Science Policy Galbally National School

Introductory Statement and Rationale

(a) Introductory Statement

This policy was formulated in 2012 by the teaching staff of Galbally National School in accordance with the guidelines set out in the Primary School Curriculum 1999. It was amended in 2017. It will form the basis for teachers long and short term planning. It will also inform new and temporary teachers of the approaches and methodologies used in the teaching of Science in our school.

(b) Rationale

The area of Science was a priority area for planning in this school year.

The purpose for the plan is:

* To benefit teaching and learning in our school
* To provide a coherent approach to the teaching of science across the whole school
* In order to ensure that pupils are given adequate opportunities to develop skills and understanding of concepts as envisaged in the Primary School Curriculum

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Vision and Aims

(a) Vision

It is hoped that this plan will ensure that children 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 endorse the aims of the Primary School Curriculum for science

* 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

**This Science** **plan will be addressed under the following headings**

**Curriculum planning**

 **1. Science Programme**

* 1. **Strands and strand units**
	2. **Children’s ideas**

**1.3 Practical investigations**

**1.4 Classroom management**

**1.5 Key methodologies**

**1.6 Linkage and integration**

**1.7 Using the environment**

**1.8 Balance between knowledge and skills**

 **2. Assessment - Looking at children’s work**

1. **Differentiation**
2. **Equality of participation and access**

**Organisational planning**

1. **Timetable**
2. **Resources and equipment**
3. **Safety**
4. **Homework**
5. **Individual teachers’ planning and reporting**
6. **Staff development**
7. **Parental involvement**
8. **Community links**
9. **Science programme**
	1. Strands and strand units
* It is expected that teachers familiarise themselves with content objectives for their current class.
* Over a two year period all strand units from each strand will be covered (See Appendix 2)
* The teaching of certain aspects of the science programme in relation to human growth, development and reproduction are in line with the school’s plan for the RSE elements of SPHE.

1.2 Children’s ideas

* + The children’s ideas are used as a starting point for scientific activity?
	+ Children’s prior knowledge is elicited through questioning, talk and discussion; listening; problem-solving tasks; annotated drawings; teacher designed tests and tasks; concept mapping *….*
	+ Strategies are used to encourage children to pose their own questions, for example, KWL charts, vocabulary work around questioning.

1.3 Practical investigations

* + Practical investigations encouraged in all classes.
	+ Investigations allow for differentiation to meet the needs of all the children in the school, for example. Recording through mediums other than writing e.g. annotated drawings, photographic evidence. Teacher expectations allow for variations in responses. Mixed ability groups are viewed as being very important, with each member having a varied and appropriate role.
	+ Children are encouraged to apply scientific concepts to everyday life, for example, environmental care of their immediate environment.
	+ There is a balance between open investigations and closed activities, particularly in the senior classes.
	+ There are opportunities for children to engage in free exploration of materials, for example, free-play with magnets, K’nex, etc.
	+ In the middle and senior classes the school will use the following four key questions to help the children understand the concept of a fair test;

- What is being tested?

- What will be changed?

- What will be kept the same?

- What will be measured or compared?

1.4 Classroom management

* + Use is made of the teacher directed approach.
	+ Pupils are enabled to work on their own problems.
	+ Children have an opportunity to work in different groupings, *e.g.* whole group, small groups, pairs and individually
	+ During group-work roles are assigned and turn-taking is always encouraged. Teacher observation is very important to ensure good participation and collaboration.
	+ Display tables for science are used in each class.
	+ The children are given the opportunity to present findings to another class.
	+ Displays are mounted in public areas on cork boards, these displays are often accompanied by a class presentation.

1.5 Key methodologies

* + As a whole staff, we will ensure that the key methodologies of the primary curriculum are used by;
	+ Using the environment
	+ Active learning
	+ Guided and discovery learning
	+ Free exploration of materials
	+ Spiral nature of the curriculum – opportunities to return to earlier learning and to extend and enhance it
	+ Learning through language
	+ Differentiation – we adapt and modify activities so that they meet the needs of all children in the class.

**1.6 Linkage and integration**

* + At each class level, every opportunity is taken to link activities/concepts to other areas of the science curriculum.
	+ There are opportunities to integrate activities/concepts with other subjects/curriculum areas, *e.g.* through the English Matter of Fact scheme and the infant factual story books, visual arts; e.g. colour spectrum, making models, Geography; environmental issues, History; history of inventions, S.P.H.E.; Myself; Taking Care of Myself.
	+ Conscious efforts are made to utilise science lessons as opportunities to develop children’s language competence and confidence, for example, reporting back, oral presentations.
	+ There is specific pre-teaching of vocabulary before the activity.

1.7 Using the environment

* + Features of the local environment are being incorporated into the science programme. This includes a range of habitats and features of the natural and built environment within easy reach of the school. For immediate habitatsand features of the natural environment see school environmental audit (Appendix 1).
	+ Teachers use the environment as much as possible during lessons.
	+ Pupils may be made responsible for particular environmental features, for example, bird feeders, Green Schools.
* Pupils are given opportunities to observe a variety of living things in their immediate e.g. field trip, nature walk etc.
	+ We have devised a general science trail of the local environment.
	+ Our science plan takes account of seasonal changes with particular reference to life in a rural community.
	+ Local resource people include, Tidy Town representatives, staff of environmental awareness office of Limerick Co.Co., local vet, local farmer (field trip to local dairy farm/local creamery) etc.
	+ If a teacher wishes to invite a visitor to work with pupils the following procedure applies,; permission from the principal, teacher must be present throughout visit, children are adequately prepared.
	+ If a teacher wishes to take pupils on a field trip the following procedure applies; ensure the general permission slip given on enrolment has been signed, that there is adequate supervision (any out of school trip must be accompanied by two adults)
* The school fosters environmental awareness and care by composting, recycling, liaising with the tidy towns committee, work through the Green Schools Programme.
* The school as an organisation is modelling good environmental practices, *e.g.* collecting samples for nature displays, packaging/waste paper, collecting old phones, used batteries etc.
* Teachers are aware of using recyclable materials for science activities.

**1.8 Balance between knowledge and skills**

|  |  |  |  |
| --- | --- | --- | --- |
| **Class** | **Topic** | **Knowledge** | **Skills** |
| **Infants** |  |  |  |
| **1st & 2nd** |  |  |  |
| **3rd & 4th** |  |  |  |
| **5th & 6th**  |  |  |  |

* Examples of what these skills mean at the different class levels can be found as follows; *(Curriculum pp. 20 – 21 for Infants; pp.36-38 for 1st /2nd; pp. 55 – 56 for 3rd /4th; pp. 78 – 80 for 5th /6th)*
	+ Questioning (
	+ Observing
	+ Predicting
	+ Investigating and experimenting
	+ Estimating and measuring
	+ Analysing
	+ Recording and communicating
* Teachers emphasise the practise and development of skills throughout each lesson.
* Children have ample opportunities for structured and unstructured play and exploration (self selection of project topics)
* Children work through the skills of exploring, planning, making, and evaluating in a designing and making lesson/unit of work.

**2. Assessment - Looking at children’s work**

*(Refer to school’s policy on Assessment and record keeping*, *Teacher Guidelines pp.142-145; Curriculum pp. 98-107)*

* We give the children opportunities to record their work in a variety of different ways, *e.g.* concrete materials, oral presentation, drawings, photographs, written records, concept maps.
* We keep records of the children’s work through copybooks, workbooks etc.
* We keep portfolios of science work in the senior classes.
* Knowledge and skills are assessed by teacher observation and teacher designed tasks and tests.
* The children have opportunities to assess their own work (e.g. reflecting on group-work/experiments.)
* Science progress is recorded at the end of school year report.
* Teacher observation informs class teaching and whole school approaches.
* Information is shared at annual parent-teacher meetings, staff meetings etc.

**3. Differentiation**

* We adapt and modify activities so that all children can participate.
* We cater for the range of learning abilities in our science teaching, for example, children with general and specific learning disabilities, children receiving learning-support, children whose first language is neither Irish nor English, children who are exceptionally able. We ensure the provision of mixed ability groups in science teaching.
* The special needs assistant (SNA) has a wider role/responsibility during science activities, *e.g.* overseeing safety of groups of pupils and physical help
* The school provides challenges for children of exceptional ability
	+ Differentiated programme within the classroom and/or homework
	+ Use of ICT
	+ Independent research projects
	+ Consulting organisations such as An Óige Thréitheach, Centre for Talented Youth

**4. Equality of participation and access**

* Equal opportunities are given to boys and girls to participate in all activities.
* Teachers are aware of perceived gender difference in relation to science and steps being taken to minimise this. (eg. Assigned roles in group, turn taking, working to overcome stereotypes, teacher modelling etc.)
* Opportunities within the science programme are used to broaden the pupils’ understanding of other cultures and environments *e.g.* fabrics used in warmer climates, colours of clothing, materials used for building homes.
* All children access to services, facilities, or amenities in the school environment.

**5. Timetable**

* Science is timetabled separately - one hour is allotted to each class per week, occasionally a block of science is taught for two to three hours eg. Nature walks or field trips.
* Discretionary time is timetabled for elements of the science programme from Infants to Fourth Class.
* The school holds a ‘Science week’ annually.

**6. Resources and equipment**

* Include an inventory of equipment and materials available in the school. Each teacher has a copy of this inventory and it is also centrally stored. (See Appendix 3)
* The resources are appropriate for science at each class level.
* Science books appropriate to class level are available in each class library.
* The resources are stored in the Store. They are accessible to teachers. Health & Safety issues have been considered.
* For major items the principal is notified before ordering.
* Pupils use a textbook, workcards, workbooks *(See Teacher Guidelines p. 27)*
* We integrate the use of ICT as far as possible. *(See Teacher Guidelines pp. 140 –141, Information and Communications Technology (ICT) in the Primary School Curriculum: Guidelines for Teachers)*
* There is a code of practice to ensure safe Internet usage of these sites. There is appropriate hardware & software installed to ensure this safety. Teachers familiarise themselves with material on websites prior to use by the children. There is ongoing monitoring.

**7. Safety**

* The teachers teach about the need for safe procedures and routines when topics being taught require safety messages eg:
	+ Safety in general – Encourage children to observe safety in all tasks. Safety precautions cannot remove all risks but should eliminate unnecessary hazards.
	+ Outdoor exploration and investigation – preliminary visits by the teacher, adequate supervision, tasks that are safe for children with allergies to certain plants or animals
	+ Light - not looking at the sun directly, using plastic instead of glass mirrors, dangers of sunburn
	+ Electricity – batteries must not be cut open, safe disposal of batteries, cutting of wires is a task for the teacher/SNA
	+ Magnetism - storage of magnets, care of magnets (repeated dropping, heating will damage magnets)
	+ Forces – floating and sinking (water safety), risk of injury from moving objects
	+ Heat - teaching the risks involved in using hot water, using water that is safe for the children

**8. Homework**

* Science homework is given occasionally in the senior classes. The purpose of assigning science homework is to investigate the application of science in the home.
* Science homework reflects the active learning approach as described in the curriculum.
* There is a balance between observation /discussion /investigation /recording. (Discussion will take place in the class after the homework is completed)
* Safety is an issue when selecting homework assignments (ie. Only assignments that are safe and not hazardous are given as homework)
* Where science homework is given, all pupils are assigned the same homework. It is pitched at a level accessible to all pupils.

**9. Individual teachers’ planning and reporting**

* The whole school plan and the curriculum documents for science provide information and guidance for individual teachers
* Teachers plan using strand and strand units from the curriculum based on our 2 year plan
* Each teacher completes a Cuntas Miosuil each month

**10. Staff development**

* Each teacher is expected to familiarize themselves with science curriculum
* If an individual teacher needs to be supported in developing the required knowledge and skills to facilitate pupil learning in some aspects of the science curriculum, this support can be provided within the school
* Teachers are encouraged to attend courses relating to the teaching of science and relate the expertise acquired at this course at the beginning of the school year at the staff meeting
* SNA’s have the responsibility of keeping the resources up to date each year during their Croke Park hour
* Time is allocated at staff meetings to discuss issues related to science

**11. Parental involvement**

* Parents are aware of the nature and purpose of the science curriculum. They are aware that it is taught at all class levels and that it is an important section of the primary school curriculum.
* Parents are involved in supporting some aspects of the science plan, for example, the implementation of R.S.E.
* Parents from this school can support the teaching and learning of science the reinforcement and nurturing of scientific knowledge and skills in the home environment.
* The school is supportive of parents who want to assist their child’s learning in the area of science and welcome their input (e.g. suggesting places of interest, knowledge as regards the local environment etc.)
* Parents are invited to participate from time to time on trips etc. (e.g. field trip to river/Darby’s Bed)
* There are parents who could contribute in particular ways to the science programme(for example, those who have an interest in local plant/wildlife, local vet, members of Tidy Towns committee)

12. Community links

* Members of the local community are also involved in supporting the science programme. Local resource people include, Tidy Town representatives, staff of environmental awareness office of Limerick County Council, local vet, local farmer (field trip to local dairy farm/local creamery) etc.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Success criteria

This plan will make a difference to the teaching and learning of science in our school. The criteria that will indicate success are:

* + Teachers’ preparation based on this plan
	+ Procedures outlined in this plan consistently followed
	+ We will know that the plan has achieved its aims by:
	+ Feedback from teachers/parents/pupils/community
		- Inspectors’ suggestions/report
		- Feedback from second level schools
	+ The plan will enhance pupil learning by:
		- enabling the child to develop knowledge and understanding of scientific and technological concepts through the exploration of human, natural and physical aspects of the environment

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Implementation

(a) Roles and Responsibilities

The plan will be supported, developed and implemented by:

* Teachers/SNA’s
* Community Links
* Parents
* Board of Management

(b) Timeframe

The plan will be implemented immediately.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Review

It will be necessary to review this plan on a regular basis to ensure optimum implementation of the science curriculum in the school. Those involved in the review will be:

* Principal and Staff

(b) Timeframe

This Policy was reviewed in May 2017.

Ratification and Communication

The Policy was officially ratified by the Board of Management at its June 2017 meeting

It is available for inspection by appointment with the principal.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CHAIRPERSON PRINCIPAL

Dated …..………………… …………………………..

APPENDIX 1

**Some science activities on a local trail**

**( majority of which can be used within Galbally N.S. school grounds)**

Note: not all activities are suitable for all classes some may be more appropriate for senior levels. Activities can be selected at class teacher’s discretion

1. **Looking at leaves**
* Identify different leaves found within school.
* Select one criteria (or more with senior classes-one per group perhaps)
1. Leaves of different colour (2) shape (3) parallel /net veined (4) texture.
* Compare different sized leaves from the same tree.

1. **Tree profile**
	* Identify trees in local environment.
	* Bark rubbing
	* Take sample of leaf/fruit/seed/flower.
	* Measure/estimate height of tree(s)/trunk circumference.
	* Discuss location of tree (Why is it suitable?)
	* Investigate tree habitat (moss at base of tree in shaded/sheltered location/insects that inhabit tree/birds nests etc.)
	* Shape of tree
	* Age of tree
	* Any seasonal change apparent on tree Loss of leaves/appearance of buds/tree sap etc.)
2. **Flower profile**
* Sketch flower head (bring along a magnifying lens) (infants+)
* Identify sepal, stamen, stigma (senior classes)
* Use buttercup, daisy, tulip, rose, poppy , daffodil to compare and contrast flowers. (infants+)
* Sorting by petals; all red/yellow/blue; all the same size; no. of petals; separate or joined to each other (infants+)
1. **Weeds**
* Collect different weeds on your route ( *an A4 sheet with two strips of double sided tape can be used to (a) collect weeds/wildflowers etc. (b)to highlight comparisons/differences and (c) to display findings.)*
* Describe where they are growing ( reasons for this etc.)
* Dig it up, wash it and draw it.
* Children can tick off what weeds they saw;
* Dandelion
	+ Daisy
	+ Redclover
	+ White clover
	+ Cleavers
	+ Hogweed
	+ Speedwell
	+ Buttercup
	+ Silverweed
	+ Rib wort- plantain
* Discuss/investigate

(a) Parts of weed; flower of fruit; where they are, colour.

(b) Leaves; shape, are they hairy, colour, veins, edge.

(c) Roots; thickness, branch, hairy, soft, slimy, woody.

1. **Dandelions**
* Discuss changes that occur in petals etc. of dandelion. Why does it change from a strong, bright, yellow head to a feathery, white delicate head? This opens discussion/study of cross pollination ( via wind/animals etc.)
* Examine dandelions growing in different areas. Do they have leaves of different sizes. Elicit possible reasons for this.

1. **A climbing plant**
* What is it?
* What supports it?
* How has it attached itself?
* Describe the habitat.
1. **One square metre**
* Rope off 1m2, (alternatively a hula hoop can be used) list plants growing within roped area; dandelion, thistle, shepherd’s purse, plantain, buttercup, daisy etc.-document can change weekly.
* List mini-beasts found within roped area; centipede, millipede, earwig, ant, beetle, spider, snail, woodlice [*classification charts can be used by the teacher or one per group to identify plants/animals*]
1. **Collecting minibeasts**
* Bring a pooter on the walk. Each pair collects a minibeast from a different habitat (e.g. shady areas, sunny areas, nettles, leaves, wood, tree trunks, soil etc.) Observe closely with magnifying glass back in class. Pages 66 & 67 in the teacher guidelines can be used to help observe, describe, compare and measure animals. (various post-trail activities that investigate characteristics of minibeasts can be found in exemplars 12,14, 18 and 19.

Other techniques for collecting

* Searching by hand; using plastic spoons/pooters – carry chunks of soil/leaf litter back to classroom and investigate further.
* Sweeping; using sweep nets through grasses/tall vegetation.
* Shaking; shake plant with ruler/stick, hold white sheet/bright umbrella underneath and examine what is collected.
* Sieving; used in river environment (sieve plants/animals from mud/water)
* Baiting; Pitfall trap – dig hole, place meat/fruit/sugary food in hole, cover trap with piece of bark.
* Flower-heads; place a polythene bag over a flower head and secure at base (for collecting insects and other small animals that visit and feed on flower heads)

The following activities incorporate some strand units into a science trail

1. **Light:**
* Blow bubbles watching the different colours that are caught; this introduces the colour spectrum (that white light can be split into a range of colours)
* Making shadows outdoors
	+ Long/short shadows.
	+ Making shadows when shaking hands.
	+ Standing so that your shadow is in front/behind you
	+ Can you hide your shadow? How?
	+ How is your shadow made?
	+ Can you make shadows on a cloudy day/at night time?
1. **Sound:**
* Going on a sound walk/sounds in the environment
	+ Birds
	+ Traffic
	+ Animals
	+ Church bells
	+ Machinery (types of agriculture in area etc.)
	+ Sounds of school (doors banging/talking/singing/reading etc.)

**Electricity**

* Observing electricity in the local environment
	+ Lights on in houses
	+ Cash registers in shops
	+ Overhead wires and cables
	+ House alarms
	+ Radios/televisions on.

(imagine Galbally 70 or 80 years ago, before electricity)

**Magnetism/Materials**

* In pairs or groups children predict/investigate objects that they think are magnetic. Why are these objects made of metal? Does it help their function?
	+ Sign posts
	+ Litter bins
	+ Letter box
	+ Hand rails etc.

**Forces**

* Investigate pushes and pulls in the area (doors, gates etc.)
* Observe friction in action (car breaking; friction between tyres and surface)

**Environmental Awareness**

* List the types of paper/plastic/glass/aluminium litter.
* Where was most of the litter?
* How long was it there?
* Count how many bins you passed.
* Uses of renewable and non-renewable resources (senior classes)
* Understand the need to conserve resources
	+ Recycling of materials
	+ Turning off lights
	+ Reducing amounts of water used for different activities
	+ Use of paper packaging in shops instead of plastic
	+ Use of reusable shopping bags.

**Reference Section**

* Curriculum documents for Science, Geography and History
* Primary School Curriculum, Your child’s learning, Guidelines for Parents
* NCCA Draft Guidelines for Teachers of Students with General Learning Disabilities, 2002
* Looking at our School, 2003, DES

Websites:

|  |  |
| --- | --- |
| PCSP  | [www.pcsp.ie](http://www.pcsp.ie) |
| SDPS | [www.sdps.ie](http://www.sdps.ie) |
| NCTE | [www.ncte.ie/internetsafety](http://www.ncte.ie/internetsafety) |
| DES | [www.education.ie](http://www.education.ie) |
| NCCA | [www.ncca.ie](http://www.ncca.ie) |
| INTO | [www.into.ie](http://www.into.ie) |
| IPPN | [www.ippn.ie](http://www.ippn.ie) |
| NPC Primary | [www.npc.ie](http://www.npc.ie) |

A list of other websites relating to science is available on the PCSP website.

APPENDIX 2

OVERVIEW OF OUR SCIENCE PLAN

**INFANTS**

***Year 1***

**STRAND UNITS**

* Myself
* Plants and Animals
* Heat
* Magnetism and Electricity
* Forces
* Materials: properties and characteristics of materials
* Caring for my locality

***Year 2***

**STRAND UNITS**

* Myself
* Plants and Animals
* Light
* Sound
* Materials and change

**FIRST AND SECOND CLASS**

***Year 1***

* Myself
* Plants and Animals
* Heat
* Magnetism and Electricity
* Forces
* Materials; properties and characteristics of materials
* Caring for my locality

**Year 2**

* Myself
* Plants and Animals
* Light
* Sound
* Materials and change

**THIRD AND FOURTH**

***Year 1***

* + Human Life
* Plants and Animal Life
* Heat
* Magnetism and Electricity
* Forces
* Materials; properties and characteristics of materials
* Caring for my locality
* Environmental Awareness

***Year2***

* Human Life
* Plant and Animal Life
* Light
* Sound
* Materials and change
* Science and the environment

**FIFTH AND SIXTH CLASSES**

***Year1***

* Human Life
* Plant and Animal Life
* Heat
* Magnetism and Electricity
* Forces
* Materials; properties and characteristics of materials
* Caring for my locality
* Environmental Awareness

***Year2***

* Human Life
* Plant and Animal Life
* Light
* Sound
* Materials and change
* Science and the environment

APPENDIX 3

Science Requisites

|  |
| --- |
| Horseshoe Magnets |
| Horseshoe Magnet (small) |
| Wand |
| Bar |
| Iron Fillings |
| Pack of small round Magnets |
| Tub of ball Magnets |
| Disc Magnets |
| Ring Magnets |
| Petri Dishes |
| Insect traps |
| Mini microscope/large microscope |
| Bug viewers |
| Pooters |
| Pull out – identification |
| Cards – Insects; Shorelife; - Wildflowers |
| Torches |
| Plastic Mirrors |
| Curved Mirrors |
| Concave/Convex Mirrors |
| Motor Pullies |
| Battery Holders |
| Tub of bulbs |
| Batteries |
|   |