

Science End of Year Expectations for Children in Year 1



Working Scientifically:

Questioning & Enquiry	Observing and Measuring	Investigating	Recording & Reporting Findings	Identifying & classifying	Conclusions
I can ask simple relevant questions about the world around us	I can observe changes and make comments about them	I can perform simple tests with support Begin to say what happened in investigations	I can begin to record simple data (e.g. complete a provided table)	I can begin to use simple features to compare objects, materials and living things, and, with help, decide how to sort and group them	I can begin to talk about what they found out and how they found it out

Science content:

Everyday Materials	Animals, including humans	Plants
<p>I can use the vocabulary for names of materials and properties of materials</p> <p>I can name some everyday materials</p> <p>I can describe some properties of everyday materials</p> <p>I can explore how solids can change their shape</p>	<p>I can name and label the main parts of my body</p> <p>I can tell you about all 5 of the senses and which body part would be used</p> <p>I can describe the importance of exercise, a balanced diet and hygiene for humans</p> <p>I can use the key vocabulary of fish, amphibian, reptile, bird and mammal to identify some animals in the local environment and through story topic.</p>	<p>I know and can use key vocabulary to talk about plants</p> <p>I can label different parts of plants</p> <p>I can identify and name common plants and trees in my surroundings</p> <p>I can grow a plant and describe the changes that I see</p> <p>I know the names of the four seasons and can describe how they are different</p>



Science End of Year Expectations for Children in Year 2

Working Scientifically:

Questioning & Enquiry	Observing and Measuring	Investigating	Recording & Reporting Findings	Identifying & classifying	Conclusions
I can ask questions of a scientific nature about the world around us	I can observe closely using simple equipment (rulers, egg timers, stop watches) including observing over time I can use observations and ideas to suggest answers to questions	I can perform simple tests independently I can describe what happened in the investigation	I can record findings in different ways (e.g. provided table, tally chart, pictograms)	I can use simple features to compare objects, materials and living things, and decide how to sort and group them	I can talk about what they found out, how they found it out, if anything surprised them and changes they might make if they did the investigation again

Science content:

Living things and their habitats	Plants	Light
I can use and explain the key vocabulary linked to food chains and habitats I know the basic needs of living things I notice that animals, including humans, have offspring. I can draw a food chain identifying producers, predators and prey I can identify and describe different habitats I can describe the effects of habitat on food chains and how living things are adapted to their surroundings	I know and can use key vocabulary to talk about plants I can label different parts of plants I can identify and name common plants and trees in my surroundings I can grow a plant and describe the changes that I see I can find out and describe how plants need water, light and a suitable temperature to grown and stay healthy.	I know and understand the key vocabulary related to light I can explain the difference between light and dark I can identify different light sources (manmade/natural) I know that light reflects from surfaces I know how shadows are formed I can investigate and explain how shadows can be changed.



Working Scientifically:

Questioning & Enquiry	Observing and Measuring	Investigating	Recording & Reporting Findings	Identifying & classifying	Conclusions
I can begin to ask questions about the world around us, exploring everyday phenomena and the relationships between living things	<p>I can learn to measure using scientific equipment (thermometers, data loggers)</p> <p>I can begin to decide what data to collect and measure to investigate simple patterns and relationships</p>	<p>I can begin to recognise when a simple fair test is necessary and help to decide how to set it up</p> <p>I can help to decide which variable to keep the same and which to change</p>	I can begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	I can help to decide criteria for grouping, sorting and classifying including grouping by behaviour or properties based on testing.	I can begin to use results to draw simple conclusions, make predictions, suggest improvements and raise further questions.

Science content:

Rocks	Forces & Magnets	Animals, including humans
<p>I can use the vocabulary linked to rocks</p> <p>I can describe the properties of different types of rocks</p> <p>I can describe the work of Mary Anning as a palaeontologist</p> <p>I can describe how fossils are formed</p>	<p>I can use the vocabulary linked to forces and magnets</p> <p>I can compare how things move on different surfaces.</p> <p>I can notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>I can observe how magnets attract or repel each other and attract some materials and not others.</p> <p>I can 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>I can describe magnets as having two poles</p> <p>I can predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>	<p>I know and can use key vocabulary linked to the body including teeth, nutrition and structure</p> <p>I know about the functions of different food groups and how they support the body</p> <p>I know the differences between endo and exo skeletons</p> <p>I can identify and name different teeth, describe their functions and recognise how to keep teeth healthy</p> <p>I can describe the effects of exercise on the body and how to keep bodies healthy.</p>



Working Scientifically:

Questioning & Enquiry	Observing and Measuring	Investigating	Recording & Reporting Findings	Identifying & classifying	Conclusions
I can raise my own questions about the world around us and make some decisions about which types of enquiry will be the best ways of answering these	<p>I can take systematic and accurate measurements using standard units and a range of equipment (thermometers, data loggers)</p> <p>I can help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.</p>	<p>I can set up simple practical enquiries, comparative and fair tests</p> <p>I can decide which variables to keep the same and which to change</p>	I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.	I can decide criteria/use keys for grouping, sorting and classifying including by behaviour or properties based on testing	I can start to use scientific evidence to answer questions and support findings beginning to look for patterns, similarities and differences in the data

Science content:

Sound	Plants	States of Matter
<p>I can use the vocabulary linked to sound.</p> <p>I can explain how sounds are made</p> <p>I can label the parts of the ear</p> <p>I can find patterns in sounds that are made by different objects</p> <p>I can explain how objects get fainter the further away they are</p>	<p>I know and can use key vocabulary to talk about plants</p> <p>I can label different parts of plants and explain their function</p> <p>I know what plants need to grow, and how this can be different for different plants</p> <p>I can explain how water is transported in plants</p> <p>I can describe the lifecycle of plants and use diagrams to explain this</p>	<p>I can use key vocabulary related to states of matter</p> <p>I can group materials according to whether they are solid, liquid or gas</p> <p>I know (and can name) some materials that can change state</p> <p>I can explain how heating/cooling affects different materials</p> <p>I can offer a simple explanation of the water cycle using key vocabulary and diagrams</p>



Working Scientifically:

Questioning & Enquiry	Observing and Measuring	Investigating	Recording & Reporting Findings	Identifying & classifying	Conclusions
I can begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables	<p>I can take systematic and accurate measurements with increasing accuracy using a range of different units (mass, time, weight, area)</p> <p>I can identify what data needs to be collected and choose the most appropriate equipment to use</p>	<p>I can start to use test results to make predictions and set up further comparative and fair tests</p> <p>I can identify independent and dependent variables in an investigation</p>	I can begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys and graphs.	I can learn to develop keys and other information records to identify, classify and describe living things and materials.	I can begin to draw conclusions based on their data, observations and scientific evidence, using their findings to make predictions and to set up further comparative tests

Science content:

Properties and Changes of Materials	Living Things and their Habitats	Earth and Space
<p>I can use the vocabulary linked to properties and changes of materials</p> <p>I can identify the properties of a range of materials</p> <p>I can use the terms reversible and irreversible changes and relate them to solids, liquids and gases</p> <p>I can describe reversible and irreversible changes using diagrams</p> <p>I understand that materials are made out of particles, and I can describe their movement in different states of matter</p> <p>I can describe some separation techniques of materials</p>	<p>I can use appropriate scientific vocabulary to identify, name and classify different animals</p> <p>I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals</p> <p>I can describe life cycles of different animals and plants</p> <p>I can explain the different stages of reproduction (sexual and asexual) in a range of living things (including plants)</p> <p>I can make comparisons between the stages of growth of different animals (including humans)</p>	<p>I can use key vocabulary to talk about the solar system</p> <p>I can name the planets in our solar system</p> <p>I know that the sun is a star at the centre of our solar system</p> <p>I can use a model/diagram to explain the movement of the planets to the sun/moon to the Earth</p> <p>I know how the rotation of the Earth causes day and night to occur</p> <p>I understand how ideas have changed through history about how the solar system is constructed</p>



Working Scientifically:

Questioning & Enquiry	Observing and Measuring	Investigating	Recording & Reporting Findings	Identifying & classifying	Conclusions
<p>I can select the most appropriate ways to answer science questions using different types of scientific enquiry (e.g. observing over time, noticing patterns, grouping or classifying, comparative/fair testing, using secondary sources).</p>	<p>I can make own decisions about what observations to make, how to make them and the most appropriate equipment to use</p> <p>I can take systematic and accurate measurements accurate to the nearest unit using a range of different units (mass, time, weight, area) and repeating reading where appropriate</p>	<p>I can use test results to make predictions and to shape further enquiries</p> <p>I can identify when a control is needed within an investigation and how this can be achieved.</p>	<p>I can decide how to record data from a choice of familiar approaches and how best to present the data.</p>	<p>I can develop own keys and other information records to identify, classify and describe living things and materials.</p>	<p>I can draw conclusions based on their data, justifying ideas and using scientific knowledge and understanding to explain their findings.</p> <p>I can identify evidence that refutes or supports their ideas.</p> <p>I can raise further questions that could be investigated based on data and observations</p>

Science content:

Light	Animals, including humans	Forces
<p>I can use the vocabulary linked to light</p> <p>I know that light appears to travel in straight lines</p> <p>I can explain how we see things</p> <p>I understand and can explain why shadows have the same shape as their object</p>	<p>I know the correct names for and can identify the main body parts and systems</p> <p>I can describe how the digestive system works and the functions of the different body parts</p> <p>I can describe how the circulatory system works and the functions of the different body parts</p> <p>I know that health can be affected both positively and negatively by lifestyle choices.</p> <p>Due to sexual reproduction, the offspring are not identical and vary from each other.</p>	<p>I can use the key vocabulary related to forces.</p> <p>I know that gravity is a force that pulls objects towards the centre of the Earth</p> <p>I understand how ideas have developed through history about how gravity and can name key scientists linked to this (Isaac Newton)</p> <p>I can name the forces of air resistance, water resistance and friction and demonstrate and explain how they act on everyday objects</p> <p>I can identify simple mechanisms, including gears, levers and pulleys, that increase the effect of a force</p>

	Animals have characteristics that make them suited to their environments.	
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Statements in red are linked to the Science Teacher Assessment Framework for KS1 & KS2.