on homework each evening. It is the decision of individual teachers when to assign science homework to their class. Research topics and projects may be given as homework throughout the year.



### **Individual Teacher's Planning and Reporting**

Teachers will consult this policy and curriculum documents when they are drawing up their short term plans.

Cúntais Míósúil will assist in recording work covered, in evaluating progress in Science and informing future teaching. These are kept in individual teacher's planning folders and in a central folder in the principal's office.

### **Staff Development**

Staff are encouraged to attend science courses provided by Drumcondra Education Centre or their local education centre. In addition, details of courses run by other organisations are displayed in the staffroom.

Staff members are invited to raise any concerns regarding the teaching of science or the implementation of this policy at scheduled staff meetings.

### **Parental Involvement**

Our science policy is communicated to the Parents Association for observation and to provide opportunities for the parents to forward observations on the draft policy before final ratification by the co- managers.

Parents are invited to view projects, surveys and investigations undertaken by the pupils through the website and the school newsletter and they can also view this policy on the school website.

### **Community Links**

Parents and other members of the wider community who could make a positive contribution to the science programme will be invited into the class or school to share their knowledge and expertise with the pupils. We will endeavour to approach visitors from the following organisations- Green School, Forensic Unit from An Garda Síochána and Electric Ireland.

The policy can also be supported by using the following local services: Cabra library, local newspapers and local places of interest.

### **Success Criteria**

The North Dublin Muslim National School will know the policy has been implemented through the following criteria:

- Teacher's planning based on the content of this policy.
- Procedures outlined in this document being consistently followed.

Means of assessing the outcomes of the plan will include

- Revisiting the aims of this plan as a staff
- Teacher/Parent feedback
- Pupil's feedback
- Inspectors reports/suggestions

- Results of class assessment

We will know the policy has been successful through the following criteria:

- Pupil's understanding of scientific concepts and ideas being developed.
- Pupil's interest in science as a subject being extended.

## **Implementation**

### A. Roles and Responsibilities

- This policy will be supported and implemented by the Co-Managers, the principal, the post holder for science and the teaching staff in the North Dublin Muslim National School.
- Class teachers should show evidence of using this policy in their short and long term planning. The principal will inspect planning to ensure the policy is being followed in each class.
- The Co-Managers will ratify the policy.
- The post holder will maintain an inventory of science resources. They will distribute resources at the start of each year and collect and replace any missing resources at the end of each school year.

### B. Timeframe

This policy will be implemented from October 2017

## **Review**

### A. Roles and Responsibilities

The Co-Managers, the principal and the teaching staff will be responsible for reviewing the Science policy.

### B. Timeframe

This policy will be reviewed in 2019.

## **Ratification and communication**

This policy was ratified by the co-managers in August 2017.

A copy of the policy is available on the website and shared drive. Parents may view the policy on the school website [northdublinmuslimnationalschool.scoilnet.ie](http://northdublinmuslimnationalschool.scoilnet.ie) or by making an appointment to view the policy in the school office.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Appendix 1: List of Available Science Resources

Science: Energy and Forces: Forces	
Work and forces poster	
2 small balls	
Bag of straws	
11 clothes pegs	
String	
3 force meters	
Stop watch	
Bag of Balloons	
Sandpaper sheets	
Bubble wrap	

Science: Energy and Forces: Light	
3 large torches	
4 small torches	
Replacement bulbs for torches	
6 AA batteries	
Box with filter paper	
39 colour tokens	
High visibility jacket	
Selection of transparent and opaque paper	
Concave/convex mirror	
Sound box	

Science: Magnets Small Box	
Fishing game	
Bag of magnetic and non-magnetic objects	
Beginning science Center: Magnet task sheets	
Bag of paperclips	
Magnetic tape	
Roll of Velcro	

Science: Energy and Forces: Magnetism and Electricity	
2 sets of crocodile leads (10 leads per set)	
Large plastic red magnet	
1.5 volt hobby battery	
Magnet set large, medium and small	
1 Large magnet set	
Science shelf activity box: electricity	
100 magnetic pole marbles	
Electricity kit	
20 ferrite bar magnets	
5 boxes of iron fillings	
Magnetism set	
2 candles	
Plastic coins	
Piece of rubber	
2 tubs of bicarbonate of soda	
10 steel nails	
Bags of pebbles	
Cotton wool	
Piece of leather	
10 plastic tweezers	

Science: Properties and Characteristics of Materials	
Small saucepan	

Materials display box	
2 metal colanders	
2 spray nozzle bottles and extra nozzle	
<b>Fabrics</b>	
Metallic fabric	
Fleece fabric	
Insulation fabric	
Polyester wadding fabric	
Bag of shells	
Bag of flour	
<b>Rocks &amp; Stones</b>	
2 pieces of pale sandstone	
6 pieces of red sandstone	
2 pieces of limestone	
1 piece of basalt	
7 pieces of granite	
7 pieces of slate	
2 pieces of schist	
<b>Specimen Tray</b>	
3 Wooden balls	
1 wooden instrument	
Wooden block	
Small box of 7 metal strips	
10 marbles	

<b>Science: Living Things: Plants and Animals</b>	
6 Clipboards	
24 Small Magnifiers	
1 Pair of Rubber Gloves	
5 Clear Cylinders with Lids, 1 cylinder without lid	
11 Bug Collectors	
2 Specimen Cylinders With Magnifying Glass Lids	
2 Sided Magnifier With Specimen Chamber	
19 Petri Dishes	
3 Protective Glasses	

<b>Science: Human Life and General Resources</b>	
Chemistry Flip Chart	
Worm Observatory	
2 Test Tube Holders	
7 Test Tubes	
2 Large White Microscopes	
2 Small Silver Microscopes	
Box of Indicator Papers	
Box Of Blank Slides	
2 small containers of test materials	
3 medium sized Compasses	
1 compass on a string	
15 mini compasses	
Discover primary science sample lessons	
Discover primary Science pack (jnr-6 <sup>th</sup> )	
Digital camera	

<b>Geography: Weather</b>	
Weather Station	
Weather station chart to fill in data	

200ml Glass Tumbler	
60ml Beaker	
Science Shelf Activity Box (x2)	
Rain Gauge x2	
Thermometers (x11)	
30 Forehead thermometers	
12 plastic thermometers	
Large Inflatable Globe	
Globe Trotting Plastic World Map	

<b>SESE Resources: Books</b>
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Surface tension – the future of water	
Questions and answers : Inventions	
Illustrated encyclopaedia of wildlife	
<i>Freshwater animals</i>	
DK guide: birds	
Life cycle of horse chestnut	
Discovering animals	
National geographic: On safari	
Red squirrels in Ireland	
Secrets of Ireland seas	
Weather Patterns Day and Night	
Human body	
Wild Dublin	
A-Z of 1 <sup>st</sup> aid and family health	
Oxford illustrated science encyclopaedia	
Copy Holder with Swivel Arm	
The World and Its Wonders	
Windows on the World Science: 6 <sup>th</sup> Class	
Science Quest 6	
Solids and Liquids	
Six Common Kinds of Rocks from Ireland x2	
How My Body Works: Eyes	
How My Body Works: The Blood	
How My Body Works: Bleeding	
How My Body Works: Suffocation	
How My Body Works: Body Care	
How My Body Works: The Kidneys	
Q&A: Transport	
Q&A: Mammals	
Q&A: Birds (x2)	
Q&A: Dinosaurs	
Q&A: How Things Work	
Q&A: Oceans and Rivers	
Q&A: Stars and Planets	
Q&A: Planet Earth	
Restless Planet - Volcanos	
Our Wonderful World	
DK Guide: Space	
DK Guide: Savage Earth	

<b>SESE Resources: DVDs</b>
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Become a World Explorer	
Become a History Explorer	
Science Experiments	
Uncle Albert's Magic Album	
Encyclopaedia of Space and the Universe	

New Atlas of the Solar System	
20 <sup>th</sup> Century Day by Day	
Dinosaur Hunter	
Our Living Oceans	
Amazing Animals	
Brain Buster Quiz	
Human Body	
Pinball Science	
Become a Science Explorer	
New Way Things Work	
3D World Atlas	
Become a Human Body Explorer	
BBC living planet	
Trials of life	
Blue planet	
Attenborough in paradise	
Life in the freezer	
Life of mammals	
Jungles	
Children's Britannica encyclopaedia	
Nature's Fury	
The Mastery of Flight	

Posters	
Planets	
Recycling	
Clouds	
Aluminium Recycling	
Plastic Recycling	
Beverage Package Recycling	
Paper Recycling	
Steel Recycling	
Card Recycling	
Board Recycling	
Glass Recycling	
Our World Flip Chart	
Work	