

Rural Church Schools Academy Trust

**A RCSAT Scientist**

Warmingham CE Primary





**RCSAT Curriculum Overview 2021**  
**LET YOUR LIGHT SHINE**  
**Matthew 5:16**



Article 29: Children’s education should develop each child’s personality, talents and abilities to the fullest. It should encourage children to respect others, human rights and their own and other cultures. It should also help them learn to live peacefully, protect the environment and respect other people.

Our Curriculum Policy details our intent behind our curriculum, how we implement it and our desired impact. At RCSAT, the school curriculum consists of all those activities designed or encouraged within its organisational framework to provide the intellectual, emotional, personal, social, spiritual and physical development of all its pupils. It includes not only the subject specific curriculum but also the ‘informal’ programme of enrichment and extra-curricular activities.

The curriculum at RCSAT, developed over a number of years, is firmly rooted in and stems directly from our Vision, Mission and Core Values.

Our Vision – ‘**Let your Light shine**’ *Matthew v5:16*

Our Mission – ‘**A Caring Christian Family Where We Grow Together**’

Our Core Values – WE aim to create an enjoyable, inclusive, safe, and nurturing environment that allows all children to develop spiritually, morally and socially. – *every child is a child of God, made to contribute to our world.*

We aim to create an inspiring environment, which encourages enthusiasm for lifelong learning and establishes an expectation of high standards – *knowing the way, showing the way and going the way.*

We aim to encourage caring, sensitive, and inclusive attitudes where individuals feel secure, valued and respected by others. – *like Jesus showed us through his teachings.*

We aim to provide a broad and connected curriculum which challenges and develops the potential of each child – *as Jesus needed his disciples to support and guide, so we look to others with more knowledge.*

We aim to develop a positive relationship between home, school and our wider community - *as a family – as brothers and sisters.*

**The RCSAT curriculum is designed to:**

**Embody - the Christian values we live by**

**Enable – all children to flourish in mind, body and spirit**

**Ensure – that all pupils are given the experiences to ‘Let their Light Shine.’**

Reading	<ul style="list-style-type: none"> <li>Loving God, loving and accepting ourselves and loving and responding well to others</li> <li>A joy of learning</li> <li>A peaceful classroom environment</li> <li>Kindness and generosity towards others</li> <li>Gentle interactions</li> <li>Patience and understanding</li> <li>Excellent behaviour and positive attitudes</li> </ul>	PSHE and Pastoral	Religious Education
Writing	<p style="text-align: center;"><b>The Fruit of the Spirit is Love, Joy, Peace, Patience, Kindness, Generosity, Faithfulness, Gentleness and Self control</b> Galatians 5: 22-23</p> <p style="text-align: center;"><b>GROWING THE FRUIT OF THE SPIRIT</b></p>	<p style="text-align: center;"><b>Love the Lord God with all your heart, with all your soul and with all your mind. Love your neighbour as yourself.</b> Matthew 22: 36-40</p>	Art
Spelling & Grammar			<p>Being an inclusive school that celebrates diversity and ensures that all pupils are given equality of opportunity regardless of gender, special needs, disability or race.</p>
Speaking	<p style="text-align: center;"><b>Christian Distinctiveness</b></p>	<ul style="list-style-type: none"> <li>Positive relationships</li> <li>High levels of praise</li> <li>Love and care for others</li> <li>Learning from mistakes</li> <li>Fostering a growth mindset &amp; perseverance</li> <li>Equal opportunity for all pupils</li> <li>Nurturing positive self-esteem</li> </ul>	Computing & E-safety
Maths			Music
Science			Physical Education
History			Modern Foreign Languages
Geography			Early Years Curriculum

**Intent:**

The schools within RCSAT are strongly committed to helping our children grow and develop the skills required *‘Let your Light Shine’ Matthew 5v16*

to be successful in life. Our curriculum is designed to promote every child's individuality giving them the skills, knowledge and understanding to prepare them for the future. At RCSAT, our Connected Curriculum is planned around the development of Knowledge, Skills and Understanding. We ensure a curriculum that nurtures fascination and imagination and promotes an appreciation of creativity & individuality. One that also works in strong partnership with parents and carers to ensure high standards, engendering a strong sense of community, where all children and families are key to the delivery of a challenging, inspirational and innovative curriculum.

As a trust, we provide varied opportunities throughout their time with us, which promote independent, interactive and collaborative learning that builds on the children's natural curiosity and eagerness to learn. We teach children to aspire to be the best possible version of themselves through our key drivers.

#### **Our Key Drivers:**

- Inspirational and connected curriculum which instils a love of learning
- Curiosity and appreciation of God's world through our Christian Values
- A culture of care for everyone in our community and in the world around us (RRSA, Global Learning, British Values)
- Aspiring to become the best person God created us to be – Let your light shine (Matthew 5:16)

Academic success comes through creativity and problem solving; responsibility and resilience, as well as physical development, well-being and mental health all being key elements in supporting the whole child through their learning journey. Our curriculum also celebrates diversity and utilises the skills and knowledge of the community to enhance our curriculum while supporting the children's emotional and spiritual development.

#### **Implementation:**

Our curriculum is driven by a desire to develop the whole child and therefore delivers much more than just the National Curriculum.

Our connected curriculum provides opportunities for the children to learn about managing themselves, relationships and situations.

Our curriculum is not simply a set of encounters from which children form ad hoc memories; it is designed to be remembered in detail – to be stored in our children's long-term memories so that they can later build on it, forming an ever wider and deeper pool of knowledge.

Our curriculum is connected. It is planned vertically between year groups, horizontally within the academic year and diagonally to build on prior knowledge.

Our connected curriculum stems from a key question linked to a specific concept which then underpins the children's learning. Knowledge around this concept is delivered through primary sources such as high-quality texts, music, art and technologies, enabling connections to be made across a range of National Curriculum subjects. Our teachers skillfully plan to ensure the children in their class experience a curriculum that inspires a love for learning.

Our curriculum is predominantly organised around rich and engaging, high-quality texts, making links and connecting to all curriculum areas where relevant. There is always an overarching text which connects the curriculum across the school. Beneath which sit key texts in each year group. Subject leads ensure progression and coverage of knowledge, skills and understanding are weaved into a meaningful and cohesive curriculum drawing in learning based on local, national and international events.

Medium term plans outline the learning to take place for the term and are developed as mind maps using the phrases; As Artists, As Geographers, As Historians, As Writers, As Readers, As Mathematicians, As Musicians, As Programmers, As Designers, As Performers, As respectful, responsible citizens to frame ideas and concepts to be taught. The core basic skills of English and Maths are planned and delivered to reflect the National Curriculum 2014 changes and many elements of the new statutory orders are reflected in our practice.

#### **We also feel that the following are necessary to support the implementation of our connected curriculum:**

*'Let your Light Shine' Matthew 5v16*

**Learning Environment** – We work hard to make sure that our learning environment supports the development of the whole child both inside, outside and beyond. Our classrooms are well organised and resourced allowing children to choose resources independently to support their learning. Our outdoor areas have been developed to enhance our connected curriculum with developments such as: running paths, outdoor stage, mini woodland, outdoor reading provision, wilderness area and forest schools. This enables pupils to explore at break and lunch-times and gives teachers a range of resource to tap into to support teaching and learning at various points within the year. 4

**Learning Partners** – It is important that as a school we engage with external partner, locally, nationally and internationally to bring added dimensions to our curriculum offer. We partner with artists, musicians, coaches, poets, cultural organisations, engineers, other schools to bring expertise and difference to our curriculum offer. These may be short term projects over a few weeks or much longer endeavours. It is through these partnerships that we may light a spark of interest, enthusiasm and passion within our children that they may carry forward with them into their future lives and schooling.

**New Pedagogies** – As we continue to develop our curriculum, our approach to teaching and learning also develops. We take a blended learning approach where multiple disciplines will be touched upon within a lesson. It may be a ‘Science’ based lesson where problem solving, maths, literacy and art disciplines are enveloped within the taught session. Project based inquiry learning coupled with direct instruction ensure that our curriculum is relevant and provides children with opportunities to develop the skills of communication, collaboration, critical thinking, citizenship and creativity whilst also building their own character.

**Impact:**

Through our connected approach:

- Our children will have the capacity to control and express their emotions and handle interpersonal relationships whilst keeping themselves safe.
- Our children will become confident and successful lifelong learners, demonstrating the Christian Values to ensuring they let their individual lights shine as they make the right choices about their learning.
- Our curriculum has an ambition for high achievement of all pupils irrespective of their background or starting point.
- Our curriculum promotes a love of learning.

The curriculum also includes those features which produce the school's ethos (i.e. the ‘hidden curriculum’) such as the quality of relationships and the values exemplified by the way the school sets about its task.

Our aim is to provide a curriculum which will firstly expand the pupil’s knowledge, experience and imaginative understanding, and thus his/her awareness of moral and Christian values and capacity for enjoyment, and secondly, enable the pupil to enter the world after formal education is over as an active participant in society and a responsible contributor to it, capable of achieving as much independence as possible.

There is an Act of Worship every day. Worship is a time where we come together to reflect on the school’s vision and to learn about the ‘*person, love & work of Jesus*’ which is central to the school’s vision and curriculum. The daily Act of Worship promotes the Christian and Learning values which permeate the ethos of the school. As such, Worship is an essential part of the school day and the contributions of staff, pupils, clergy and other visitors are valued highly.

## Why is Science Important?

Science stimulates and excites pupils' curiosity about phenomena and events in the world around them. It also satisfies this curiosity with knowledge. Because science links direct practical experience with ideas, it can engage learners at many levels. Scientific method is about developing and evaluating explanations through experimental evidence and modelling. This is a spur to critical and creative thought. Through science, pupils understand how major scientific ideas contribute to technological change – impacting on industry, business and medicine and improving quality of life. Pupils recognise the cultural significance of science and trace its worldwide development. They learn to question and discuss science-based issues that may affect their own lives, the direction of society and the future of the world.

**RCSAT's Vision for Science** - On completion of the Science curriculum our pupils will have developed:

- Curiosity and the ability to ask scientific questions.
- Confidence and competence in a range of practical skills: observing, questioning, planning, collecting, recording, concluding, communicating, reflecting and responding.
- The ability to plan and carry out scientific investigations and report findings.
- Good scientific knowledge and understanding across a range of topics which is demonstrated in written and verbal explanations.
- An interest in science and its application in past, present and future technologies.

## Science at Warmingham

Science teaches an understanding of natural phenomena. It aims to stimulate a child's curiosity in finding out why things happen in the way they do. It teaches methods of enquiry and investigation to stimulate creative thought. Children learn to ask scientific questions and begin to appreciate the way in which science will affect the future on a personal, national, and global level.

Children are encouraged to use everyday objects and experiences to question and experiment in order to increase their understanding of their world.

Science stimulates and excites pupils' curiosity about phenomena and events in the world around them. Through exploring the world of Science, children are taught to develop their investigative skills by planning investigative skills and obtaining, presenting, and evaluating evidence.

		Autumn Term	Spring Term		Summer Term		
		History Based Enquiry	STEM Based Enquiry		Geography Based Enquiry		
KS1	Year A	<b>Human body</b> Sense / healthy living	<b>Materials</b>	<b>Changing Materials</b> Heat and cooling	6 <b>African animals, habitats, and food chains</b>		
	Year B	<b>Seasons</b> Changes/Weather patterns/ Day length	<b>Plants</b>	<b>Minibeasts &amp; microhabitats</b>	<b>Seashore &amp; Ocean habitats - food chains</b>		
Lower KS2	Year A	<b>States of Matter</b>		<b>Forces and Magnets</b>	<b>Electricity</b>		
	Year B	<b>Rocks</b>	<b>Sound</b>	<b>Animals including humans</b>		<b>Plants</b>	<b>Light</b>
Upper KS2	Year A	Evolution and Inheritance		Electricity	Materials	Forces and Magnets	
	Year B	Animals including humans		Earth and Space	Light	Animals including humans	Living things and their habitats

**YEAR 1 Working scientifically**

- I can ask simple scientific questions.
- I can use simple equipment to make observations.
- I can carry out simple tests.
- I can identify and classify things.
- I can suggest what I have found out.
- I can use simple data to answer questions

**YEAR 2 Working scientifically**

- I can ask simple scientific questions.
- I can use simple equipment to make observations.
- I can carry out simple tests.
- I can identify and classify things.
- I can suggest what I have found out.
- I can use simple data to answer questions

**Biology**

**YEAR 1 Plants**

- I can name a variety of common wild and garden plants.
- I can name the petals, stem, leaf and root of a plant.
- I can name the roots, trunk, branches and leaves of a tree.

**YEAR 2 Plants**

- I can describe how seeds and bulbs grow into plants.
- I can describe what plants need in order to grow and stay healthy.

**YEAR 1 Animals, including humans**

- I can name a variety of animals including fish, amphibians, reptiles' birds and mammals.
- I can classify and name animals by what they eat (carnivore, herbivore and omnivore).
- I can sort animals into categories (including fish, amphibians, reptiles, birds and mammals).
- I can sort living and non-living things.
- I can name the parts of the human body that I can see.
- I can link the correct part of the human body to each sense.

**YEAR 2 Animals, including humans**

- I can explain the basic stages in a life cycle for animals, including humans.
- I can describe what animals and humans need to survive.
- I can describe why exercise, a balanced diet and good hygiene are important for humans.

**Chemistry**

**YEAR 1 Everyday materials**

- I can distinguish between an object and the material it is made from.
- I can explain the materials that an object is made from.
- I can name wood, plastic, glass, metal, water and rock.
- I can describe the properties of everyday materials.
- I can group objects based on the materials they are made from.

**YEAR 2 Uses of everyday materials**

- I can identify and name a range of materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard.
- I can suggest why a material might or might not be used for a specific job.
- I can explore how shapes can be changed by squashing, bending, twisting and stretching.

**Physics****Seasonal changes**

- I can observe and comment on changes in the seasons.
- I can name the seasons and suggest the type of weather in each season.

**YEAR 1 Greater Depth in Science**

- I can find out by watching, listening, tasting, smelling and touching.
- I can talk about similarities and differences.
- I can explain what I have found out using scientific vocabulary.
- I can make accurate measurements.
- I can classify animals according to a number of given criteria.
- I can point out differences between living things and non-living things.
- I can say why certain animals have particular characteristics
- I can sort some plants by those that can be eaten and those that cannot.
- I can explain what happens to certain materials when they are heated or cooled, for example, bread, ice, chocolate, jelly, etc.
- I can sort some animals on a simple branching diagram with features such as meat eaters and non-meat eaters; can swim and cannot swim.

**YEAR 2 Greater Depth in Science**

- I can say whether things happened as I expected and if not why not.
- I can suggest more than one way of grouping animals and plants and explain my reasons.
- I can use information from books and online sources to find things out.
- I can name some characteristics of an animal that helps it to live in a particular habitat.
- I can describe what animals need to survive and link this to their habitats.
- I can describe what plants need to survive and link it to where they are found.
- I can classify living things into groups according to a range of criteria I have been given.
- I can describe the properties of different materials using words like transparent or opaque, flexible, etc.
- I can say which materials are natural and which are manmade.
- I can tell which materials cannot be changed back after being heated, cooled, bent, stretched or twisted.

**A Year 3 Scientist at RCSAT**

- I can ask relevant scientific questions.
- I can use observations and knowledge to answer scientific questions.
- I can set up a simple enquiry to explore a scientific question.
- I can set up a test to compare two things.
- I can set up a fair test and explain why it is fair.
- I can make careful and accurate observations, including the use of standard units.
- I can gather, record, classify and present data in different ways to answer scientific questions.
- I can use diagrams, keys, bar charts and tables, using scientific language.
- I can use findings to report in different ways, including oral and written explanations and presentation.
- I can draw conclusions and suggest improvements.
- I can make a prediction with a reason.
- I can identify differences, similarities and changes related to an enquiry.



**Biology****Plants**

- I can describe the function of different parts of flowering plants and trees.
- I can explore and describe the needs of different plants for survival.
- I can explore and describe how water is transported within plants.
- I can describe the plant life cycle, especially the importance of flowers.

**Animals, including humans**

- I can explain the importance of a nutritious, balanced diet.
- I can explain how nutrients, water and oxygen are transported within animals and humans.
- I can describe and explain the skeletal system of a human.
- I can describe and explain the muscular system of a human.
- I can describe the purpose of the skeleton in humans and animals.

**Chemistry****Rocks**

- I can compare and group rocks based on their appearance and physical properties, giving a reason.
- I can describe how fossils are formed.
- I can describe how soil is made.
- I can describe and explain the difference between sedimentary and igneous rock.

**Physics****Light**

- I can describe what dark is (the absence of light).
- I can explain that light is needed in order to see.
- I can explain that light is reflected from a surface.
- I can explain and demonstrate how a shadow is formed.
- I can explore shadow size and explain.
- I can explain the danger of direct sunlight and describe how to keep protected.

**Forces and magnets**

- I can explore and describe how objects move on different surfaces.
- I can explain how some forces require contact and some do not, giving examples.
- I can explore and explain how objects attract and repel in relation to objects and other magnets.
- I can predict whether objects will be magnetic and carry out an enquiry to test this out.
- I can describe how magnets work.
- I can predict whether magnets will attract or repel and give a reason.

**Greater Depth in Science**

- I can record and present what I have found using scientific language, drawings, labelled diagrams, bar charts and tables.
- I can use my findings to draw a simple conclusion.
- I can explain how the muscular and skeletal systems work together to create movement.
- I classify living things and non-living things by a number of characteristics that I have thought of.
- I can explain how some living things depend on one another to survive.
- I can explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
- I am beginning to relate the properties of rocks with their uses.
- I can investigate the strengths of different magnets and find fair ways to compare them.
- I can explain why lights need to be brighter or dimmer according to need.
- I can explain why a shadow changes when the light source is moved closer or further from the object.

## **A Year 4 Scientist at RCSAT**

### **Working scientifically**

- I can ask relevant scientific questions.
- I can use observations and knowledge to answer scientific questions.
- I can set up a simple enquiry to explore a scientific question.
- I can set up a test to compare two things.
- I can set up a fair test and explain why it is fair.
- I can make careful and accurate observations, including the use of standard units.
- I can use equipment, including thermometers and data loggers to make measurements.
- I can gather, record, classify and present data in different ways to answer scientific questions.
- I can use diagrams, keys, bar charts and tables, using scientific language.
- I can use findings to report in different ways, including oral and written explanations, presentation.
- I can draw conclusions and suggest improvements.
- I can make a prediction with a reason.
- I can identify differences, similarities and changes related to an enquiry.

### **Biology**

#### **Living Things and their Habitats**

- I can group living things in different ways.
- I can use classification keys to group, identify and name living things.
- I can create classification keys to group, identify and name living things (for others to use).
- I can describe how changes to an environment could endanger living things.

#### **Animals, including Humans**

- I can identify and name the parts of the human digestive system.
- I can describe the functions of the organs in the human digestive system.
- I can identify and describe the different types of teeth in humans.
- I can describe the functions of different human teeth.
- I can use food chains to identify producers, predators and prey.
- I can construct food chains to identify producers, predators and prey.

### **Chemistry**

#### **States of Matter**

- I can group materials based on their state of matter (solid, liquid, gas).
- I can describe how some materials can change state.
- I can explore how materials change state.
- I can measure the temperature at which materials change state.
- I can describe the water cycle.
- I can explain the part played by evaporation and condensation in the water cycle.

### **Physics**

#### **Electricity**

- I can identify and name appliances that require electricity to function.
- I can construct a series circuit.
- I can identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers).
- I can draw a circuit diagram.
- I can predict and test whether a lamp will light within a circuit.
- I can describe the function of a switch in a circuit.
- I can describe the difference between a conductor and insulators; giving examples of each.

## Sound

- I can describe how sound is made.
- I can explain how sound travels from a source to our ears.
- I can explain the place of vibration in hearing.
- I can explore the correlation between pitch and the object producing a sound.
- I can explore the correlation between the volume of a sound and the strength of the vibrations that produced it.
- I can describe what happens to a sound as it travels away from its source.

## A Year 5 Scientist at RCSAT

### Working scientifically

- I can plan different types of scientific enquiry.
- I can control variables in an enquiry.
- I can measure accurately and precisely using a range of equipment.
- I can record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- I can use the outcome of test results to make predictions and set up a further comparative fair test.
- I can report findings from enquiries in a range of ways.
- I can explain a conclusion from an enquiry.
- I can explain causal relationships in an enquiry.
- I can relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory.
- I can read, spell and pronounce scientific vocabulary accurately.

## Biology

### Living things and their habitats

- I can describe the life cycle of different living things, e.g. mammal, amphibian, insect bird.
- I can describe the differences between different life cycles.
- I can describe the process of reproduction in plants.
- I can describe the process of reproduction in animals.

### Animals, including humans

- I can create a timeline to indicate stages of growth in humans.

## Chemistry

### Properties and changes of materials

- I can compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets).
- I can describe how a material dissolves to form a solution; explaining the process of dissolving.
- I can describe and show how to recover a substance from a solution.
- I can describe how some materials can be separated.
- I can demonstrate how materials can be separated (e.g. through filtering, sieving and evaporating).
- I know and can demonstrate that some changes are reversible and some are not.
- I can explain how some changes result in the formation of a new material and that this is usually irreversible.
- I can discuss reversible and irreversible changes.
- I can give evidenced reasons why materials should be used for specific purposes.

## **Physics**

### **Earth and space**

- I can describe and explain the movement of the Earth and other planets relative to the Sun.
- I can describe and explain the movement of the Moon relative to the Earth.
- I can explain and demonstrate how night and day are created.
- I can describe the Sun, Earth and Moon (using the term spherical).

### **Forces**

- I can explain what gravity is and its impact on our lives.
- I can identify and explain the effect of air resistance.
- I can identify and explain the effect of water resistance.
- I can identify and explain the effect of friction.
- I can explain how levers, pulleys and gears allow a smaller force to have a greater effect.

## **Greater Depth in Science**

- I can explore different ways to test an idea, choose the best way and give reasons.
- I can vary one factor whilst keeping the others the same in an experiment.
- I can use information to help make a prediction.
- I can explain (in simple terms) a scientific idea and what evidence supports it.
- I can create a timeline to indicate the stages of growth in certain animals, such as frogs and butterflies.
- I can observe my local environment and draw conclusions about life-cycles, for example, the vegetable garden or plants in a shrubbery.
- I can describe methods for separating mixtures, for example, filtration, distillation.
- I can compare the time of day at different places on Earth.
- I can describe and explain how motion is affected by forces, for example, gravitational attractions, magnetic attraction and friction.
- I can work out how water can cause resistance to floating objects.

## **A Year 6 Scientist at RCSAT**

### **Working scientifically**

- I can plan different types of scientific enquiry.
- I can control variables in an enquiry.
- I can measure accurately and precisely using a range of equipment.
- I can record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- I can use the outcome of test results to make predictions and set up a further comparative fair test.
- I can report findings from enquiries in a range of ways.
- I can explain a conclusion from an enquiry.
- I can explain causal relationships in an enquiry.
- I can relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory.
- I can read, spell and pronounce scientific vocabulary accurately.

## **Biology**

### **Living things and their habitats**

- I can classify living things into broad groups according to observable characteristics and based on similarities & differences.
- I can describe how living things have been classified.
- I can give reasons for classifying plants and animals in a specific way.

Animals, including humans

- I can identify and name the main parts of the human circulatory system.
- I can describe the function of the heart, blood vessels and blood.
- I can discuss the impact of diet, exercise, drugs and life style on health.
- I can describe the ways in which nutrients and water are transported in animals, including humans.

Evolution and inheritance

- I can describe how the earth and living things have changed over time.
- I understand that some people will explain adaptation over time to evolution.
- I can explain what people mean by evolution.
- I can explain how fossils can be used to find out about the past.
- I can explain about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents).
- I can explain how animals and plants are adapted to suit their environment.

**Physics**Light

- I can explain how light travels.
- I can explain and demonstrate how we see objects.
- I can explain why shadows have the same shape as the object that casts them.
- I can explain how simple optical instruments work, e.g. periscope, telescope, binoculars, mirror, magnifying glass etc.

Electricity

- I can explain how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer.
- I can compare and give reasons for why components work and do not work in a circuit.
- I can draw circuit diagrams using the correct symbols.

**Greater Depth in Science**

- I can use information from different sources to answer a question and plan a scientific enquiry.
- I can make a prediction that links with other scientific knowledge.
- I can plan in advance which equipment I will need and use it appropriately.
- I can link my conclusions to other scientific knowledge.
- I can explain how some living things adapt to survive in extreme conditions.
- I can analyse the advantages and disadvantages of specific adaptations, such as being on two rather than four feet.
- I am beginning to understand about the nature of DNA.
- I can readily group animals into reptiles, fish, amphibians, birds and mammals.
- I can make a diagram of the human body and explain how different parts work and depend on one another.
- I can compare the organ systems of humans to those of other animals.
- I can use the ray model to explain the size of shadows.
- I can explain the danger of short circuits and what a fuse is.

### Greater Depth in Science

- I can plan and carry out a scientific enquiry by controlling variables fairly and accurately.
- I can use test results to make further predictions and set up further comparative tests.
- I can record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models.
- I can report findings from scientific enquiries through written explanations and conclusions.
- I can explain how people, weather and the environment can affect living things.
- I can group and classify a variety of materials according to the impact of temperature upon them.
- I can relate temperature to the change of state of materials.
- I can work out which metals can be used to connect across a gap in a circuit.

