Sonning Common Primary School

POLICY STATEMENT ON SCIENCE

Policy 5 Version 4

POLICY STATEMENT AND GUIDELINES ON SCIENCE

DEFINITION

Science knowledge is obtained by observation and experimentation and scientific method is a way of working which allows children, through practical first hand experiences and secondary sources, to develop their knowledge and understanding of the world in which they live. These experiences will allow them to observe, investigate, make sense of and communicate their findings.

Aims

To encourage children to:

- develop a questioning and inquiring mind through a range of interesting and enjoyable experiences.
- develop a systematic and logical way of working.
- apply skills and knowledge to investigations.
- gradually come to a deeper understanding of scientific concepts.
- work carefully and safely.

Teaching and learning

All children have access to science in the National Curriculum. It is generally organised on a two-year cycle throughout the school, though some areas are revisited more often. Science programmes of study are sometimes included in an overall topic but if there is not a strong link then Science is taught as a separate subject.

Science 1 Investigations

These are built into our schemes of work and children are expected to undertake whole investigations at least once a term. These may be at the beginning of a topic, as a way of finding out what children already know, or at the end of a topic to assess how well children have understood the work they have been doing. The three strands of AT1, planning experimental work, obtaining evidence and considering evidence, may also be addressed in isolation.

Skills and Attitudes

In our science activities we will develop the following skills:-

- to observe
- to raise questions
- to predict
- to hypothesize

- to plan
- to test fairly and to control variables
- to measure
- to collect and interpret data
- to explain evidence
- to communicate findings in a variety of ways.

Through science we will foster the following qualities:-

- curiosity
- perseverance
- open-mindedness
- self discipline
- sensitivity to others
- independence
- adaptability
- co-operation
- care for living things.

Equal opportunities

In line with our school policy on equal opportunities, all children are given plenty of first hand experiences of carrying out science work throughout their time at Sonning Common Primary School, regardless of their race, gender or ability.

Progression

We recognise that our curriculum planning must allow children to gain a progressively deeper understanding as they move through the school and on to the next school. This is achieved through thorough topic planning at the beginning of each term, staff discussion, assessments, record-keeping and cross-phase liaison meetings with staff at Chiltern Edge School, the school to which most of our children transfer.

Differentiation

We allow all children to reach their full potential by offering a range of activities in the classroom which meet the needs of the individual and where appropriate, groups of children. This is developed through our Schemes of work which have differentiation built into them so that tasks can be differentiated by outcome or by the nature of the task.

Information and Communication Technology

We see ICT as an important tool for use in science work. We aim to use ICT for collecting data and putting it in databases or spreadsheets. To use word processing programs for recording information and CD ROM's and the Internet for assessing and collecting information. To use light and temperature sensors to produce graphs.

Records and Assessment

A record is kept of topics covered in science and their work standard on a yearly record sheet. A comment will be made if a child has a particular strength or weakness in that

area. Teacher assessment will be taken at the end of Key Stage 1 and the SAT tests will be done at the end of Key Stage 2. Children will be continually assessed through the work they do and by more formal methods where appropriate. At the end of each module an assessment will be made, usually in a written test format. Once a year an investigation will be used as an assessment of the three strands of AT1.

Monitoring

Tasks include:-

- Co-ordinator to monitor guidelines, schemes of work and assessment including enrichment and extension for the more able and support for the less able.
- Co-ordinator to monitor progression within the subject area.
- To monitor the assessment timetable and build up a moderation file to include the moderated assessments. These will be one moderated assessment per term, one term being a moderated assessment of an AT1 investigation/experiment.
- To monitor work samples for consistency in marking.

Safety

It is important that children are taught to observe the rules of safety when carrying out experiments and investigations. Materials and equipment need to be handled sensibly and we will ensure that children do this. Teachers should be aware that the County has adopted as its Science Safety Policy the document published by the Association for Science Education entitled "Be Safe". This can be found on the science shelf in the staff room.

Resources

Some science resources are kept in the science trolley outside the TV room, while larger or heavier equipment is kept in the Science resources room behind the end classroom. The Infant department keeps a small stock of equipment in the Infant block.

Links within other curriculum areas

The six core skills that pervade the National Curriculum are numeracy; problem solving; study; social; communication and ICT. Of these communication and ICT are particularly relevant to science. Pupils will be taught to express themselves clearly in speech and in writing, to use appropriate scientific vocabulary and to use a variety of ways to present information. Forms of communication will include

- Oral communication
- Written communication
- Graphic communication
- Other forms of communication eg photography, audio and video recordings, dramatic productions and ICT.

These communication skills link closely with the skills being developed in literacy.

Science links with numeracy in the measuring of weight, time, temperature and length and being able to interpret different scales and markings on the equipment. Also there are links with numeracy in the drawing, collating and presenting of information in graphs, tables and charts.

Science Year 1 - Programme of Study

AT 1 - Experimental & Investigative Science.

Develop an awareness of Science in everyday life.
Opportunities to discover through play and to develop observational skills.
Develop language and the ability to communicate.
Introduce new scientific terms, which do not arise during discussions.
Encourage children to ask questions and answer by providing opportunities for them to question each other.
Provide experience of sorting according to shape, colour, size etc.
Investigate ideas which arise from sorting activities.
Ask children to make predictions. Use everyday examples, since many children may have no experience yet of scientific equipment.
Introduce measuring using non-standard units.
Use appropriate senses to obtain evidence.
Introduce fair testing.

AT 2 - Life Processes and Living Things.

Differences between things that are living and things that have never been alive.
Animals move, feed, grow, use their senses and reproduce - needs and characteristics of animals.
Name body parts.
Role of drugs as medicine - people who help us.
Humans produce babies and these babies grow into children and then into adults.
Plants need light and water to grow.
Recognise and name parts of a plant.
Recognise similarities and differences between themselves and other pupils.
Living things can be grouped according to observable similarities and differences.
Different kinds of plants and animals in the local environment - the school.

AT 3 - Materials and their Properties.

Use the senses to explore and recognise the similarities and differences between materials.
Sort materials into groups on the basis of appearance.
Recognise and aim to use the correct names for common types of material.
Know that many materials have a variety of uses.
Know that materials are chosen for specific uses on the basis of their properties.
Objects made from some materials can be changed in shape.
Describe the way some everyday materials change when they are heated or cooled.

AT 4 - Physical Processes.

Many everyday appliances use electricity - include safety issues.

Describe the movement of familiar things getting faster, slowing down, changing direction - toys.
Both pushes and pulls are examples of forces - toys.
Light comes from a variety of sources, including the sun.
Darkness is the absence of light.
There are many kinds of sound and many sources of sound.
Sounds are heard when they enter the ear - what are ears for?

Science Year 2 - Programme of Study

AT 1 - Experimental & Investigative Science.

Encourage the use of more specific scientific language.
Encourage children to choose their own criteria for sorting.
Begin to turn their own ideas into a form which can be investigated.
Investigate ideas arising from class discussion.
Think about the outcome when planning an investigation.
Encourage the children to move towards fair testing by using examples and considering if the test is fair.
Encourage children to recognise and accept when their predictions are wrong.
Further develop measuring abilities by using standard and non-standard units.
Make a record of observations and measurements using different methods.
Be able to recount what happened during their work.
Make simple comparisons.
Begin to use results to draw conclusions.
Begin to use their own knowledge and understanding to explain what they found out.

AT 2 - Life Processes and Living Things.

Animals, including humans move, feed, grow, use their senses and reproduce - human requirements for life
Humans need food and water to stay alive.
Taking exercise and eating the right types and amount of food help humans to keep healthy.
Humans have senses which enable them to be aware of the world around them.
Plants need light and water to grow.
Recognise the names of parts of a flower.
Flowering plants grow and produce seeds which, in turn, produce new plants.
There are different kinds of plants and animals in the environment - the local environment.
There are differences between local environments and that these affect which animal and plants are found there - comparison of environments within the school and village area.

AT 3 - Materials and their Properties.

Use senses to explore and recognise the similarities and differences between materials.
Sort materials into groups on the basis of type.

Recognise and name common types of materials and study man-made and natural materials.
Know that many materials have a variety of uses.
Know that materials are chosen for specific uses on the basis of their properties.
Objects made from some materials can be changed in shape.
Describe the way some everyday materials change when they are heated or cooled.

AT 4 - Physical Processes.

Construct simple circuits involving batteries, wires, bulbs and buzzers. Revise safety issues.
Electrical devices will not work if there is a break in the circuit.
Describe the movement of familiar things - extend by making a magnetic fishing game.
Forces can make things speed up, slow down or change direction.
Forces can change the shapes of objects.
Light comes from a variety of sources including the sun - extend Year 1 work.
Darkness is the absence of light - shadows and candles.
Sound travels away from sources, getting fainter as they do so.
Sounds are heard when they enter the ear - introduce vibrations and look at vibrating elastics and rulers.

Science Year 3 - Programme of Study

AT 1 - Experimental & Investigative Science.

Adopt an idea as his/her own in a class brainstorming session and plan an investigation.
Develop their idea of fair testing and begin to recognise when a test is unfair.
Take their own predictions into account when planning what to do.
Begin to think independently of what apparatus and equipment they need.
Use simple equipment correctly.
Take time to make careful observations.
Begin to use tables and bar charts to present information.
Understand whether the evidence collected supports any prediction made.
Aim to present results in an organised way.

AT 2 - Life Processes and Living Things.

Life processes common to all animals including humans - growth and reproduction, - nutrition, movement and the skeleton.
The main stages of the human life cycle.
The functions of the teeth and the importance of dental care.
Food is needed for activity and for growth, and that an adequate and varied diet is needed to keep healthy.
Humans have skeletons and muscles to support their bodies and to help them to move.
Different animals are found in different habitats.

AT 3 - Materials and their Properties.

Compare everyday materials on the basis of their properties - building materials.
Some materials are better thermal insulators than others - building materials.
Some materials are better electrical conductors than others - building materials and electricity.
Mixing materials causes them to change - building materials.
Heating and cooling materials can cause them to change and that temperature is a measure of how hot or cold they are - using a thermometer, building materials or could look at heating and cooling chocolate, ice, margarine, bread.
Describe and group soils on the basis of their characteristics
Some changes can be reversed and some cannot.
Describe and group rocks on the basis of characteristics, texture and appearance.

AT 4 - Physical Processes.

A complete circuit, including a battery or power supply, is needed to make electrical devices work - conductors and insulators, make a working lighthouse, introduce standardised diagrams, application and knowledge of safety.
There are forces of attraction and repulsion between magnets, and forces of attraction between magnets and magnetic materials - toys and magnetism.
When springs and elastic bands are stretched they exert a force on whatever is stretching them - toys.
When springs are compressed they exert a force on whatever is compressing them - toys.

Science Year 4 - Programme of Study

AT 1 - Experimental & Investigative Science.

Turn their own ideas into a form that can be investigated.
Have ideas about what evidence should be collected.
Develop their ideas about fair testing.
Begin to make more careful observations and improve their accuracy in taking measurements.
Use tables and bar charts more accurately.
Make comparisons within the results gained.
Begin to be able to evaluate the evidence collected
Use their results to draw conclusions.

AT 2 - Life Processes and Living Things.

Life processes common to all plants.
Life cycle of flowering plants - pollination and seed production, seed dispersal and

germination.
Locally occurring animals and plants can be identified and assigned to groups using keys.
Different plants are found in different habitats, revise animal habitats.
Animals and plants in two different habitats are suited to their environment.
Food chains show feeding relationships in an ecosystem.
Nearly all food chains start with a green plant.

AT 3 - Materials and their Properties.

Know what soil is made from. Know that soil absorbs water, has air spaces and is porous.
Solid particles of different sizes can be separated by sieving.
Identify and classify different rocks.

AT 4 - Physical Processes.

Objects have weight because of the gravitational attraction between them and the Earth.
Friction, including air resistance, as a force which slows moving objects - AT1 investigation : Which shoes have the best grip?
Light travels from a source.
Light cannot pass through some materials and that this leads to the formation of shadows - transparent, translucent and opaque.
Light is reflected from surfaces e.g. mirrors, polished metals.
We see light sources e.g. light bulbs, candles, because light from them enters our eyes - light comes from the object NOT from our eyes.
Sounds are made when objects e.g. strings on a musical instrument, vibrate but that vibrations are not always directly visible - revise basic work done in Year 2, look at musical instruments and make own instrument.
The pitch and loudness of sounds produced by some vibrating objects e.g. a drum skin, a plucked string, can be changed - discussion on how to vary pitch and loudness.
Vibrations from sound sources can travel through a variety of materials e.g. metals wood, glass, air, to the ear - string telephones.
The Sun, Earth and Moon are approximately spherical.
The position of the Sun appears to change during the day.

Science Year 5 - Programme of Study

AT 1 - Experimental & Investigative Science.

Develop a structured approach to planning an investigation:
a) prediction
b) consideration of the appropriate equipment and apparatus
c) consideration of the variables which could influence the result and what evidence should be collected.
Use equipment correctly.
Check observations and measurements by repeating them.

Aim to identify trends or patterns in results.
Decide whether the evidence collected supports any prediction made.

Try to explain conclusions in terms of scientific knowledge and understanding.

AT 2 - Life Processes and Living Things.

A simple model of the structure of the heart and how it acts as a pump.
How blood circulates around the body through arteries and veins.
The effect of exercise and rest of pulse rate - all related to health.
Plant growth is affected by the availability of light and water and by temperature - AT1 investigation.
Plants need light to produce food for growth, and the importance of the leaf in this process.
The root anchors the plant and water and nutrients are taken in through the root and transported through the stem to other parts of the plant.
The life cycle of flowering plants, including pollination, seed production, seed dispersal and germination.
Food chains show feeding relationships in an ecosystem.
Nearly all food chains start with a green plant.

AT 3 - Materials and their Properties.

Compare everyday materials on the basis of their properties - packaging.
Some materials are better thermal insulators than others - packaging.
Some materials are better electrical conductors than others - to be covered in the Electricity module.
Recognise differences between solids, liquids and gases in terms of ease of flow and maintenance of shape and volume.
Dissolving, melting, boiling, condensing, freezing and evaporating are changes that can be reversed - the water cycle.
The water cycle and the part played by evaporation and condensation.
Solids that have dissolved can be recovered by evaporating the liquid from the solution.

AT 4 - Physical Processes.

A complete circuit, including a battery or power supply, is needed to make electrical devices work - revise Year 3 work, make puzzle boxes, quiz boards.
Switches can be used to control electrical devices - making switches.
How to represent series circuits by drawings and diagrams, and how to construct series circuits on the basis of drawings and diagrams - further diagrams of series circuits.
Forces act in particular directions - floating and sinking - boats.
Forces acting on an object can balance e.g. in a tug of war, on a floating object, and that when this happens an object at rest stays still - floating and sinking, upthrust.
Unbalanced forces can make things speed up e.g. an apple being dropped, slow down e.g. a shoe sliding across the floor, or change direction e.g. a ball being hit by a bat.
Revise magnets - N & S poles, magnetic and non-magnetic materials.

Science Year 6 - Programme of Study

AT 1 - Experimental & Investigative Science.

Improve their overall skills in planning experimental work, obtaining evidence and considering evidence. Also

1. Be able to put into practice all the skills learned in earlier years and plan their own experimental work -
   - making predictions, turning their own ideas into a form which can be investigated,
   - deciding what evidence should be collected,
   - carrying out a fair test by changing only one factor
   - use their own experience to consider what apparatus and equipment should be used.
2. Obtain evidence
   - using equipment correctly,
   - make careful observations and measurements and check these by repeating them if necessary.
3. Consider the evidence gained objectively,
   - use tables, bar charts and line graphs to present their results.
   - use the evidence to make comparisons and to identify trends or patterns in the results.
   - use these results to draw conclusions.
   - decide whether the evidence collected supports any prediction made.
   - try to explain conclusions in terms of scientific knowledge and understanding

AT 2 - Life Processes and Living Things.

There are life processes, including nutrition, movement, growth and reproduction, common to animals, including humans - growth and reproduction.
The main stages of the human life cycle.
Tobacco, alcohol and other drugs can have harmful effects.
Micro-organisms exist and many may be beneficial e.g. in the breakdown of waste, while others may be harmful e.g. in causing disease.

AT 3 - Materials and their Properties.

The changes that occur when most materials are burned are not reversible
Some solids dissolve in water to give solutions but some do not.
Insoluble solids can be separated from liquids by filtering.
There is a limit to the mass of solid that can dissolve in a given amount of water, and that this limit is different for different solids - AT 1 investigation.

AT 4 - Physical Processes.

When springs and elastic bands are stretched they exert a force on whatever is stretching them. - Design and build a vehicle which will move easily across the floor. Find three ways to make it move without touching it.
When springs are compressed they exert a force on whatever is compressing them.
Forces act in particular directions.
Unbalanced forces can make things speed up e.g. an apple being dropped, slow down e.g. a shoe sliding across the floor, or change direction e.g. a ball being hit by a bat - build a see-saw. How can a 100g weight be lifted by 20g?
Light travels from a source.
Light cannot pass through some materials and that this leads to the formation the shadows.
Light is reflected from surfaces e.g. mirrors and polished metals - AT 1 investigation - Which shiny material works best as a mirror?
We see light sources e.g. light bulbs, candles, because light from them enters our eyes - the eye and how we see.
Sounds are made when objects e.g. strings on a musical instrument, vibrate but that vibrations are not always directly visible - musical instruments.
The pitch and loudness of sounds produced by some vibrating objects e.g. a drum skin, a plucked string, can be altered - discussion of frequency and amplitude.
Vibrations from sound sources can travel through a variety of materials e.g. metals, wood, glass, air, to the ear - AT 1 investigation What things affect how well you can hear a sound?
The Earth is spinning around its own axis, and day and night are related to this spin.
The Earth orbits the Sun once a year and the Moon takes approximately 28 days to orbit the Earth.
Shadows change position as the Sun appears to change its position in the sky.

Science Resources

Trolley outside the TV room

magnifying glasses
marbles
balloons, balloon pump
clothes pegs
thermometers
stop-watches
paper fasteners
flashlights
goggles
mirrors
lenses
pots with magnifying lids
1 large magnifying sheet

Electricity:

- wires with crocodile clips
- assorted lengths of wire
- bulbs and bulb-holders
- batteries
- buzzers
- motors

Science Resource Room

On Maths side of the room
shells, starfish, seahorse, coral
fossils
assorted and interesting rocks
wood, bark, horns, cones
honeycomb
coal
butterfly and moth collection
birds' eggs collection
Galt geology set
geological specimens
coloured acrylic pieces
bike parts
wool carding set
pulley frames
ramp

shelves on the right
8 large black pulleys
9 large blue pulleys
3 large red pulleys
1 medium red pulley
6 small red pulleys
gears of assorted ratios

Heat:
- 2 ceramic tiles
- candle night lights
- bi-metallic strip
- ball + hole expt + instructions
- copper, brass, iron + aluminium expansion experiment
- lighting tapers
- 3 metal gauzes

Light and colour:
- thin coloured acetate sheets and pieces
- Osmiroid light box and instructions
- string of plastic colour plates
- 2 box cameras
- 4 wooden lens holders
- colour filters (acetate sheets) and cardboard holders
- 3 small triangular prisms
- 4 long triangular prisms
- 1 isosceles prism
- 1 long triangular water prism
- 5 periscope templates
- 1 compact
- 1 cylindrical bi-concave lens
- 1 cylindrical bi-concave lens
- 3 circular bi-concave lenses
- 1 circular bi-convex lens
- various rolls of coloured acetate for cutting up
- 1 set paddle shaped acetate colour filters

Magnets:
- 12 iron filings shakers

4 sets large, med + sm horseshoe magnets
jar iron filings
self adhesive magnetic strips
12 compasses
horseshoe magnets) of varying
bar magnets) effectiveness
box of items to test for magnetism

Heron air and water pack

Weather:
- wind sock
- 2 plastic rain gauges
- wind meter
- room thermometer
- weather vane
- large thermometer

Soil auger

Under bottom shelf

telephones
bricks, building materials
petri dishes
plastic test tubes with lids
large & small plastic syringes

Middle shelf

8 lge peg-type test-tube holders
pin-hole camera (biscuit tin)
box clear plastic containers with lids
red litmus paper
2 displacement pots
ball on a stick (for Earth and beyond work)
2 tuning forks
battery charger
funnels

Top shelf

5 microscopes
glass test-tubes and wooden racks
4 retort stands with clamps
4 triangular metal stands
long handled nets
length of guttering with sealed ends (floating and sinking)

Human biology:
- Osmiroid smoker
- models of teeth
- small human skeleton model
- assorted bones and skulls
- ink stamp of body systems & ink pad
- large model of human body

- assorted cardboard tubes
- filter paper
- a tyre
- plastic sheeting

- pivot / fulcrum
- tray of different types of sand

plant pots
- seed trays
- soil test kit
- Ant town
- assorted buttons
- bag of different types of soil
- plastic tubing

Infant Resources *Cupboard outside Mrs. Pound's room*

Dowel
wooden wheels
fasteners
magnets
candles
pipettes
cardboard discs
funnels
thermometers
viewers

balloons and pump
filter papers
mirrors
magnifying glasses
bug boxes

SCIENCE BOOK LIST
(Books to be found in the staffroom)

Be Safe. ASE Publication on safety in Science teaching.

Blueprints. Teacher book Key Stage 2
Blueprints. Photocopiable pupil book

Nuffield Primary Science KS2.
Rocks, soil and weather
Materials
The variety of life
Living processes
Living things in their environment
Using energy
Forces and movement
Sound and music
The earth in space.

Science Scene Setters.
Heat (2 copies)
Air (2 copies)
Flight (2 copies)
Water (2 copies)
Forces (2 copies)

Learning through Science. (Macdonald Educational).
Fabrics & Fibres
Earth
Out of doors
Sky and Space
On the move
Which and what
Time growth and change
All around
Seeds and seedlings

Teaching and Understanding Science - G Peacock & R Smith.

Energy in Primary Science.
1. Mechanical energy
2. Sound
3. Magnetism and electricity
4. Chemical energy food and fuels
5. Light
6. Heat
7. Sources and resources

8. Energy and the environment

Macdonald Primary Resource Pack.

change
energy
environment
a local study

O.C.C. Problem solving 1987.

Search out science (2 copies)

Book 1. Communication and Structures
Book 2. Planet earth, moving about.

Starting Science. Working models.

The story of gas (30 copies)

The energy pack (BNFL)

Salt (blue cardboard folder)

O.C.C. Observe devise and test 1984

O.C.C. Paper and paste

Integrated approach to light (2 sheets)

CLEAPS Booklets

Elementary photography
Egg Incubation
Cold water aquaria

Paints - IC young scientists project.

Science and Technology from topics.

Topics from your tidy box.

Science from your shopping basket.

The lighthouse Keepers Catastrophe - cross curricular planning.

Oil - Grangemouth (BP).

Roehampton Racer - instructions.

Topics - Litter/Environmentally friendly.

A Day on the Farm - Health and Safety Executive.

The farming industry

Bees (Blue cardboard folder)

Life cycle

The Bat Pack

OCC.

Ponds and minibeasts
Science activities from stories and rhymes
Trees and plants
In the ground
Forces
Levers
Building and structures
Problem solving
Supporting Science with games
Light and colour
Science investigations from stories and rhymes
Collect borrow or buy
Castles

Science in a topic - food (book)

Containers folder (2 copies)

Insects Guinness Resource Pack

Brainwaves Science (Lower Junior)

SATIS 8 - 14 Science and Technology in Society

What's your reaction? - background reading for primary science teachers

Fresh start (folder) - fruit and vegetables

Into Science (Oxford book)

The Sun (BP)

Live it up (folder about food)

The power water pack (folder)

The reservoir book (cross curricular)

'Look' workcards

Science in a topic -Kincaid and Coles
In the air
Clothes and costumes
Communication
Ships
Sports and games

Teaching Primary Science - Macdonald Ed.

Candles

Natural Science Books - A James
Books 1,2,3,4

Action Science - A James
Books 1 & 2

The 3rd book of experiments - L De Vries

Mcdonald Educational Science 5 - 13
Early experiences
Learning through Science
With objectives in mind
Minibeasts
Early explorations
Investigations
Tackling problems
Ways and means
Change
Science from toys
Working with wood
Like and unlike
Holes, gaps and cavities
Metals
Structures and forces
Children and plastics
Ourselves
Science models and toys

Fabrics and Fibres - Mac Ed.

Exploring science books 1,2,3, & 4

Science and water - S. F. King

Biology - introducing living things - Longman

All about me - early years of schooling 5 - 8

Assessment

Detectives Book 1 KS2 Collins Primary Science

Nelson Assessment tests for KS1
Assessment tests for KS2

SCAA Knowledge and understanding guide for teachers:

Genetics and Ecology
Forces

Electricity for Life-2. In the Environment
3. Communications
4. Industry and commerce

Steel and motorways curriculum pack for KS1 and KS2

Scholastic practical guides: Science

Starting points in Physical Science

Inputs - A question of Science - Science information for primary teachers

Curriculum Map for Science

	Autumn	**Spring**	**Summer**
Year 3	Forces (5 wks)	Materials (7 wks)	Human body and life processes of human and animals (6 wks)
	Electricity (6 wks)	Rocks and soils (2 wks)	Animal habitats (1 wk)
Year 4	Light (4 wks)	Earth & beyond (4 wks)	Life processes common to plants (4 wks)
	Sound (4 wks)	Solids (2 wks)	Plant & habitats (4 wks)
	Forces (6 wks)	Food chains (2 wks)	Classification of plants (2 wks)
Year 5	Humans (4 wks) Water Cycle (2 wks) Solids, liquids and gases (2 wks) Forces (floating and sinking) (4 wks)	Materials Packaging (6 wks) Magnetism Electricity (4 wks)	Plants (7 wks) Food chains Human/animal (1 wk) Classification Animals/Insects (2 wks)
Year 6	Light and the Earth & beyond (6 wks) Forces (2wks) Sound (4 wks) Microorganisms Separating AT1 skills	Humans (6 wks) Burning dissolving and filtering (4 wks) Overall Revision	Science/ Design Technology on a chosen theme

Number of weeks are approximate

YEAR 1 - 2 year plan

	Autumn	**Spring**	**Summer**
1st Year	Plants Sorting Humans Senses Light	Classifying Light Electricity Sound Animals	Materials Forces Habitats Plants Life Cycles
On-going Activities	Weather Road Safety	Seasons Cooking	Modelling Materials

YEAR 2 - 2 year plan

	Autumn	**Spring**	**Summer**
1st Year	Electricity Magnets Materials	Senses Light Sound	Living things Habitats
On-going Activities	Weather Road Safety	Seasons Cooking	Modelling materials

For mor detail refer to Curriculum 2000 document.

SCIENCE RECORD

NAME ..... YEAR 1

MODULE	COMMENT
AT2 Life Processes and Living Things	
Classify into living and non-living	weak average good
Name parts of the body (head, neck, chest, elbow, knee) Name parts of a plant (leaf, flower, stem, root)	weak average good weak average good
AT3 Materials/Properties	
Classify/sort things into plastic, metal, paper and wood	weak average good
AT4 Physical Processes	
Able to identify light sources Able to name 4 appliances that need electricity Predicting where a shadow will fall	weak average good weak average good weak average good
AT1 Task: Ice cube investigation Task: Where do we put seeds to grow ? Task: Food investigation	 w a g Date ..... w a g Date ..... w a g Date .....

SCIENCE RECORD

NAME ..... YEAR 2

MODULE	COMMENTS		
Animals and humans	weak	average	good
Plants	weak	average	good
Materials	weak	average	good
Change	weak	average	good
Electricity	weak	average	good
Forces	weak	average	good
Light	weak	average	good
Sound	weak	average	good
Attainment Target 1 Planning	weak	average	good
Obtaining evidence	weak	average	good
Considering evidence	weak	average	good
Whole investigations			

SCIENCE RECORD

NAME ..... YEAR 3

MODULE	COMMENTS		
Animals and humans	weak	average	good
Habitats	weak	average	good
Building materials	weak	average	good
Change	weak	average	good
Separation	weak	average	good
Electricity	weak	average	good
Forces	weak	average	good
Attainment Target 1 Planning	weak	average	good
Obtaining evidence	weak	average	good
Considering evidence	weak	average	good
Whole investigations			

SCIENCE RECORD

NAME ..... YEAR 4

MODULE	COMMENTS		
Life processes of plants	weak	average	good
Keys	weak	average	good
Habitats	weak	average	good
Food chains	weak	average	good
Forces	weak	average	good
Light	weak	average	good
Sound	weak	average	good
The Earth and beyond	weak	average	good
Rocks and soil	weak	average	good
Attainment Target 1 Planning	weak	average	good
Obtaining evidence	weak	average	good
Considering evidence	weak	average	good
Whole investigations			

SCIENCE RECORD

NAME ..... YEAR 5

MODULE	COMMENTS		
The human body	weak	average	good
Plants	weak	average	good
Food chains	weak	average	good
Packaging materials	weak	average	good
Solids, liquids and gases	weak	average	good
Water cycle processes	weak	average	good
Electricity	weak	average	good
Forces	weak	average	good
Attainment Target 1 Planning	weak	average	good
Obtaining evidence	weak	average	good
Considering evidence	weak	average	good
Whole investigations			

SCIENCE RECORD

NAME ..... YEAR 6

MODULE	COMMENTS		
Life processes	weak	average	good
Drugs	weak	average	good
Micro-organisms	weak	average	good
Change	weak	average	good
Forces	weak	average	good
Light	weak	average	good
Sound	weak	average	good
The Earth and beyond	weak	average	good
Attainment Target 1 Planning	weak	average	good
Obtaining evidence	weak	average	good
Considering evidence	weak	average	good
Whole investigations			

AMENDMENT SHEET FOR ALL POLICY STATEMENTS

POLICY ON SCIENCE
POLICY NUMBER 5 Version 4

DATE POLICY RATIFIED; AUTUMN 1996
DATE POLICY LAST REWRITTEN; SPRING 2001

Review Date	Page	Line	Amendment
Summer 1998			New Records
Autumn 1999			Rewritten
Spring 2001			Rewritten