



St. Michael's School
Whole School Plan for
Science

Reviewed June 2025

St. Michael's School

Science Plan

Introductory Statement and Rationale

This science plan has been formulated by the teaching staff of St. Michael's School. It has been informed by:

- St. Michael's School Mission Statement;
- The NCCA Primary School Curriculum;
- Junior Cycle L1LP and L2LP
- Senior Cycle L1LP and L2LP
- QQI Level 3
- Other subject areas e.g. (Horticulture)
- Draft Guidelines for the Education of Pupils with a Mild General Learning Disability;
- Draft Guidelines for the Education of Pupils with Moderate General Learning Disabilities;
- School Initiatives e.g. Green Schools' Flag Initiative
- Teachers' Recommendations.

Vision and Aims

Vision

We believe that our pupils should have a broad, balanced, relevant and differentiated curriculum, one which mirrors the opportunities for learning provided to their peers within mainstream educational contexts. We strive to provide an equality of educational opportunity underpinned by an inclusive educational philosophy. It is our belief that scientific education can provide important learning opportunities for our pupils, opportunities to formulate and develop their abilities to question, providing a direction and focus for pupils' own ideas and thereby enabling them to become active agents in their own learning. Our vision is underpinned by an acceptance and understanding of the uniqueness of each of our pupils, their individual strengths and their needs. It seeks to provide for these in both the short term, in their lives as pupils in our school and in the long term, in their lives as full and independent members of an inclusive society. It is our wish that all pupils will experience, enjoy and succeed in learning scientifically through active participation at their own level. Acknowledging the range of differences amongst our pupils, we believe that for some of our pupil's science education will primarily provide an important learning context within which to develop and use language and social skills in a meaningful learning context.

Aims

We endorse the aims and objectives of the Primary Curriculum for Science and these aims are also relevant for the Junior and Senior Cycles:

- 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 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.
- Promote fun and enjoyment.
- Promote personal and social skills through working on group projects, participation, communication, sharing strengths, valuing and listening to other pupils' thoughts and ideas.
- Capture the imagination of and motivate pupils with a limited attention span.

Content of the Plan

The science plan will be addressed under the following headings:

1. Children's ideas.
 2. Practical investigation.
 3. Classroom management.
 4. Key methodologies.
 5. Linkage and integration.
 6. Using the environment.
 7. Strands and strand units.
 8. Balance between knowledge and skills.
 9. Resources and equipment.
 10. Looking at children's work.
 11. Safety.
 12. Meeting different learning needs.
 13. Timetabling.
 14. Equality of participation and access.
 15. Staff Development
 16. Parental Community Involvement.
1. Adopting a constructivist view of learning, pupils' ideas may be the starting point for all science lessons. Everyday play activities and the immediate environment provide

rich opportunities for capitalising on young pupils' natural interests in the world around them (e.g. water-play-floating and sinking). In other classes, ideas will be elicited through questioning, brainstorming, annotated drawing, preconceived concept-mapping and teacher-designed tasks and tests. Accessing existing ideas may be a challenge, students may lack confidence, fear failure, or have language difficulties. A range of creative strategies are necessary to elicit pupil's knowledge and ideas. A comfortable, supportive non-judgemental environment, and a range of differentiated models of communication should be accommodated, be they drawings, the construction of models or written.

2. Practical Investigation. Practical hands-on learning experiences are pivotal for pupils with mild general learning disabilities. In classes, up to half the time allocated to science within the month will be used for practical investigation sessions. The emphasis in all lessons will be practical and hands-on as possible. A combination of open and closed techniques will be used. Open investigations are investigations that arise from students' own questions. It requires particular skill and input from teachers to enable pupils with mild general learning disabilities to engage successfully. Closed activities involve the teacher guiding students in the discovery of a pre-determined idea or concept. The concept of a fair scientific test will be taught as appropriate to the pupils' level of understanding. There will be many opportunities for free play and for the exploration and manipulation of materials.
3. Classroom management strategies employed will include groups of different size; whole-class lessons; small groups; individual work and collaborative groups; mixed ability grouping; groups of similar ability; groups who share common interests; project groups.
4. Key Methodologies of the Primary School Curriculum 1999 utilised in the delivery of the science programme will include guided discovery, problem-solving approach, talk and discussion, active learning, optimal use of resources, both visual and auditory, use of the environment, collaboration and co-operative learning, scaffolding of structured play/discovery and skills acquisition through the elements of content. Particular attention should be paid to the need for:
 - (a) Explicit teaching of the language of science
 - (b) The need to teach pupils how to record scientifically with particular regard to: aims, equipment used, method, results and conclusion. A variety of recording devices will be employed. Please refer to bullet points 10 & 12
 - (c) The appropriate use of questioning and analysis during the experimental process
 - (d) Additional demonstration
 - (e) Repetition of investigation, spiral approach
 - (f) Review
 - (g) Facilitation of the transfer of knowledge to real-life contexts/experience
5. Linkage and integration. All possible links within the science programme and with other areas will be exploited as practicable. Particular attention will be given to a

thematic and integrated approach within the context of S.E.S.E.(History ,Geography and Science)

- **Living things** linked/integrated with S.P.H.E./ QQI Container Gardening/ Green schools Biodiversity/5th/6th class R.S.E. programme.
- **Materials** also linked/integrated with Home Economics & Woodwork/Ceramics.
- **Concepts** will link with other aspects of science, history, geography, ceramics, music etc.
- **Designing & making** linkage/integration with QQI ceramics module/ Home Economics/ Woodcraft.

6. Opportunities for using the environment are comprehensively covered in The Environmental Audit (Appendix I)
7. Strands and strand units. Each year, in the Primary classes every effort will be made to cover the four strands in the science programme. Over a 2 year period the strand units are completed. (See Appendix 1 SESE)

Class teachers of Junior Cycle classes will include elements of this science plan that fit in with Junior Cycle Learning Outcomes while being appropriate and meaningful for their classes. Details are included in Appendix 2 “Science in the Junior Cycle”

Senior Cycle classes will engage with Science as part of the Senior Cycle SESE Plan outlined in Appendix 3. Pupils will engage with Science across a range of strands and topics over a two-to-three-year programme. Pupils will access material at a level and pace suited to their abilities.

8. Teachers will strive to achieve a balance between knowledge and skills. In addition to science content (knowledge), we will teach working scientifically, designing and making. Opportunities to work scientifically and to design and make provide an important context for many of our students to demonstrate their individual talents/strengths, also providing pupils of all ages an opportunity to actively engage and enjoy science.
9. Resources and equipment included in Appendix 5). Resources will be reviewed annually.
10. Looking at children’s work. Maintaining an accurate record of pupils’ work to enable staff to monitor progression and to facilitate home-school communication will be an important aspect of the programme. Strategies employed may include recording pupils’ work using annotated drawings, pictures, photographs, concept-mapping, science notice-board, science folders and written reports. School digital technology may be used where appropriate.
11. Safety considerations dictate that teachers should be aware of safety implications of any scientific exploratory work which is undertaken. Activities should not involve the use of hazardous chemicals – use as teacher demonstration only, and children should be encouraged to observe safety procedures during all tasks. Teachers should also

refer to the school's Health & Safety Policy Document. In relation to field trips outside of school grounds, the school's official school outing record should be completed. Teachers should always pre-visit/research potential sites with a view to establishing safety and potential hazards. A First Aid Kit is to be brought on all outings. Adequate supervision should be a pre-requisite for all outings. Every effort should be made to enable students to become aware of and adopt safe practices, observing safety procedures in designing and making, particularly if using tools and materials. Student awareness of the risks involved in some activities should be fostered with appropriate safety procedures understood and implemented by all.

12. Meeting different learning needs: recognising and responding to the range of individual strengths and needs presented by our pupils is an important part of our school's work. We endeavour to deliver to our pupils a broad and balanced curriculum which each can access at a level appropriate to his/her needs. Pupils should also be enabled to develop new skills and knowledge at an appropriate level and pace. At class level, individual teachers will employ a range of strategies in endeavouring to meet these needs. In science class these will include adaptation of curriculum content, learning contexts and approaches and methods of monitoring progress. Teachers will establish the appropriate differentiation required for individual pupils and the class group and will endeavour to strike a balance between pupils' common and individual learning needs. We will strive to provide equal access to the science curriculum for all pupils through first hand experiences and will recognise the pupils' existing knowledge and experience in acquiring new understanding of scientific concepts. A variety of approaches will be used to meet different learning needs.

13. Time-tabling in terms of discrete time $\frac{3}{4}$ to 1 hour per week or up to 2 hours per fortnight will be allocated in all classes, except in classes where pupils are following the Junior Cycle, or Senior Cycle SESE Programme/QQI Certification. Time-tabling in these classes will be flexible facilitating an integrated approach to S.E.S.E. As deemed appropriate by individual teachers, homework may be a feature of the programme (e.g. Science Week). It will be used in order to generate enthusiasm and involvement within our parent community and to enable pupils to establish links between topics covered at school and their practical applications at home.

14. Equality of participation and access. All pupils within the school will participate in the science programme, each at a level appropriate to his/her needs and abilities.

15. Staff development will be a crucial component of the programme, and may draw upon expertise from relevant CPD.

16. Parental and community involvement is a vital element of the programme and where practicable, will find expression through the active involvement of parents with expertise as well as the value of parents' involvement when undertaking activities.

Review:

The Science Plan was reviewed in November 2022 by all teaching staff and subsequently in March 2025 and ratified by the Board of Management on 18th June 2025.

Signed: *Sr. Bernadette Carron*

Date: 18.06.2025

Chairperson, Board of Management

Appendix 1: Strand and Strand Units for Primary Class Levels

SESE St. Mark's Class

	History	Geography	Science
<p><u>Term 1</u> Myself</p> <p>Seasons (Autumn/Winter)</p>	<ul style="list-style-type: none"> • Personal History • Important life events • People in my Family • Story • (Feasts, Christmas) 	<ul style="list-style-type: none"> • Human Environments • Homes • Living in the local community • People who help us • People who work in school 	<ul style="list-style-type: none"> • Learning body parts • Myself • Variety and characteristics of humans • Weather changes • Materials (clothes)
<p><u>Term 2</u></p> <p>Spring</p> <p>Toys & Games</p>	<ul style="list-style-type: none"> • Story • Chronology • People & Things of the past • Toys & games now and in the past 	<ul style="list-style-type: none"> • Change of environment (spring tree, new life) • Plants in our local environment 	<ul style="list-style-type: none"> • Hot and cold • Heat and energy • Light and dark • Day & Night
<p><u>Term 3</u></p> <p>Our Environment and others.</p> <p>Country: Australia</p>	<ul style="list-style-type: none"> • Continuity & Change in the local environment • Aboriginals – Native people of Australia 	<ul style="list-style-type: none"> • Our Environment – Living in local community • People & Places in other areas • Australia on map – Differences between Ireland and Australia weather, hobbies etc. 	<ul style="list-style-type: none"> • Environmental Awareness and Care • Attributes of local environment • Caring for my locality • Plant & animal life • Caring for my locality

St. Luke's SESE

Subject Timeframe	History	Geography	Science
<u>Term 1</u>			
Growing Up	This is me! (timeline)	Living in the local community (work)	My growing body
Homes	Now and then homes	Weather, signs of the seasons	Taking care of my body
Autumn	Autumn celebrations, Halloween games from the past	People in other places – Africa (homes)	Plants and animals (influence of weather)
Energy			Materials, properties and characteristics (materials and change)
Winter	The Children of Lír	Space exploration	Energy and forces (electricity)
<u>Term 2</u>			
Playtime	Toys / games from the past	Living in the local community (playground / playroom)	Energy and forces – push and pull forces in the playground
Recycling	Spring traditions around the world	Caring for my locality (recycling)	Magnets – push and pull forces
Spring	Ancient Egyptians, daily life in ancient Egypt, their beliefs, pyramids, hieroglyphics	Weather	My senses
The environment	Tír na nÓg	Working in Ireland/ work in my area	Materials (recycling)
Work			Pollution
<u>Term 3</u>			
Transport and travel / work	Now and then travel	Working in travel (living in the local community)	Modes of transport
	Watching the weather		Materials (building bridges)
Summer	The Legend of Fionn MacCool, the Giants Causeway	Weather / weather in other countries	Plants and animals, life cycle of the butterfly
The environment		Habitats	

St. Johns Class SESE Plan

<i>Subject:</i>	History:	Geography:	Science:
<i>Timeframe:</i>			
<u>Term 1:</u>			
Growing Up	Myself: Personal History (Timeline / Storyline / Family Tree).	Homes / Houses.	
Playtime	Toys / Games from the past. The story of the creation of Lego.	Living in the local community (My local area and locations within my locality). Simple Mapping and/or mapwork. (The local natural environment).	Taking care of my body.
Where I live	Stories; The Story of the creation of Lego. Change and continuity (How school life has changed through the years).	Living in the local community (People who help us / Work).	Materials, properties, and characteristics (Materials and change).
Winter Autumn Spring Summer	Weather (The History and development of weather forecasting).	Weather; Weather forecast.	Weather / Seasons and their impacts. (Appropriate Clothing).
Transport & travel	Modes of Transport (Travelling now and then).	Environmental care (Recycling). (Caring for my locality).	
Energy	How global warming has changed over the years and the impact of Global Warming.		Energy and forces (Forces).

<p><u>Term 2:</u></p>	<p>Change and continuity; Technology and Machinery, how farming and farming methods, technology and machinery have developed over time.</p> <p>“St. Bridgit” and “St. Patrick” (Also relates to Feasts and Festivals in the Past).</p> <p>The history of two chosen countries; First chosen country is Spain and the second one is optional, but must be from the continent of Europe.</p>	<p>Farming; The work of the people who supply food to us. Influences/Impacts that the weather and seasonal changes have on farming. (Human/Natural Environments).</p> <p>People and places in other areas. (European country; Food, Landmarks & Animals of that country/s).</p>	<p>Compost (Planting & Gardening).</p> <p>Plants and animals; life cycles. Differentiate between both plants and animals relating to specific features like / dislikes and similarities. (Cows; Milking).</p> <p>The Story of the Chick/Hen.</p> <p>The country’s national animal or Living Things; Focusing on Living Things that have an Egg. Hatching from an Egg. Group and sort living things according to certain characteristics (e.g., whether they lay eggs). Recognise and describe the parts of living things (such as; the scales of a snake, the webbed feet of a duck, and the shell of a turtle). Develop an awareness of animals in their local habitat and/or those further afield.</p>
<p><u>Term 3:</u></p> <p>Summer</p> <p>Energy & Forces; Heat</p>	<p>Story; Discussing and noticing how our summer plans have changed from generation to generation. The story of the Mill in Chapelizod.</p>	<p>Weather / Seasons and their impacts. Temperature (Degrees Celsius). and/or Weather in foreign countries.</p> <p>Sources of heat. Solar Energy. Heating and Cooling</p>	<p>Plants and animals (Living things). Observe, identify and explore signs of seasons in the local environment (e.g., trees, animals, ponds etc..). Become familiar with the life cycle of the tree through learning about and observing each season. Understand that seasonal changes occur in living things and examine the</p>

	<p>How homes were heated in the olden days, compare how heat evolved over the centuries in both our homes and in school. (Old and New / Past and Present.</p>	<p>(Materials and Change). Planet Earth in Space.</p>	<p>changes to plant and animal life during the different seasons.</p> <p>Temperature, heat and living things. Comprehend what the word temperature means, e.g., temperature is a measurement of how hot something is. Measure and compare temperatures in different places (such as the classroom and in the yard).</p>
<p>The Romans.</p>			<p>Group and sort living things according to where they live (for example, in a hot or cold place). Develop an awareness of animals from different environments.</p>

SESE St. Anthony's Class

	History	Geography	Science
Term 1 Family	<u>Myself and My Family:</u> My Family: -Events and dates -Comparing ages -Same and different -Family Tree -Viking Family Life	<u>Human Environments:</u> Living in the local community: My family and community -Where do I live -School bus -Type of house I live in -My home community -My school community A Galway Community	<u>Living Things</u> Myself Human Life Process Plants and Animals -Physical similarities/differences -Living things grow and change -My senses -Autumn
	People	<u>Story: Stories</u> Communication -Marconi (Radio) -A. Graham Bell (telephone) Viking Exploration	<u>Human Environments</u> People and Places in other areas Homes around the world / Homelessness Christmas around the world
Term 2 Changes	<u>Myself and My Family</u> Feasts and Festivals in the Past <u>Story: Stories</u> -Spring Traditions near and far -The Legend of Setanta Oisín in Tir na nÓg	<u>Natural Environments</u> Weather The local natural environment <u>Human Environments</u> People and Places in other areas - Asia -Winter Weather -Spring weather -Pond Life -Chinese New Year	<u>Living Things: Plants and Animals</u> <u>Materials: Materials and Change</u> -Reindeer -The frog -An apple tree -Insulation -Sound
	My Life	<u>Myself and My Family</u> My Family When my grandparents were young Games in the past Favourite Childhood Places Games then and now	<u>Natural Environments:</u> Weather The local natural environment Environmental Awareness and Care – Caring for my locality <u>Human Environments:</u> People and Places in other areas

	Going to school	Ireland -Weather in Ireland /Wild Atlantic Way -Water Conservation	
Subject Timeframe	History	Geography	Science
<u>Term 3</u> Respect	<u>Change and Continuity</u> Change and continuity in the local environment <u>Story:Stories</u> Chapelizod then and now Aras An Uachtaran Space travel through time Chris Hadfield	<u>Environmental Awareness and Care</u> Caring for my locality <u>Natural Environments</u> Planet Earth in space The Phoenix Park pond The River Liffey Trees, flowers, animals The Planets A view from space Tourism in Dublin	<u>Environmental Awareness and Care</u> Caring for my locality <u>Energy and Forces</u> Sound/Magnetism/Forces Air, water, soil – comparing growth without light,water Litter awareness Sounds in my environment Electricity at school + home Static electricity Floating and sinking

From Curriculum for First and Second Classes, with some Learning outcomes taken from Third Class.

Linked to SPHE Curriculum Plans

Appendix 2: Science in the Junior Cycle

Science is incorporated in the Junior Cycle across all the Priority Learning Units (PLUs) and the Short Courses. PLUs that are specifically related to Science include:

Numeracy Elements:

- Developing an awareness of temperature
- Developing an awareness of weight and capacity
- Using data for a range of different purposes

Personal Care:

- Developing healthy eating habits
- Developing a healthy lifestyle
- Becoming aware of one's sexuality
- Knowing how to stay safe

Living in a Community:

- Seeking help and advice
- Making consumer choices

Preparing for Work:

- Developing an awareness of health and safety using equipment

Short Courses:

- Home Economics
- An introduction to Woodcraft and Joinery
- CSPE

Throughout the school year each class in the Junior Cycle participate in Science Week, Maths Week, Technology Week, Engineers week, Green Schools initiatives and Active Schools week where we specifically concentrate on scientific disciplines (Biology, Ecology, Zoology)

It can also be included in the PLUs; Numeracy, through the elements of Developing Spatial Awareness, Using Data for a Range of Purposes and Using Shapes. In Personal Care through the elements of Being Able to Manage Stress and Recognising Emotions. In Preparing for Work through the elements of Being Able to Set Goals for Learning and Preparing for a Work-Related Activity.

It is also incorporated through thematic and topic teaching and through looking and responding to the work of other artists

At Junior Cycle Level students may access Short Courses in Home Economics, Woodwork, and Wellbeing (CSPE, SPHE, PE). Art & Design is incorporated in these but particularly evident in Woodwork and CSPE.

Terminology that may be used: line, tone, form, shape, texture, pattern, colour, colour wheel, primary, secondary, tertiary colours, monochrome, 2D, 3D, ceramics, glaze, draw, sketch, paint, blend, portrait, landscape

Tools of Art & Design may include: pencil, colouring pencil, marker, paint, brushes, kiln, clay, pastels, chalks, glue, glitter, watercolour, acrylics, tissue paper, crepe paper, felt, scissors

Events and themes throughout the school year incorporating artistic responses and experiences (list not exhaustive):

Annual Texaco Children's Art Competition	St. Patrick's Day
Classroom and corridor displays	St. Valentine's Day
Hallowe'en displays and costumes	Mother's/Father's Day
Christmas displays and costumes	Assemblies
Easter displays and bonnet designs	Seasonal artwork
Religious celebrations	Environmental themes

Appendix 3: Science in Senior Cycle

St Michael's Senior Cycle Programme for SESE

	Learning Outcomes The student should be able to:	Year 1	Year 2
Weather			
<u>Curricular Links:</u>			
Science: Water Cycle, States (solid/liquid/gas), Thermometers, Energy and Forces			
History: Local Studies, Historical Instruments for measuring weather; Historical storms e.g. Katrina			
Geography: Meteorology maps, countries affected by extreme weather, climate/climate change			
1.	Develop an understanding of what weather means (measure temperature, rainfall etc.)		
2.	Investigate the seasons and their changes		
3.	Become aware of weather in other parts of the world and its consequences		
4.	Think about the consequences of extreme weather		
5.	Investigate how the weather affects what we eat (foods for summer/winter, seasonal meals etc..)		
6.	Investigate how the weather affects what we wear (opportunities to study travel brochures etc..)		
7.	Investigate how the weather effects the activities that we do (opportunities to investigate the effect of weather on farming, fishing etc..)		
8.	Investigate the work of emergency services during various weather conditions		
9.	Investigate our changing weather and climate change		
Energy			
<u>Curricular Links:</u>			
Science: Living Things; Energy and Forces; Environmental Awareness and Care			

History: Life, Society, Work and Culture in the Past

Geography: Human Environments; Environmental Awareness and Care

10.	Explore why our bodies need energy		
11.	Explore how humans get energy from food		
12.	Become aware of our use of electricity etc..		
13.	Suggest ways of saving energy		

Waste

Curricular Links:

Science: Materials, Environmental Awareness and Care

History: Life, Society, Work and Culture in the Past, Continuity and Change Over Time

Geography: Human Environments, Environmental Awareness and Care

14.	Develop an awareness of the different categories of waste		
15.	Develop an understanding of the problems caused by waste		
16.	Investigate where waste goes		
17.	Evaluate the impact of lifestyle on the planet		
18.	Investigate how to recycle waste		
19.	Influence others to recycle waste		

Homes

Curricular Links:

Science: Materials, Environmental Awareness and Care

History: Local Studies, Life, Society, Work and Culture in the Past, Continuity and Change Over Time

Geography: Human Environments, Environmental Awareness and Care

20.	Develop an understanding of what a home is		
21.	Become aware of the type of building they live in		
22.	Develop an awareness that different homes are suitable for different people and animals		
23.	Use maps/Google Earth etc.. to study homes		
24.	Investigate various homes from around the world		
25.	Develop an awareness of the cost of homes		
26.	Investigate the range of jobs involved in the building of a home		
27.	Develop an awareness that some people are homeless		
28.	Develop an awareness of how to help support people who are homeless		

Events and Festivals

Curricular Links:

Science: Living Things, Energy and Forces, Materials, Environmental Awareness and Care

History: Local Studies, Story, Early People and Ancient Societies, Life, Society, Work and Culture in the Past, Eras of Change and Conflict, Politics, Conflict and Society, Continuity and Change Over Time

Geography: Human Environments, Natural Environments, Environmental Awareness and Care

The student should be able to:

29. Develop an awareness of current news events as they occur and as are relevant to the various curricular links above e.g volcanoes, effects of climate change etc..

30. Become aware of various local, national and international events and festivals as they occur in the calendar e.g St Brigid's Day, St Patrick's Day, Chinese New Year

Local Studies

Curricular Links:

Science: Living Things, Energy and Forces, Materials, Environmental Awareness and Care

History: Local Studies, Story, Early People and Ancient Societies, Life, Society, Work and Culture in the Past, Eras of Change and Conflict, Politics, Conflict and Society, Continuity and Change Over Time

Geography: Human Environments, Natural Environments, Environmental Awareness and Care

The student should be able to:

31. Become familiar with the immediate area surrounding their school using the curricular links as listed above e.g Phoenix Park Project, Chapelizod Village Project

Opportunities may arise for pupils to research and present information about their own locality.

Europe and the Wider World

Curricular Links

Science: Living Things, Energy and Forces, Materials, Environmental Awareness and Care

History: Local Studies, Story, Early People and Ancient Societies, Life, Society, Work and Culture in the Past, Eras of Change and Conflict, Politics, Conflict and Society, Continuity and Change Over Time

Geography: Human Environments, Natural Environments, Environmental Awareness and Care

The student should be able to:

32. Learn about a small number of the major natural features of Europe (Refer to Primary School Curriculum for Geography p.79)		
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33. Become familiar with the names and approximate location of a small number of major world physical features (Refer to Primary School Curriculum for Geography p.79		
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34. Become familiar with some aspects of the lives of a variety of peoples e.g Stone Age peoples, Bronze Age peoples, Egyptians etc... (Refer to Primary School Curriculum for History p.67)		
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Appendix 4: Science Environmental Audit, St. Michael's School, 2025.

How can we use our school environment as a resource for the teaching of Science?

1. (a) Develop awareness, observe and explore landscape features our school/local environment?

Woodland	√	Wall	√
Hedgerow	√	Peatland	
Hill	√	Soil	√
Bog		Grassland	√
'Waste' ground		Mountains	
Highlands		Valley	
Lowlands		Low Land	
Banks	√	Drumlins	
Headlands		Wildlife area	√
Marshy area	√		

(b) Water in the environment

Pond	√	Lakes	
Stream	√	Estuaries	
River	√	Beach	
Canal		Seashore	

2. Areas in the environment in which weather observations might be made.

- Car park,
- Phoenix Park,
- Gardens,
- View of mountains
- Yard,
- Outside classrooms.

3. Which of these trees can pupils explore in our school environment?

Oak	√	Beech	√	Cypress	√	Holly	√
Hawthorn	√	Chestnut	√	Cedar	√	Cherry	√
Rowan	√	Lime/Linden	√	Spruce			

Hazel	√	Ash	√	Pine	√		
Crab apple	√	Sycamore	√	Larch	√		
Birch	√	Willow	√	Alder	√		

4. What plants grow in our local environment - can we use them to enable pupils to explore variety of....

Stems	Eg. ash tree has a thick, grey, vertical trunk/chickweed has a thin, green, horizontal stem All plants.
Leaves	All trees, monkey puzzle, sycamore, beech, holly, chestnut, oak and ash.
Roots	Potatoes, vegetables, pine, beech, peony.
Bark	All trees, silver birch.
Flowers	Daffodils, crocuses, tulips, buttercups, daisies.
Fruit	Rowan tree, cherry tree, blackcurrants
Buds	Sycamore, horse chestnut, cherry blossom, daffodils.

5. What simple food chains exist in the school environment?

- insects----birds
- fishing trips
- leaves----worms----bird
- plant----slug----hedgehog
- food/litter----magpies/crows
- weasels----mice
- nuts----squirrels----foxes.

6. How can we make our local environment a better place for observing animals?

- Leaving 'naturalized' areas—quiet areas,
- Create a natural pond life,
- Birds- feeding tables and nesting tables,
- Wildlife area,
- Fill in fountain/ pond,
- Compost heaps,
- Nesting boxes,
- Create definite habitats,
- Create a small observation station.
- Bug Hotel – “Ladybug Lodge”

7. List the natural materials evident in the school/local environment.

Mud	√	Pebbles	√
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Soil	√	Sand	
Rocks	√	Water	√
Stones	√	Other	

8. What evidence can we see of the human/built environment in our school?

Walls	√	Types of surfaces	√
Buildings	√	Paths	√
Windows	√	Roof Types	√
Drains	√	Evidences of services	√
Oil Tank	√	Shelter	√
Fencing	√	Astro/Other?	

9. What examples of the following can pupils observe and explore in the school/local environment?

Buildings in which the following materials are used			
Brick	Main school to cill height	Corrugated iron	Sheds, sides of water tank
Steel girders	Phoenix Room	Roof Tiles	Glen College Canteen
Stone	Steps by canteen -granite	Slate	Ozanam Villa
Concrete blocks	Walls	Wood	Garden Shed, Internal doors.
Mass concrete	Walls, foundations	Aluminium	Flashing on roofs
Pebble dash	Walls	PVC	School windows
Thatch	Crib at Christmas	Glass	Shop windows

10. List some examples of- homes, buildings, settlements

Single-storey Buildings	School building, cottages.	Three-storey buildings	Old House, Convent
Two-storey buildings	Local houses, Ozanam Villa	Buildings with more than three storeys	Local Apartments
Oldest buildings in the locality	Farmleigh, Castleknock College, Main house with oak paneling, Mount Sackville, Ashtown Castle, Castleknock Castle	Recently constructed buildings	Apartment blocks and shops in Chapelizod, Glen College Administration/ Horticulture buildings, Footbridge, Bungalows St. Louises's, Pottery Room.

11. What seasonal changes can pupils explore/observe in the school environment?

Natural Environment, e.g. habitats
 Human Environment, e.g. buildings

- Autumn –colour of leaves
- Spring- flowers, buds, nests
- Winter- bare trees
- Summer- flowers, trees, growth of grass
- Buds/ leaves growing on trees
- Flower beds and pots
- Trees- leaves changing colour
- Vegetable patch

12. Name a local building that you think enhances the environment? Why?

- The water tower- shape, structure, use of materials
- Glenmaroon House/ Convent Building- old, different materials

13. Name a building that, in your opinion, doesn't enhance the environment? Why?

- Chapelized National School- doesn't fit in with the little houses in the village
- West County Hotel- unattractive appearance

14. What examples of the positive impact of human activities on the environment can be observed/ explored by pupils in our school?

- Planting of an oak tree by the pupils of our school
- Woodlands area work done by staff from Glen College,
- Recycling,
- Bird table,
- Plants and vegetables
- Flower beds,
- Well kept lawns.

15. What examples of the negative impact of human activities on the environment can be observed/ explored by pupils in our school?

- Toll bridge
- Buildings,
- Haphazard planning,
- Litter-attracts scavengers, spreads disease,
- Road/ Building works,
- Noise/ Visual/ Dust/ Pollution.

16. What strategies for improving and caring for the environment can pupils implement in our school?

- Litter awareness,
- Compost bins- show pupils how biodegradable matter can be reduced to natural state, whereas plastic does not disintegrate,
- Recycling/ litter control,
- Planting a wildlife garden,
- Maintaining gardens,
- Organic gardens,
- h. Cleaning yard.
- Green Schools Flag

17. What strategies for improving and caring for the environment can be implemented by teachers/parents?

- Make pupils aware of the role they have to play in the environment,

- Show pupils how to reduce, reuse, recycle. Talk about the impact of chewing gum, plastic bags etc. on the environment,
- Discuss ozone layer and greenhouse effect,
- Recycling/ litter control,
- Walk/ cycling more,
- Reduce packaging,
- Conserving energy,
- Planting a wildlife garden.

18. What local environmental issues can pupils investigate/help to resolve?

- Recycling- clothes, bottles, cans, paper.
- Amount of traffic/ road safety eg: road safety issue, campaign for wider paths,
- Waste,
- Pollution in the River Liffey,
- Knocking down old buildings in Chapelizod to build apartments.

Appendix 5

Resources.

Science Press 1

Upper Shelf	Middle Shelf	Lower Shelf
Videos:-Birds -Insects -Where Does Sand Come From? -SESE C.D. -Bird Sounds	Light pack contains: 1 large card piece 8 small card pieces 1 kaleidoscope 5 white torches 6 red torches 6 4 pack batteries 10 curved mirrors Teacher Lesson pack (missing)	1 Cartridge Burner 1 Spare Gas Cartridges
1 Big Magnifier	15 Colour Paddles	1 Tripod Stand
9 Large Bug Viewers	12 Candles	1 Wire Gauze
100 Mini Grip Bags	6 Torches	1 Fire Blanket
1 Feely Bag	1 Box – White Chromatography Paper	1 Gas Lighter
5 Bug Hunters	6 Spotting Tiles	1 Conductivity Star
1 Changing Sounds Pack	6 Symmetry Mirrors	1 Ball and Ring without Chain
1 Box – Outdoor Sounds	27 Bulk Mirrors Pack	1 Fingerprint Ink
1 Book Plus Science Module: The Spider	1 Newton’s Colour Disc (missing)	1 Box Starch Test Paper 1 Box PH Paper
10 Plastic Tweezers	1 Test Tube Stand Test Tubes	1 Box Universal Indicator
2 Nature Viewers	20 Plastic Specimen Tubes	1 Jar Iron Filings
2 Shallow White Trays	10 Plastic Beakers	Primary Science Day Folder – Energy
20 Petri Dishes	9 Glass Round Bottom Test Tubes	Exploring Science Books 2, 3 and 4
60 Plastic Pipettes	10 Beakers 250ml (glass)	Photocopiable Resources
2 Tuning Forks		1 Cylinder 100ml 1 Cylinder 250ml
		10 Filter Funnels 2 Boxes Filter Paper

Science Press 2

Upper Shelf	Middle Shelf	Lower Shelf
1 Electricity Box PLUS 1 Primary Science Day Electricity Box	1 Magnets Pack PLUS 1 Primary Science Day Magnets Box (4 large red/blue magnets missing)	3 Investigator Slide Viewers
Electricity Kit (SI Discovery)	1 Box of Nails	1 Investigator Slide Set: Bodily Knowledge
Electricity box	1 Giant Horseshoe Magnet	1 Investigator Slide Set: Pond Paradise
10 Crocodile Clips	9 Floating Magnets	1 Investigator Slide Set: Pond Paradise
5 Small Screwdrivers	12 Metal Testing Strips (Magnets) (Missing)	1 Investigator Slide Set: Insects Up Close
1 Automatic Wire Stripper	10 Small Compasses	1 Student LED Microscope
4 Pliers	20 Magnetic Marbles (missing)	20 Microscope Cavity Slides
Simple Planetarium	60 Paper Tubes	1 Human Anatomy Microslide Set
1 Materials Collection Box	1 White Bathroom Scales	1 Planet Introductory Microslide Set
1 Basic Rock Set	10 Force Meter Springs	1 Animal Primary Microslide Set
	6 Newton Springs	
	2 Submersible Motors	
	5 Flat Sided Motors	
	3 Pulley Blocks	
	2 Weights	
	10 Meagre Motors	

The following equipment will be kept in the care of the Post-Holder responsible for Science:

1 Rainbow Electricity Box
Skeleton Parts – Poly Bones

Science Press 3

Upper Shelf	Middle Shelf	Lower Shelf
1 Anatomy Kit	1 Bread Mould Chart	4 Timers (5 minutes)
1 Drug Awareness Photopack	1 Vertebraes Chart	28 Bounty Science – Germs and Cleaning Packs & Teacher Resource Booklet
Book Plus Science Module: - The Heart - The Ear - The Eye - The Digestive System	1 Fish Chart	Science Catalogues
Big Books: - Big Chick - Lifecycle of a Frog	1 Reptiles Chart	The Big Book of Experiments (missing)
2 Whose Baby? (matching game)	1 Birds Chart	1 Basin
1 Stethoscope	1 Mammals Chart	1 Unbelievable Bubble Thing and Book
4 Thermometers (Clinical)	1 Insects Chart	Photocopiable Resources Dental Care Folders (x2)
7 Green Filled Thermometers	1 Fruit Chart 1 Leaves Chart	Irish Forestry Today Videos and Information
10 Thermometer (Non-spill) Pots	1 Wormery	Something Fishy (x2) Learning about fish and fishing
1 Peak Flow Meter PLUS 1 Spare Mouthpiece	1 Flowers Chart	Living Willow Sculpture
	1 My Skeleton Chart 1 Human Anatomy (10 Flip Charts)	Plant parts Kit
	1 Weather A4 Pack 1 Wind Mill 1 Wall Thermometer (Miss Doherty)	
	1 Giant Dental Care	
	1 Model Torso	
	1 Smokey Sue	

Useful websites

- I.N.T.O. www.into.ie
 - NPC Primary www.npc.ie
 - IPPN www.ippn.ie
 - DES www.education.ie
 - NCCA www.ncca.ie
 - PCSP www.pcsp.ie
 - SDPS www.sdps.ie
- www.discoverprimaryscience.ie

Science Plan

Classes: St Mark/Luke

	Living Things	Materials	Energy & Forces	Environmental Awareness & Care
	Myself			Caring for Myself & My Locality
	Plants & Animals			Caring for Myself & My Locality
	Myself		Forces	
	Myself		Heat	
			Light	Caring for Myself & My Locality
	Myself	Properties and Characteristics of Material		
	Plants & Animals		Magnetism	
	Plants & Animals	Materials & Change. Mixing & other change.		
	Plants & Animals		Electricity	
		Materials and Change Heating and Cooling	Sound	

Science Plan

Classes: St John/Anthony

Year 1	Living Things	Materials	Energy & Forces	Environmental Awareness & Care
September	Plants & Animals			
October			Light	
November				Caring for myself & my locality
December		Properties & Characteristics of materials		
January	Plants & Animals			
February			Heat	
March		Material & Change. Heating & Cooling.		
April	Plants & Animals			
May			Sound	
June				Caring for myself & My locality