

Science in the Stanton Bridge Primary Curriculum

Intent

Stanton Bridge Primary School's Curriculum Statement of Intent has been constructed to reflect and incorporate each curriculum subject whilst ensuring that each subsequent content designed meets the intent at every opportunity.

Thus, the context - past, present and future - are factored in. The past - family influences, social experience and how that may contribute to their new experiences. The present — school and expanding social networks, and how this can positively shape their future given the right environmental and social factors. Finally, the future - in search of what awaits them in a fast evolving technological world.

Hence the premise upon which our pupils will grow:

- High ambition.
- Rich in language with a passion for learning.
- Habits of Mind that serves to support achievement across all areas of learning.
- Strong basis for continuous academic growth beyond their primary years.
- Ability to regulate their social, emotional well-being, with knowledge & skills to tap into a bank of resources that enable them to be flexible in their approach to problem-solving.
- Stand shoulder to shoulder and thrive with others in a range of different roles, exhibiting leadership qualities and skills.
- Acknowledge and appreciate their heritage in world where accepting themselves as individuals and celebrating who they are is key in steering a complex and ever-changing environment.
- Having a voice and knowing that they can make a difference to the world in which they live, changing things for the better.
- Positive relationships and social networks from which they can thrive and excel, seeking and working to include others.
- Belonging to the House of Values, focused on developing character, competence and connectedness. (Relationships, Equality, Care, Thinking Flexibly, and Listening)

| Character | Our pupil are taught to learning with a sense of honesty, coming to know, acknowledge and appreciate both strengths and areas for further growth learning. They are then taught to respect the learning ahead of them and to appreciate this opportunity to learn where this is not the case for many across the world. |
|---------------|---|
| Competence | Pupils will have high aspiration for learning, demonstrate confidence in key concepts learned, use subject specific vocabulary, working both independently and interconnected dependent on task set. |
| Connectedness | Pupils will work in harmony with others, within familiar and unfamiliar surroundings. |



Implementation:

Pedagogy: The understanding of how concepts are taught.

Pedagogy is the 'method of teaching'. At Stanton Bridge, we use the Barak Rosenshine's Principles of Instruction to establish Effective Teaching Practice. This is further strengthened by the use of Thinking Frames that support in the development of Metacognition. Our school's approach to Teaching and Learning is rooted in the Science of Learning and as such, all staff members are routinely engaged in school improvement activities to develop pedagogy and specific CPD to ensure subject content is expertly delivered. This of course sits alongside individualised mentoring and coaching to support continuous improvements in practice. Responsive coaching also serves to ensure each adult knows the relevant next steps to maximise learning opportunities for all groups of pupils.

Core concepts

| Core Concepts in Science by Strand | | | | | | | |
|------------------------------------|---------------------------|-----------|-----------------|--|--|--|--|
| Working Scientifically | Biology | Chemistry | Physics | | | | |
| | Animals, including | Materials | Light | | | | |
| | Humans | | Electricity | | | | |
| | Living Things and Their | | Forces | | | | |
| | Habitats | | Rocks | | | | |
| | Plants | | Sounds | | | | |
| | Evolution and Inheritance | | Earth and Space | | | | |

Science Delivery:

| Lesson timings | Type of delivery |
|--|--|
| Science is taught weekly for 50 mins per lesson. | The lessons are predominantly discrete to enable focus |
| In KSI, it is taught once a week. | on the core concepts of science, although vocabulary is |
| In KS2, it is taught twice a week. | continually developed using sentence stems and tiers universally across the subject areas. |
| | Each science lesson compromises of time to consolidate |
| | key vocabulary and concepts for the first section before |
| | focussing on the new learning taking place in the |
| | subsequent section. |



Science Planning:

Lesson Structure

| Lesson Structure | Notes |
|--|--|
| I. Starter | Key skills focussed. |
| 2. Review | Pupils review prior learning (previous lesson, previous topic, previous year) in the form of low-stake quizzes. |
| 3. Learning Intention Learning Outcomes Vocabulary | Teacher to share learning intention, learning outcomes and key vocabulary including definitions and images. |
| 4. Main Teach | Didactic teaching of the key concepts. |
| 5. Teacher Model | Teacher to verbalise thinking out loud, with no pupil input. |
| 6. Shared Model | Pupil input using directed questions. |
| 7. Independent | White board work and teachers check through questioning and observation. |
| 8. Main Task | Independent/pair/groups — pupils practice and embed new concept/consolidate through scaffolded tasks designed tasks by their teacher. Teacher facilitates learning through teacher live marking and checks on progress throughout the lesson, intervene and question for understanding, furthering knowledge. |
| 9. Plenary/Reflection | Check in at the end or during the lesson, flexible, as and when best suited. |

Annual Organisation

| Terms Autumn 1 | Year I Animals including humans | Year 2 Animals including humans | Year 3 Magnets | Year 4 Living things and their habitats | Year 5 Living things and their habitats | Year 6 Evolution and inheritances |
|-------------------|--|--|--------------------------------|--|---|--|
| Autumn 2 | Animals including humans | Plants | Animals including humans | Animals including humans | Forces | Animals including humans |
| | | | Food and our bodies | Teeth and eating | | |
| Spring | Everyday Materials | Living things and their habitats | Rocks | Electricity | Animals including humans | Electricity |
| Spring 2 | Everyday Materials | Uses of everyday materials | Plants | Sound | Properties and changes of materials | Light |



| | | | | | Classi fying car materials | |
|----------|-----------------------|--------------------------------|-----------------------|-----------------------|-------------------------------|--|
| Summer 1 | Plants | Scientific Enquiry | Light | States of matter | Earth and space | Evolution and inheritances |
| Summer 2 | Scientific Enquiry | Animals including humans | Scientific Enquiry | Scientific Enquiry | Scientific Enquiry | Living things and their habitats |

Impact

The ultimate test of the impact of the curriculum is in whether the students know what you want them to know, and what you think they should know. This has been carefully mapped against the core concepts for computing in the tables on the following pages. To determine this, we check and monitor children's learning, providing teachers and students with information about progress and analysis of deliberate retrieval practice. We need to be able to fluidly use 'checking for understanding' techniques in the moment as well as being able to know what has been learnt and retained over time and the depth of that learning:

- We use checking for understanding techniques through quizzes and questions to ensure we are aware of all students learning during the lesson and adapt the pace as necessary.
- Retrieval practice is built in where most impactful to interrupt the forgetting curve and secure constructs in long term memory.
- Depth of knowledge is then assessed through end of unit assessment quizzes, teacher discussion and observation and pupil portfolios on Showbie. Pupils are assessed against core concepts, which is recorded on DC Pro.

Science Specific Impact Measures



In Science, quizzing is used as a method of assessing pupils, understanding at the end of a core concept to analyse the extent to which knowledge has been consolidated into long-term memory. Retrieval practice tasks throughout the lessons also interrupt the forgetting curve to enable faster access to prior learning.

Each topic pupils also complete a diagnostic test, a mid-topic test and end of topic test which further supports staff in identifying any children in need of additional support.

Progression Points against the Core Concepts.

| Core Concept | KSI | | LKS2 | | UKS2 | |
|---------------------------|--|--|---|--|--|---|
| Working Scientifically | During years I and 2, p to use the following pro methods, processes and teaching of the prograr • Asking simple questio they can be answered ii • Observing closely, usi • Performing simple te • Identifying and class | actical scientific skills through the nme of study content: ns and recognising that n different ways. ng simple equipment. sts. ifying. ons and ideas to suggest | During years 3 and 4, to use the following promethods, processes and teaching of the prograw Asking relevant ques different types of scienanswer them. Setting up simple pracomparative and fair Making systematic anand, where appropriate measurements using starange of equipment, in and data loggers. Gathering, recording | skills through the mme of study content: tions and using utific enquiries to actical enquiries, tests. Ind careful observations and careful observations and units, using a cluding thermometers and are the simple scientific belled diagrams, keys, so from enquiries, tten explanations, so of results and a vimple conclusions, ew values, suggest a further questions. Ces, similarities or le scientific ideas and | During years 5 and 6, to use the following pr methods, processes and teaching of the progra • Planning different enquiries to answer qu recognising and control necessary. • Taking measuremen scientific equipment, w and precision, taking r appropriate. • Recording data and complexity using scientilabels, classification ke graphs, bar and line g • Using test results to up further comparativ • Reporting and preserenquiries, including correlationships and explan of trust in results, in such as displays and o • Identifying scientific | skills through the amme of study content: types of scientific estions, including ling variables where ts, using a range of ith increasing accuracy epeat readings when results of increasing fic diagrams and ys, tables, scatter raphs. make predictions to set we and fair tests. Iting findings from inclusions, causal nations of and a degree oral and written forms |
| | | | answer questions or to | | | |
| Animals, | Year I | Year 2 | . Year 3 | Year 4 | Year 5 | Year 6 |
| including Humans | Pupils should be taught to: Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets). | Pupils should be taught to: Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. | Pupils should be taught to: I dentify 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. I dentify that humans and some other animals have skeletons and muscles for support, protection and movement. | Pupils should be taught to: Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions. Construct and interpret a variety of food chains, identifying producers, predators and prey. | Pupils should be taught to: Describe the changes as humans develop to old age. | Pupils should be taught to: • 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. • Describe the ways in which nutrients and water are transported within animals, including humans. |



| | Identify, name, | | | | | |
|---------------|---------------------------------------|---|-------------------------------|--|---------------------------------|---|
| | draw and label the | | | | | |
| | basic parts of the | | | | | |
| | human body and say | | | | | |
| | which part of the | | | | | |
| | body is associated | | | | | |
| | with each sense | | | | | |
| Living Things | Year I | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| and Their | 7 600 1 | Pupils should be | 7 600 3 | Pupils should be | Pupils should be | Pupils should be |
| Habitats | | taught to: | | taught to: | taught to: | taught to: |
| | | • Explore and | | • Recognise that | Describe the | Describe how living |
| | | compare the | | living things can be | differences in the | things are classified |
| | | differences between | | grouped in a variety | life cycles of a | into broad groups |
| | | things that are | | of ways. | mammal, an | according to common |
| | | living, dead, and | | ● Explore and use | amphibian, an insect | observable |
| | | things that have | | ' | and a bird. | characteristics and |
| | | never been alive. | | classification keys to | Describe the life | based on similarities |
| | | Identify that most | | help group, identify | | and differences, |
| | | | | and name a variety of living things in | process of reproduction in some | including |
| | | living things live in habitats to which | | their local and wider | ' ' | microorganisms, |
| | | they are suited and | | environment. | plants and animals. | plants and animals. |
| | | describe how | | | | · · |
| | | different habitats | | • Recognise that | | • Give reasons for |
| | | provide for the basic | | environments can | | classifying plants and animals based on |
| | | needs of different | | change and that this | | |
| | | kinds of animals and | | can sometimes pose | | specific characteristics. |
| | | plants, and how they | | dangers to living | | criaracteristics. |
| | | depend on each | | things. | | |
| | | other. | | | | |
| | | Identify and name a | | | | |
| | | variety of plants and | | | | |
| | | animals in their | | | | |
| | | habitats, including | | | | |
| | | microhabitats. | | | | |
| | | Describe how | | | | |
| | | animals obtain their | | | | |
| | | food from plants | | | | |
| | | and other animals, | | | | |
| | | | | | | |
| | | using the idea of a | | | | |
| | | simple food chain, and identify and | | | | |
| | | name different | | | | |
| | | sources of food. | | | | |
| Materials | Year I | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| victor cous | Everyday Materials | Use of Everyday | Magnets | States of matter | Properties and | 7 447 0 |
| | Pupils should be | Materials | Pupils should be | Pupils should be | changes of Materials | |
| | taught to: | Pupils should be | taught to: | taught to: | Pupils should be | |
| | Distinguish between | taught to: | • Compare how | • Compare and | taught to: | |
| | an object and the | ● Identify and | things move on | group materials | • Compare and | |
| | material from which | compare the | different surfaces | together, according to | group together | |
| | it is made Identify | suitability of a | notice that some | whether they are | everyday materials | |
| | and name a variety | variety of everyday | forces need contact | solids, liquids or | on the basis of their | |
| | of everyday | materials, including | between two objects, | gases. | properties, including | |
| | materials, including | wood, metal, plastic, | but magnetic forces | Observe that some | their hardness, | |
| | wood, plastic, glass, | glass, brick, rock, | can act at a | materials change | solubility, | |
| | metal, water, and | paper and cardboard | distance. | state when they are | transparency, | |
| | rock. | for particular uses. | Observe how | heated or cooled, and | conductivity | |
| | Describe the simple | • Find out how the | magnets attract or | measure or research | (electrical and | |
| | physical properties of | shapes of solid objects | repel each other and | the temperature at | thermal), and | |
| | a variety of everyday | made from some | attract some | which this happens in | response to magnets. | |
| | materials. | materials can be | materials and not | degrees Celsius (°C). | • Know that some | |
| | Compare and | changed by | others. | ■ Identify the part | materials will dissolve | |
| | group together a | squashing, bending, | Compare and | played by evaporation | in liquid to form a | |
| | group logeliner a variety of everyday | twisting and | group together a | and condensation in | solution, and describe | |
| | I variety of everyady | www.uniquitu | I group wyenner a | ana conaensallon in | solution, and describe | |
| | materials on the basis | stretching. | variety of everyday | the water cycle and | how to recover a | |



| T T | | | | | | |
|--------|---|---|--|---|---|--------|
| R' | of their simple physical properties. | | materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. • Describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing. | associate the rate of evaporation with temperature. | substance from a solution Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes. • 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. | |
| Plants | Year I | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| | Pupils should be taught to: I dentify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, including trees. | Pupils should be taught to: Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. | Pupils should be taught to: Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. 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 Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. | | | |
| Light | Year I | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| j | | - | Pupils should be taught to: • Recognise that they need light in order to | Pupils should be taught to: | | |



| Recipitation of the plant of th | | <u> </u> | | | | | |
|--|-------------|----------|--------|---------------------|--|---------------------|------------------------------------|
| erhapt Lane. Nation Bart light is a control of the lane and the september of the lane and the lane lane and the lane and the lane and the lane and the lane and th | | | | see things and that | Recognise that light | | |
| • Natice that light to refricted menty from the state care between the state of | | | | | | | |
| Profested from surfaces Processes in surfaces Processes Pr | | | | | • | | |
| ## Strooms feat light Forces Vear Vear 2 Vear 3 Forces Vear Vear 3 Vear 4 Forces Vear Vear 2 Vear 3 Forces Vear Vear 2 Vear 3 Forces Vear Vear 2 Vear 3 Forces Vear Vear 3 Vear 4 Forces Vear Vear 2 Vear 3 Forces Vear Vear 3 Vear 4 Forces Vear Vear 2 Vear 3 Forces Vear Vear 3 Vear 4 Forces Vear Vear 2 Vear 3 Forces Vear Vear 3 Vear 4 Forces Vear Vear 2 Vear 3 Forces Vear Vear 2 Forces Vear Vear 2 Vear 3 Forces Vear Vear 3 Forces Vear Vear 2 Forces Vear Vear 3 Forces Vear Vear 4 Forces Vear Vear 5 Forces Vear Vear 2 Forces Vear Vear 3 Forces Vear Vear 4 Forces Vear Vear 6 Forces Vear V | | | | | | | |
| Recognise that labyter from the same can but adapted the service of the servic | | | | | | | |
| Forces James Jame | | | | | | | |
| daugerous and that form or ways to protect their eyes. • Requisite that should be protected their eyes. • Requisite that should be protected their eyes. • Epidant betail or see thought was to be protected their eyes. • Find patterns in the way that the sails of should be part to core age. • Find patterns in the way that the sails of should be the sail that be spian why shouldows have the some shape as the shyech that cast them. • Year 1 Year 2 Year 3 Year • Year 5 Year 6 • Pupils should be taught the to be individually and narranged beautiful and the protection of the should be taught the should be taught to extra them. • Contract a simple series delicited or contact a simple series coreast, based on whether or not the lamp six part of a complete loop with a simple series coreast, based on whether or not the lamp six part of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a complete loop with a simple series coreast. • Received the series of a co | | | | | | | |
| There are wage to Proposite that Industrial to see Proposite that Industrial to a region of Proposite that Industrial to a region of Proposition of the second by south Proposition Proposition of the second by south Proposition | | | | - | | | |
| Proces Proces | | | | | | | |
| Pacagouse that that display from light source is thocked by solid chosts | | | | | | | |
| ### Authors are formula when the light from a light source is to the lock it is gold to plant. Fire Year Ye | | | | | | | |
| when the light from a light source is blooked by select the blooke | | | | | | | |
| a light sources to blocked by solid objects and then to cour eyes. • Forces Year 1 Year 2 Year 3 — Use the lied at that light trevalue in straight lines to explain why shadown changes. **Description of the straight lines to explain why shadown changes at the objects what can there are the control of the straight to the liaming to the control of the straight lines to explain why shadown changes at the objects what can the control of the straight to the liaming to the control of the straight of the straight lines to explain why shadown and straight lines to explain which we will light in a sample series careal and associate this with whether or not a lamp will light in a sample series careal and associate this with whether or not a lamp will light line a sample series careal and associated the solid lines and straight lines to explain of switchis and the shadown and straight lines to explain the sample series and the shadown and straight lines to explain the sample series and t | | | | | | | |
| blockated by solid objects • Fire of patterns in the way float the same shape as the shyloth that cases there is a supplier to the shape to the shape that to the same shape as the shyloth that cases there. • Fire of patterns in the way float the same shape as the shyloth that cases there is a shape as the shyloth that cases there is a shape as the shyloth that cases the shape to the shape to the shape that to the shape to the sh | | | | | | | |
| Secretary Propositions in the way that the size of whatone changes of whatone changes of whatone changes of whatone changes of the changes of calls used in the carsalt what the changes of the changes | | | | | | | |
| ## Of the date that the table that t | | | | | - | | |
| the way that the size of shadows changes. Straight lines to option why ghadows have the arms shape as the objects that coast them. Vear Vear 2 Vear 3 Vear 4 Vear 5 Vear 6 | | | | | 9 | | |
| Bactricity Year I Year 2 Year 3 Year 4 Pupils should be taught to: • Santify common appliances that run on destricity. • Construct a simple some skelefucul curaut, then figure and naming its basic parts, including rolls, wires, bulbs, switches and hazzers. • I dantify whather or not at an pull light in a simple some screen, based on whether or not the lamp to part of a complete loop with a hattery. • Recognise that a switch spans and danses an cental and associate this with whether or not a lamp lights in a simple some corner. • I dantify whather or not the lamp to part of a complete loop with a hattery. • Recognise that a switch spans and danses an cental and associate this with whether or not a lamp lights in a simple some common conductors. • Recognise that a switch spans and classes a cental and associate this with whether or not a lamp lights in a simple some common conductors and insulations, and associate metals with being good of conductors. • Recognise some common conductors and insulations, and associate metals with being good conductors. Forces Year I Year 2 Year 3 Year I Year 5 Year 6 Pupils should be taught to • Epplain that unsupported do jects juil two supported do jects juil two suppor | | | | | | | |
| Electricity Year 1 Year 2 Year 3 Year 4 Year 4 Year 5 Puplis should be taught to: • Identify common appliance that run on electricity. • Construct a simple series discribitual curvait, identifying and naming its base parts, including alls, wires, bulbs, workbes and huzzers • Identify whether or not a lamp will light in a simple series viceit, based on whether or not the lamps is part of a complete loop with a battery • Recognite that a switch opens and closes a curvait and associate this with whether or not a lamp lights in a simple series circuit. • Recognite that a switch opens and closes a curvait and associate this with whether or not a lamp lights in a simple series circuit. • Recognite some curvait and associate this with whether or not a lamp lights in a simple series circuit. • Recognite some curvait and associate this with whether or not a lamp lights in a simple series circuit. • Recognite some curvait and associate this with whether or not a lamp lights in a simple series circuit. • Recognite some curvait and associate this with whether or not a lamp lights in a simple series circuit. • Recognite some curvait and associate this with whether or not a lamp lights in a simple series circuit. • Recognite some curvait and associate this with whether or not a lamp lights in a simple series circuit. • Recognite some curvait and associate the additional and associate the additional associate the additional and associate the additio | | | | | | | |
| Bactricity Year 1 Year 4 Year 4 Pupils should be taught to educate them on plainance that run on electricity or control that a simple series deletrical circuit, identifying and naming its base and buzzers. • Compare and give reasons for onto a lamp will light in a simple series circuit, based on whether or not the lamp spart of a complete low with a battery. • Recognise that a switch spans and closes a current and associate this with whether or not a lamp light in a simple series circuit. • Recognise that a switch spans and closes a current and associate this with whether or not a lamp light in a simple series circuit. • Recognise that a switch spans and closes a current and associate this with whether or not a lamp light in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with bing good conductors. Forces Vear 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to efficient and the card of pupils should be taught to efficient and region to the compare how things move en different surfaces. | | | | | | | |
| Electricity Year 1 Year 2 Year 3 Year 4 Pupls should be taught to • Meantify common applanances that run on electricity • Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, were, builts, switches and buzzer, • Meantify whether or not a lamp will light in a simple series electricat thoused on 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 • Recognise that a switch opens and classes a circuit and does a circuit a | | | | | | | |
| Sear Year Pupils should be tought to: Intentify common appliances that run on electricaty Construct a simple serves electrical circuit, identifying and noming its basic parts, including cells, were, bulls, within and buzzers Compare and voltage of cells used in the circuit sand buzzers Compare and give reasons for variations in how components function, the lamp is part of a complete loop with a battery Recognise that a witch spons and closes a circuit and associate the simple series circuit. Recognise that a witch spons and closes a circuit and associate the simple series circuit. Recognise that a witch spons and closes a circuit and associate the simple series circuit. Recognise strat a witch spons and closes a circuit and associate the simple series circuit. Recognise strat a witch spons and closes a circuit and associate the simple series circuit. Recognise strat a witch spons and closes a circuit and associate metals with being good conductors. Year Year 2 Year 3 Year Year 5 Year 6 | | | | | | | |
| Pupils should be taught to liketrify common appliances that run on electricity. Construct a simple series electrical creat, identifying and naming its basic parts, including cells, were, bulls, switches and buzzer with the number and veltage of cells used in the carcait. Poping and naming its basic parts, including cells, were, bulls, switches and buzzers. It is a simple series circuit, based on 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. Recognise sima a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and associate metals with being good conductors. Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Company how thus, and the total conductors and insulators, and associate the total conductors. Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Company how thus, and the taught to: Company how thus, and the total conductors and insulators with the taught to: Company how thus, and the taught to: Company how the taught | | | | | | | |
| The series and series of the series of the series should be taught to elderhicity and associate metals with the series series and series of the southern of the series series section. I series a series section of circust, identifying and naming its board parts, including cells, wires, bulbs, switches and buzzers. I dentify 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. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. | Electricity | Year I | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| • Identify common appliances that run on electricity. • Construct aimple series dectrical circuit, identifying and naming it basic parts, including to sells, were, bulks, switches and buzzers and the complete loop with a battery. • Recognise that a switch opens and classes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good associate metals with being good conductors. • Year 1 Year 2 Year 3 Year 4 Puplis should be taught to: • Compare how things move on different surfaces. • Explain that unsupported digits • Associate the beinghiness of alamp or the volume of a buzzer with the number and voltage of cells used in the currout. • Compare how things move on different surfaces. | | | | | Pupils should be | | Pupils should be |
| appliances that run on destrictly. Construct a simple series destrical circuit, identifying and naming its basic parts, including cells, were, bulls, switches and buzzers. I dentify 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. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Year 1 Year 2 Year 3 Year 4 Pupils should be taught to: Compare how things move on different surfaces. | | | | | | | 5 |
| on electricity. Construct a simple series dectrical circuit, identifying and naming its basic parts, including cells, were, bulbs, switches and buzzers. I dentify 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. Recognise that a switch opens and closes a circuit and associate this with whether on a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Year I Year 2 Year 3 Year 4 Pupils should be taught to Compare how things move on different burgarses. | | | | | | | |
| Onstruct a simple series electrical curvati. Identifying and naming its bosic parts, including cells, were, bulls, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit. Abased on whether or not the lamp is part of a complete loop with a boattery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Year I Year 2 Year 3 Year 4 Puptls should be taught to Compare how things move on different surfaces. I buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulls are pictured. Compare the brightness of bulls on complete loop with a boattery. Recognise that a switch open and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and associate metals with being good conductors. Year I Year 2 Year 3 Year 4 Year 5 Year 6 Puptls should be taught to Compare how things move on different surfaces. | | | | | | | |
| series electrical circuit, identifying and naming its basic parts, including cells, wires, bulks, switches and buzzers • 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 beattury. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate this with being good conductors. Year 1 Year 2 Year 3 Year 4 Pupils should be taught to • Compare how things move on different surfaces. | | | | | | | _ |
| circuit, identifying and naming its basic parts, including cells, were, bulbs, switches and buzzers. • 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. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise to part the lamp is part of a complete loop with a battery. • Recognise that a switch opens and closes a circuit and associate itsis with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good and associate metals with being good conductors. Forces • Year I Year 2 Year 3 Year 4 Year 5 Year 6 • Pupils should be taught to: • Compare how things move on different surfaces. | | | | | · · | | |
| and naming its basic parts, including sells, wires, bulbs, witches and buzzers. • identify whether or not a lamp will light in a simple series circuit, based on whether on not the lamp is part of a complete loop with a battery. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp light in a simple series circuit. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors. Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: • Compare how things more on of different surfaces. | | | | | | | • |
| parts, including cells, wires, bulbs, switches and buzzers. • dentify 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. • Pecceptise that a switch opens and closes a circuit and associate this with whether or not a lamp hight in a simple series circuit. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate mala with being good conductors. Forces • Year I Year 2 Year 3 Year 4 Year 5 Year 6 • Pupils should be taught to: • Compare and give reasons for variations, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. • Use recognised symbols when representing a simple circuit in a diagram. **The common conductors and insulators, and associate mala with being good conductors. **Pupils should be taught to: • Compare and give reasons for variations, including the brightness of bulbs, the loudness of bulbs, the loudness of buzzers and the on/off position of switches. • Use recognised symbols when representing a simple circuit in a diagram. **The common conductors and insulators, and associate mala with being good conductors. **Pupils should be taught to: • Explain that unsupported objects fall towards the | | | | | | | 9 |
| wires, bulbs, switches and buzzers. oldentify 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. oldentify becomes and doses a circuit and associate this with whether or not a lamp lights in a simple series circuit. oldentify bulbs, the loundness of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches a circuit and associate this with whether or not a lamp lights in a simple series circuit. oldentify on the buzzers and doses a circuit and associate this with whether or not a lamp lights in a simple series circuit. oldentify buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify of buzzers and the on/off position of switches. oldentify on oldentify of buzzers and the on/off position of switches. oldentify on | | | | | | | |
| and buzzers. I distribly 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. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Pupils should be taught to: Oncompreted objects fall towards the different surfaces. | | | | | | | |
| • 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. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: • Compare how things move on different surfaces. Simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors. Pupils should be taught to: • Compare how things move on different surfaces. | | | | | | | 9 |
| 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. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors. Forces • Year I • Year 2 • Year 3 • Recognise some common conductors and insulators, and associate metals with being good conductors. • Pupils should be taught to: • Compare how things move on different surfaces. | | | | | | | |
| light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good Forces • Year 1 • Year 2 • Year 3 • Year 4 • Year 5 • Pupils should be taught to: • Compare how things move on different surfaces. • Use recognised symbols when representing a simple circuit in a diagram. • Vear 5 • Year 6 • Pupils should be taught to: • Explain that unsupported objects full towards the | | | | | | | |
| series circuit, based on whether or not the lamp is part of a complete loop with a battery. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors. Forces • Year I • Year 2 • Year 3 • Year 4 • Pupils should be taught to: • Compare how things move on different surfaces. • Series circuit, based on whether or not the lamp is part of a complete loop with a battery. • Recognise that a switch with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors. • Sear 5 • Year 6 • Explain that unsupported objects fall towards the | | | | | | | |
| on whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year Year 2 Year 3 Year Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. | | | | | | | |
| lamp is part of a complete loop with a battery. ■ Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. ■ Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year I Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: ■ Compare how things move on different surfaces. I amp lights in a simple series circuit. ■ Recognise some common conductors and insulators, and associate metals with being good conductors. Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 | | | | | | | |
| Switches. Complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year Year 2 Year 3 Year 4 Year 5 Year 6 | | | | | | | on/off position of |
| battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: © Compare how things move on different surfaces. | | | | | | | |
| switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. | | | | | | | Use recognised |
| closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. | | | | | Recognise that a | | symbols when |
| associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. | | | | | switch opens and | | |
| whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. | | | | | | | circuit in a diagram. |
| lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year Year 2 Year 3 Year 4 Year 5 Year 6 | | | | | | | |
| simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. Forces Year I Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. | | | | | | | |
| Forces Year I Year 2 Year 3 Pupils should be taught to: Compare how things move on different surfaces. • Recognise some common conductors and insulators, and associate metals with being good conductors. Year 5 Year 5 Year 6 Pupils should be taught to: • Compare how things move on different surfaces. | | | | | | | |
| common conductors and insulators, and associate metals with being good conductors. Forces Year I Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: • Compare how things move on different surfaces. • Compared to bjects fall towards the | | | | | | | |
| and insulators, and associate metals with being good conductors. Forces Year I Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: • Compare how things move on different surfaces. • Explain that unsupported objects fall towards the | | | | | | | |
| Forces Year I Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: • Compare how things move on different surfaces. • Compared to be taught to: • Compared to be taught to: • Explain that unsupported objects fall towards the | | | | | | | |
| being good conductors. Forces Year I Year 2 Year 3 Year 4 Year 5 Pupils should be taught to: • Compare how things move on different surfaces. • Compare towards the | | | | | | | |
| Forces Year I Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. | | | | | | | |
| Forces Year I Year 2 Year 3 Year 4 Year 5 Year 6 Pupils should be taught to: Compare how things move on different surfaces. **The compart of the co | | | | | | | |
| Pupils should be taught to: | Forces | Year I | Year 2 | Year 3 | | Year 5 | Year 6 |
| taught to: Compare how things move on different surfaces. taught to: Explain that unsupported objects fall towards the | | | | | | | |
| ● Compare how things move on different surfaces. ● Explain that unsupported objects fall towards the | | | | | | | |
| things move on unsupported objects different surfaces. | | | | | | | |
| different surfaces. fall towards the | | | | things move on | | unsupported objects | |
| ● Notice that some Earth because of the | | | | | | | |
| · | | | | 33 | | | |



| forces need contact between 2 objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday force of gravity acting between the Earth and the falling object. I dentify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms | |
|--|---|
| magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a Earth and the falling object. I dentify the effects of air resistance, water resistance, water resistance and friction that act between moving surfaces. Recognise that | |
| act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a falling object. I dentify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that | |
| act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that | |
| ● Observe how magnets attract or repel each other and attract some materials and not others. ● Compare and group together a ● Identify the effects of air resistance, water resistance and friction that act between moving surfaces. ● Recognise that | |
| magnets attract or repel each other and attract some materials and not others. Compare and group together a effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that | |
| repel each other and attract some resistance, water resistance and friction that act others. Compare and group together a resistance and surfaces. Recognise that | |
| attract some materials and not others. Compare and group together a attract some resistance and friction that act between moving surfaces. Recognise that | |
| materials and not others. • Compare and group together a friction that act between moving surfaces. • Recognise that | |
| others. ■ Compare and group together a others. ■ Recognise that | |
| Compare and group together a surfaces. Recognise that | |
| ● Compare and group together a surfaces. ● Recognise that | |
| group together a • Recognise that | |
| | |
| | |
| variety of everyday some mechanisms including levers, | |
| | |
| of whether they are pulleys and gears | |
| attracted to a allow a smaller force | |
| magnet, and identify to have a greater | |
| some magnetic effect. | |
| materials. | |
| Describe magnets | |
| as having 2 poles. | |
| • Predict whether 2 | |
| | |
| magnets will attract | |
| or repel each other, | |
| depending on which | |
| poles are facing. | |
| Rocks Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 | |
| Pupils should be | |
| taught to: | |
| • Compare and | |
| | |
| group together | |
| different kinds of | |
| rocks on the basis of | |
| their appearance and | |
| simple physical | |
| properties. | |
| Describe in simple | |
| terms how fossils are | |
| formed when things | |
| that have lived are | |
| | |
| trapped within rock. | |
| • Recognise that soils | |
| are made from rocks | |
| and organic matter. | |
| Sound Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 | 1 |
| Pupils should be | |
| taught to: | |
| • Identify how | |
| sounds are made, | |
| | |
| | |
| associating some of | |
| associating some of them with something | |
| associating some of them with something vibrating. | |
| associating some of them with something vibrating. • Recognise that | |
| associating some of them with something vibrating. • Recognise that vibrations from | |
| associating some of them with something vibrating. • Recognise that | |
| associating some of them with something vibrating. • Recognise that vibrations from | |
| associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. | |
| associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. • Find patterns | |
| associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. • Find patterns between the pitch of | |
| associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. • Find patterns between the pitch of a sound and | |
| associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. • Find patterns between the pitch of a sound and features of the | |
| associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. • Find patterns between the pitch of a sound and features of the object that produced | |
| associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. • Find patterns between the pitch of a sound and features of the object that produced it. | |
| associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. Find patterns | |
| associating some of them with something vibrating. • Recognise that vibrations from sounds travel through a medium to the ear. • Find patterns between the pitch of a sound and features of the object that produced it. | |



| 7 7 " | <u> </u> | | | | | |
|---------------|----------|--------|--------|------------------------------------|---|---|
| | | | | strength of the | | |
| | | | | vibrations that | | |
| | | | | produced it. | | |
| | | | | Recognise that | | |
| | | | | sounds get fainter as | | |
| | | | | the distance from | | |
| | | | | the sound source | | |
| | | | | increases. | | |
| Earth and | Year I | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Space | 7 644 1 | 7000 2 | Team 3 | 7 600 7 | Pupils should be taught to: 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 | Teal of |
| | | | | | of the sun across the sky. | |
| Evolution and | Year I | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Inheritance | | | | | | Pupils should be taught to: Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. |