



Explore Discover Reason Achieve

`Aspiring to Excellence`

Science Policy 2017

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Introduction to the Science Policy

Children show a fascination and curiosity for how things work and the world around them. At Stourport Primary Academy, we believe that feeding children's inquisitiveness will support them in making sense of scientific problems they will face. As teachers and facilitators, it is our responsibility to direct the learning to provide opportunities for investigative enquiry, observation and evaluation. Along with guiding children to develop a passion and resilience that they need to achieve and deepen their scientific understanding.

Purpose of study

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to justify their explanations, and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes (National Curriculum for Science 2015).

Aims

At Stourport Primary Academy we believe that the teaching and learning of science should inspire and excite children's curiosity about the world around them. We aim to provide our children with plenty of opportunities to carry out practical investigations and to aid their learning through observations. Children will be taught how to develop their line of scientific enquiry through effective questioning and discussion.

Children will be given the opportunity to challenge and ultimately improve their prior understanding of science. A range of practical experiences set in meaningful contexts will enable children to develop a range of investigative skills and allow them to 'Work Scientifically'. We aim to allow children the chance to take risks and learn from their mistakes; ultimately developing them into independent, resilient learners.

Through the effective application of the curriculum we aim to:

- Prepare our children for life in an increasingly scientific and technological world.
- Foster concern about, and active care for, our local and global environment.
- Enable learners to appreciate the everyday applications of science, both positive and negative.
- Help develop and extend our children's scientific perceptions of the world.

Through effective planning and a high standard of teaching we aim to:

- Set suitable learning objectives to develop the depth and breadth of children's understanding.
- Have access to a consistently high level of teaching in all science lessons.
- Receive the appropriate assistance and intervention to aid their understanding of scientific concepts.
- Receive regular feedback in accordance with the school's marking policy.

We also aim to work on children's attitudes towards scientific learning by:

- Encouraging the development of positive attitudes towards science.
- Building on our children's natural curiosity by developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and responsibility.
- Building our children's self-confidence to enable them to work independently.
- Developing our children's social skills to work cooperatively with others.
- Providing our children with an enjoyable experience of science, so that they will develop a deep and lasting interest that may be motivated to study science further.

Planning

The planning of science at Stourport Primary Academy is to be completed in conjunction with the 2015 National Curriculum. Science is to be planned for thematically, where applicable, but is primarily to be taught and planned for discretely once a week in each class. Science is to be planned for using a short term plan which aims to highlight: the key objectives; core knowledge to be covered in that lesson; the main activities for learning; and the assessment for learning. By the end of the academic year, the expectation for each year group is to have completed the program of study, to ensure maximum coverage of the curriculum and exposure to scientific enquiry.

Differentiation

The study of science will be planned to give pupils a suitable range of activities appropriate to their age and abilities. Tasks will be set which challenge all pupils; beginning with a basic expectation for all to complete, which will lead onto activities showing evidence of a greater understanding by individuals. For pupils with Special Educational Needs (SEN) the task will be adjusted accordingly, and if necessary pupils may be given extra support and time to complete activities. The grouping of pupils for practical activities will take account of their strengths and areas of development to ensure that all take an active part in the task and gain in confidence.

Higher Achievers and SEND in Science

Higher achievers can be identified at any point in their education at Stourport Primary Academy. Those individuals will be expected to develop further understanding by drawing on their knowledge of the curriculum and applying across other areas of the curriculum (e.g. forces and Space). They will also be expected to provide evidence of this deeper understanding when creating a hypothesis or concluding an investigation; this can be evidenced in a way that suits the child's learning but will draw on other areas of the science curriculum to explain their reasons.

Lower achievers and children with SEND can also be identified throughout their education at Stourport Primary Academy. Children identified with a specific need or lower achievers will be supported through practical based learning, more dialogue around the subject focus, along with note taking and scribing support. Lower achievers will be expected to achieve the basic level of understanding and where support has been given this will be documented through annotations on their work.

Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically	<p>Explain why some things occur.</p> <p>Talk about the things that have been observed.</p> <p>Familiarisation of investigative procedure.</p>	<p>Beginning to ask simple questions and recognising that they can be answered in different ways.</p> <p>Beginning to observe more closely, using simple equipment.</p> <p>Beginning to perform simple tests.</p> <p>Beginning to identify and classify.</p> <p>Beginning to use their observations and ideas to suggest answers to questions.</p> <p>Beginning to gather and record data to help in answering questions.</p>	<p>Ask simple questions and recognising that they can be answered in different ways.</p> <p>Observe more closely, using simple equipment.</p> <p>Perform simple tests.</p> <p>Identify and classify.</p> <p>Use their observations and ideas to suggest answers to questions.</p> <p>Gather and record data to help in answering questions.</p>	<p>Beginning to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Beginning to identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Beginning to use straightforward scientific evidence to answer questions or to support their findings.</p> <p>Beginning to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Beginning to gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>Beginning to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Beginning to set up simple practical enquiries, comparative and fair tests.</p> <p>Beginning to make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> <p>Beginning to ask relevant questions and using different types of scientific enquiries to answer them.</p>	<p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Setting up simple practical enquiries, comparative and fair tests.</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> <p>Asking relevant questions and using different types of scientific enquiries to answer them.</p>	<p>Beginning to identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Beginning to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Beginning to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Beginning to record data and results of using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Beginning to use test results to make predictions to set up further comparative and fair tests.</p> <p>Beginning to report and represent findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p>	<p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Using test results to make predictions to set up further comparative and fair tests.</p> <p>Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p>

Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants	<p>Make observations of plants.</p> <p>Talk about similarities and differences.</p>	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>Observe and describe how seeds and bulbs grow into mature plants</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.</p> <p>Investigate the way in which water is transported within plants.</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	Not a requirement.	Not a requirement.	Not a requirement.
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Seasonal changes	<p>Discuss similarities and differences of places and living things.</p> <p>Talk about features of their environment and how they change.</p>	<p>Observe changes across the four seasons.</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p>	Not a requirement	Not a requirement	Not a requirement	Not a requirement	Not a requirement
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Animals including humans	<p>Make observations of animals and talk about differences.</p> <p>Know about similarities and differences between living things.</p>	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and</p>	<p>Notice that animals, including humans, have offspring which grow into adults.</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p>	<p>Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and</p>	<p>Describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Identify the different types of teeth in humans and their simple functions.</p> <p>Construct and interpret a variety of food chains (see Year 2 living things and</p>	Describe the changes as humans develop to old age.	Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.

		<p>omnivores.</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</p> <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p>	<p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>movement.</p>	<p>their habitats), identifying producers, predators and prey.</p>		<p>Describe the ways in which nutrients and water are transported within animals, including humans.</p>
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Living things and their habitats	<p>Discuss similarities and differences of places and living things.</p> <p>Discuss how environments vary.</p>	Not a requirement	<p>Explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</p> <p>Identify and name(habitats) a variety of plants and animals in their habitats, including micro-habitats.</p> <p>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain (see Year 4</p>	Not a requirement	<p>Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment (See year 6 living things).</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the life process of reproduction in some plants and animals.</p>	<p>Describe how living things are classified (See year 4 living things).into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>

Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Evolution and inheritance</p> <p>Taught in year 6 - however, build up across the years.</p>	Not a requirement	Not a requirement	<p>Animals and identify and name different sources of food.</p> <p>Living things and habitats – how conditions affect the plants/animals that live there.</p> <p>Animals including humans – animals have offspring.</p>	<p>Rocks – Fossils.</p> <p>Living things and habitats – living things can be groups/classification/changes to environment.</p>	Habitats - producers, predators and prey.	Habitat – differences in lifecycles/reproduction.	<p>Recognise that living things have changed over time and that fossils (See year 3 Rocks topic) provide information about living things that inhabited the Earth millions of years ago</p> <p>Recognise that living things produce offspring (See year 2 'Animals') of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Everyday uses of materials(KS1)</p> <p>States of matter(LKS2)</p> <p>Properties and changes of materials(UKS2)</p>	<p>Know about similarities and differences of objects and materials.</p> <p>Explain why things occur and talk about changes.</p> <p>Know properties of some materials and suggest purposes.</p> <p>Familiar with basic scientific concepts (floating/sinking).</p>	<p>Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Describe the simple physical properties of a variety of everyday materials.</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	Not a requirement	<p>Compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p>	Not a requirement

		properties.				<p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p>	
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Rocks		Not a requirement	Not a requirement	<p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p>Describe in simple terms how fossils (See year 6 evolution) are formed when things that have lived are trapped within rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p>	Not a requirement	Not a requirement	Work on fossils to form basis of 'Evolution and inheritance'.
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Forces and magnets(LKS2)</p> <p>Forces (UKS2)</p>	<p>Talk about magnetic and non-magnetic metals.</p> <p>Experiment with properties of materials.</p> <p>Similarities and differences.</p>	Not a requirement	Not a requirement	<p>Compare how things move on different surfaces.</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>Observe how magnets</p>	Not a requirement	<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction, that act</p>	Not a requirement

				<p>attract or repel each other and attract some materials and not others.</p> <p>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.</p> <p>Describe magnets as having two poles.</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>		<p>between moving surfaces</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electricity		Not a requirement	Not a requirement	Not a requirement	<p>Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p>	Not a requirement	<p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</p> <p>Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>

Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Light		Not a requirement	Not a requirement	<p>Recognise that they need light in order to see things and that dark is the absence of light.</p> <p>Notice that light is reflected from surfaces.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by a solid object.</p> <p>Find patterns in the way that the size of a shadows changes.</p>	Not a requirement	Not a requirement	<p>Recognise that light appears to travel in straight lines</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Sound	<p>Musical instruments.</p> <p>Loud and quiet.</p>	<p>Not a requirement – link with Materials</p> <p>Cross curricular link to music.</p>	<p>Not a requirement - link with Materials</p> <p>Cross curricular link to music.</p>	<p>Not a requirement</p> <p>Cross curricular link to music.</p>	<p>Identify how sounds are made, associating some of them with something vibrating.</p> <p>Recognise that vibrations from sounds travel through a medium to the ear.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p>	<p>Not a requirement - link with Materials and States of Matter (prior knowledge in Year 4).</p> <p>Cross curricular link to music.</p>	<p>Not a requirement</p> <p>Cross curricular link to music.</p>

					Recognise that sounds get fainter as the distance from the sound source increases.		
Topic	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Earth and space		Not a requirement Year 1/2 'outer space' topic.		Not a requirement	Not a requirement	Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	Not a requirement

Science links across the Curriculum

Science is seen as being particularly linked to work in other curriculum areas. Science provides opportunities for teaching many cross-curricular areas. For example:

- Mathematics
- Literacy
- Environmental Education
- Health Education
- Physical Education

Science saturates every aspect of our lives and we will endeavour to relate it to all areas of the curriculum. Providing our children with scenarios and opportunities to learn, practice, consolidate and build on as many skills linking subjects to science is paramount for their academic development. As facilitators, we will not only emphasise the positive effects of science on the world but also include problems, which some human activities can produce.

To develop pupils' use of information and communication technology (ICT) in their Science studies

- To give pupils opportunities to use ICT (including digital microscope, video, iPads, digital camera, data logger) to record their work and to store results for future retrieval throughout their Science studies.
- To give pupils the chance to obtain information using CD-ROMs and other data bases.

Teaching

All lessons have clear Learning Objectives and Success Criteria. A variety of strategies, including questioning, discussion, and marking, are used to assess progress. Activities inspire the pupils to experiment and investigate the world around them and to help them raise their own questions such as "Why...?", "How...?" and "What happens if...?"

Activities develop the skills of enquiry, observation, locating sources of information, selecting appropriate equipment and using it safely, measuring and checking results, making comparisons and communicating results and findings.

Lessons make effective links with other curriculum areas and subjects, especially literacy and numeracy. Activities are challenging, motivating and extend pupils' learning.

Pupils have frequent opportunities to develop their skills in, and take responsibility for, planning investigative work, selecting relevant resources, making decisions about sources of information, carrying out activities safely and deciding on the best form of communicating their findings.

Class organisation

Class teachers are responsible for their own class organisation and teaching style in relation to science, while at the same time ensuring these reflect the overall aims and philosophy of the school.

Children are encouraged to work with different groupings to:

- a) Introduce new topics or activities
- b) Allow individuals to develop own skills and concepts at own pace
- c) Aid effective learning and understanding.
- d) Aid social and personal development.

The learning task or the Science topic being studied, and the resources being used will determine the choice of class organisation.

Learning and Progression

Early Years Foundation Stage pupils investigate Science as part of Knowledge & Understanding of the World. By careful planning, pupils' scientific skills and knowledge gained at Key Stage 1 will be consolidated and developed during Key Stage 2. Teachers observations of children's development will be noted and included in the child's learning journal.

Pupils in Key Stage One will be introduced to Science through focused observations and explorations of the world around them. Children will be immersed in the 'working scientifically' strands of the curriculum; providing children with a hands on approach to science. Children will develop their ideas through discussion with each other and adults; this will be documented in science books. These will be further developed through supportive investigations into more independent work at Key Stage 2.

Key Stage two will provide our children with the structure of a science investigation and provide them with opportunities to learn how to theorise their ideas, along with concluding their investigation with their findings. Year five and six will provide children with plenty of opportunities for independent investigation, evaluating their findings and suggestions to develop their next investigation.

The knowledge and content prescribed in the National Curriculum will be introduced throughout both key stages in a progressive and coherent way. How this is achieved is indicated in our scheme of work for Science.

Marking for Improvement (see policy)

Much of the learning done in science lessons is of a practical or oral nature and, as such, recording will take many varied forms thus making marking different. It is, however, important that written work is marked regularly and clearly, as an aid to progression and to celebrate achievement. When appropriate, pupils may be asked to self-assess or peer assess their own or other's work.

It is imperative that children are given the time to improve their work and teachers will support children by scaffolding improvements as necessary. Providing children with questions and next steps will provide the individual with their next step on their learning journey along with potential assessment evidence for greater depth when answering questions.

Assessment

A clear learning objective and, where appropriate a context will be included in all lessons. Children's subject area targets will be presented in the front of their science books. This will inform teaching and learning and give a representation of where individuals' strengths and areas of improvement are in a given topic.

Assessing children's learning will be carried out according to curriculum coverage and competency. The expectation that 'Working Scientifically' targets will be achieved on multiple occasions across each year will allow for sound assessment each term, along with evidence of progression. Topical curriculum objectives (e.g. Year 2 Everyday uses of Materials) will be assessed throughout the topics duration; teacher's assessment will be sufficient as to whether the individual has achieved, mostly achieved, or working towards achieving the objective.

An end of unit assessment can be taken by individuals to provide evidence of the knowledge and understanding by the each child; providing evidence for teacher assessment.

Equal Opportunities

All pupils, irrespective of gender, ability, disability, ethnicity and social circumstance have access to the Science curriculum and have opportunities to make the greatest progress possible in all areas of the curriculum while in our school.

We provide a balance of scientific activities to suit the level of ability. Learning experiences can be provided to extend all children, in the form of a more challenging investigation or through careful questioning.

The following strategies may aid planning for individual children:

- Activities should vary so that children can share their strengths and help each other
- Group work will encourage participation and inter-personal skills
- Open-ended activities will differentiate by outcome
- Use of ICT for recording work

See policy on Special Educational Needs

See policy on More Able

Leadership and Management

The role of the Science leader is to:

- Take the lead in policy development and review, including the continuing successful implementation of the Science curriculum.
- Support colleagues in the development of weekly plans from topic coverage.
- Encourage and support staff in the implementation of the agreed procedures and closely monitor the progression of activities and consistency of approach across both year groups and Key Stages through lesson observation.
- Monitor the progress made by children, both individuals and cohorts, through book trawls and data analysis, monitoring the tracking of children by teachers and through talking to groups of children to seek their views.
- Encourage and support the professional development of staff through relevant training.
- Keep up-to-date on local and national initiatives and disseminate information.
- Take responsibility for the purchase and organisation of scientific resources.
- Invite speakers/ specialists in to Stourport Primary to support teaching and learning of both staff and children.
- To share ideas to promote science in Stourport Primary by sharing ideas, resources with staff.

Staff development and training opportunities

The Head teacher discusses staff development needs and, where appropriate, these are built into the school's development plan. The needs of individual members of staff (teaching and non-teaching) are identified as a result of the school's performance management programme. Staff attending training are expected to feedback information with other appropriate staff. The school allocates an annual budget for Science. KS1 & KS2 teachers discuss needs with the Science leader and Head teacher and ensure planned units of work are adequately resourced and Science teaching and learning is kept up to date.

Governors

Governors will be kept informed of the teaching and learning of Science at governors meetings where a member of staff will feed back the policies implementation and its success.

See policy on Assessment

See policy on Recording and Reporting

Health and Safety

Pupils will be taught to use scientific equipment safely when using it during practical activities. Class Teachers, Teaching Assistants and the Subject Leader will check equipment regularly and report any damage, taking defective equipment out of action. A simple risk assessment will be carried out for all practical activities. The Subject Leader, together with the Head teacher will review risk assessments annually. The LEA has adopted the ASE book 'Be Safe' as its model risk assessment and therefore this should be consulted when necessary. If an activity is not covered by 'Be Safe' then we will contact CLEAPSS (School Science Service Helpline 01895251496) for further advice.

Resourcing

In order to encourage an investigative approach to learning all classrooms contain sufficient basic equipment to allow simple investigations, observations and measurements to be carried out in small groups.

The Science Subject Leader will see that this level of resourcing is maintained and will administer the allocated budget for Science.

More specialist pieces of equipment and those posing a potential safety risk will be held centrally and staff access when required. Teaching materials and background information on Science are kept in the library.

The Science section of the school library is continuously being developed to reflect curriculum and teaching needs.

Homework

On occasions homework may be set which relates to the children's learning in KS2 and Key Stage 1, this may be in the format of a small investigation or activities related to the work in hand.

Review

The Science Subject Leader will monitor classroom teaching in all year groups according to the monitoring schedule. The effectiveness of the Science curriculum will be evaluated in discussions with the Headteacher, Key Stage Phase Managers and the Science Subject Leader. Priorities for in service support and external review will be established.

This evaluation will form the basis for an action plan, which will then inform the School Improvement Plan.

This policy will be reviewed bi-annually by the Science Subject Leader or as necessary in view of government or LA initiatives, analysis of assessments or curriculum development.