

## Our Lady Star of the Sea Science Programme of study (PoS) Year 2

Materials	Living Things		
<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, water, rock, paper and cardboard for particular uses</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (applying a force)</p> <p>Some materials can be found naturally; others have to be made</p> <p>Pupils should identify and discuss the uses of different everyday materials so that they become familiar with how some materials are used for more than one thing or different materials are used for the same thing.</p> <p>Find out about people who have developed useful new materials; for example, John Dunlop, Charles Macintosh or John McAdam.</p>	<p><b>Environment - Living things and their habitat</b></p> <p>Explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</p> <p>Different kinds of plants and animals live in different kinds of places</p> <p>Habitats provide the preferred conditions for the animals/plants that live there (compare local habitats and less familiar examples).</p> <p>Identify and name a variety of plants and animals in their habitats, including micro-habitats.</p> <p>There are different kinds of habitat near school which need to be cared for.</p> <p>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.</p> <p>Observe living things in their habitats during different seasonal changes</p> <p>Compare animals in familiar habitats with animals found in less familiar habitats, for example, on the seashore, in woodland, in the ocean, in the rainforest.</p>	<p><b>Animals - Animal survival and growth</b></p> <p>Notice that animals have offspring which grow into adults.</p> <p>Find out about and describe the basic needs of animals for survival (water, food and air).</p>	<p><b>Plants - Plant growth</b></p> <p>Observe and describe how seeds and bulbs grow into mature plants</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy (and how changing these affects the plant)</p> <p>Plants are living and eventually die</p>
		<p><b>Health - How we grow and stay healthy</b></p> <p>Notice that humans have offspring which grow into adults.</p> <p>Find out about and describe the basic needs of humans, for survival (water, food and air).</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> <p>Medicines can be useful when we are ill.</p> <p>Medicines can be harmful if not used properly.</p>	

# Our Lady Star of the Sea SCIENCE KEY SKILLS YEAR 2

	Exploring and observing	Grouping and classifying	Questioning	Research	Modelling	Collaborating
	<p><i>KS1 - Observing closely. Using their observations and ideas to suggest answers to questions.</i></p> <p><i>LKS2 - Developing their own ideas and their understanding of the world around them.</i></p>	<p><i>KS1 - Compare and contrast a variety of examples linked to KS1 PoS</i></p> <p><i>LKS2 - Compare and contrast a variety of examples linked to LKS2 PoS</i></p>	<p><i>KS1 - Asking simple questions</i></p> <p><i>LKS2 - asking relevant questions</i></p>	<p><i>KS1 - Finding things out using secondary sources of information</i></p> <p><i>LKS2 - finding things out using a wide range of secondary sources of information</i></p>	<p><i>using dance, drama or a visual aid to represent science in the real world</i></p>	<p><i>interacting effectively as part of a group</i></p>
Year 3	<p>Observe and record relationships between structure and function (linked to Y3 PoS)</p> <p>Observe and record changes /stages over time (linked to Y3 PoS)</p> <p>Explore / observe things in the local environment / real contexts and record observations (linked to Y3 PoS) – see ‘Communicating’ section also re links to vocabulary</p>	<p>Decide ways and give reasons for sorting, grouping, classifying, identifying things/objects, living things, processes or events based on specific characteristics</p> <p>Compare and contrast and begin to consider the relationships between different things (e.g. structures of plants, functions of plant parts, diets, skeletons of humans and other animals, changes over time, etc.)</p> <p>Record similarities as well as differences (e.g. what do all skeletons have? as well as the differences between skeletons</p>	<p>Explore their own ideas about ‘what if...?’ scenarios e.g. humans did not have skeletons. Ask questions such as ‘What if we tried....?’ or ‘What if we changed...?’</p> <p>Begin to understand that some questions can be tested in the classroom and some cannot. Within a group suggest questions that can be explored, observed, tested or investigated further</p> <p>Within a group suggest relevant questions about what they observe and about the world around them.</p>	<p>Find things out using a range of secondary sources of information (e.g. books, photographs, videos and other technology)</p>	<p>Act out or make a model of something to represent something in the real world using appropriate scientific vocabulary verbally.</p>	<p>Begin to make some decisions about an idea within a group from a list of choices (e.g. let’s put them all in a pile first OR I think we should try ....)</p> <p>With help; support, listen to and acknowledge others in the group (e.g. Yes. I prefer that one too)</p> <p>Build on / add to someone else’s idea. (e.g. we could use x and as well as y)</p> <p>Begin to understand that it is okay to disagree with their peers and offer a reason for their opinion</p>
Year 2	<p>Use simple scientific language from the year 2 PoS to talk about / record what they have noticed</p> <p>Use observations to make suggestions and/or ask questions</p> <p>Observe and describe simple processes/cycles/ changes with several steps (e.g. growth cycle, simple food chain, saying how living things depend on one another)</p> <p>Observe closely and communicate with increasing accuracy the features or properties of things in the real world</p>	<p>Name / Identify common examples, some common features or different uses</p> <p>Sort and group objects, materials or living things by observable and/or behavioural features</p> <p>Compare and contrast... a variety of things [objects, materials or living things] - focusing on the similarities as well as the differences</p>	<p>Raise their own logical questions based on or linked to things they have observed</p> <p>With help / scaffolds, begin to ask questions such as ‘What will happen if...?’</p>	<p>Talk about how useful the information source was and express opinion about findings</p> <p>Make suggestions about who to ask or where to look for information.</p> <p>Ask people questions to help them answer their questions</p> <p>Use simple and appropriate secondary sources (such as books, photographs, videos and other technology) to find things out / find answers</p>	<p>Act out something to represent something else about the world around us (e.g a life cycle)</p>	<p>Share ideas in a group and listen to the ideas of others</p> <p>Work cooperatively with others on a science task making some choices</p>
Year 1	<p>Begin to use simple scientific language (from yr1 PoS) to talk about or record what they have noticed</p> <p>Use observations to make suggestions and/or ask questions</p> <p>Look / observe closely and communicate changes over time</p> <p>Look / observe closely and communicate the features or properties of things in the real world</p> <p>Observe closely using their senses</p>	<p>Name/identify common examples and some common features</p> <p>With help, decide how to sort and group objects, materials or living things</p> <p>Name basic features of objects, materials and living things</p> <p>Say how things are similar or different</p> <p>Compare and contrast simple observable features / characteristics of objects, materials and living things</p>	<p>Ask simple questions about what they notice about the world around them</p> <p>Demonstrate curiosity by the questions they ask</p>	<p>Ask people questions (e.g. an expert or hot-seating)</p> <p>Use simple primary and secondary sources (such as objects, books and photographs) to find things out</p>	<p>With help, follow movements (dance / drama) to act out their Science</p>	<p>Share ideas in a group and listen to the ideas of others</p> <p>Work with others on a science task</p>

	<b>Planning and testing</b> KS1 - Performing simple tests LKS2 - making decisions about and setting up simple practical enquiries, comparative tests and fair tests	<b>Using equipment and measure</b> KS1 - Using simple equipment and gathering data to help in answering their questions. LKS2 - making accurate measurements and gathering data	<b>Communicating</b> Reporting findings, recording data, presenting findings Read, spell and pronounce scientific vocabulary correctly linked to the relevant Yr Grp	<b>Describing results and looking for patterns</b> KS1 - Talk about what happened/what they noticed LKS2 - Describing their findings/results	<b>Explaining Results</b> KS1 - Talk about what they found out. LKS2 - reporting on findings saying why something happened	<b>Trusting Results</b> KS1 - Beginning to spot when a method is not fair. LKS2 - suggest improvements for further tests
<b>Year 3</b>	Help to decide about how to set up a simple fair test and begin to recognise when a test is not fair. Make a prediction based on everyday experience With support/as a group, set up simple practical enquiries incl. comparative and fair tests e.g. make a choice from a list of a things (variables) to change when conducting a fair test. (e.g. choose which magnets to compare and which method to use to test their strength). As a group, begin to make some decisions about the best way of answering their questions. Find/suggest a practical way to compare things e.g. rocks, magnets,	Collect data from their own observations and measurements using notes/ simple tables/standard units Help to make some decisions about what observations to make, how long to make them for, the type of simple equipment that might be used and how to work safely. Make simple accurate measurements using whole number standard units, using a range of equipment Gather data in a variety of ways to help in answering questions Use equipment accurately to improve the detail of their measurements/observations (e.g. microscopes, measuring syringes, measuring cylinders, hand lenses)	Record and present findings using simple scientific language and vocabulary from the year 3 PoS, including discussions, oral and written explanations, notes, annotated drawings, pictorial representations, labelled diagrams, simple tables, bar charts (using scales chosen for them), displays or presentations With scaffold / support record, and present data in a variety of ways to help in answering questions. Communicate their findings in ways that are appropriate for different audiences. (linked to Y3 PoS)	With scaffold/support, describe and compare the effect of different factors on something. (e.g. we noticed that larger magnets are not always stronger) With help, look for changes and simple patterns in their observations, data, chart or graph. Use their results to consider whether they met their predictions.	Use their experience and some evidence or results to draw a simple conclusion to answer their original question. Write a simple explanation of why things happened (using the word 'because') and using simple scientific language and vocabulary from the year 3 PoS	Say whether what happened was what they expected and notice any results that seem odd. Begin to recognise when a test is not fair and suggest improvements.
<b>Year 2</b>	Carry out simple comparative tests as part of a group, following a method with some independence Make a simple prediction about what might happen and try to give a vague reason (even though it might not be correct) With support, make suggestions on a method for setting up a simple comparative test Talk about a practical way to find answers to their questions	Measure using non-standard and simple standard measures (e.g. cm, time) with increasing accuracy Begin to make decisions about which equipment to use Correctly and safely use equipment provided to make observations and/or take simple measurements	Record and communicate their findings in a range of ways to a variety of audiences Use simple scientific language with increasing accuracy (from year 2 PoS) Record simple data with some accuracy to help in answering questions; With support or using frameworks, make decisions about how to complete a variety of tables/charts (e.g. a 2 column table, tally charts, Venn diagram, pictograms, block graphs with 1:1 scale). Present findings in a class displays Sequence / annotate photographs of change over time Produced increasingly detailed drawings which are labelled/annotated.	With guidance, begin to notice patterns in their data e.g. order their findings, sequence best to worst, say what happened over time, etc. Recognise if results matched predictions. (say if results were what they expected) Use their recordings to talk about and describe what has happened	Begin to use simple scientific language (from year 2 PoS) to explain what they have found out.  Give a simple, logical reason why something happened (e.g. I think ... because ...)	Begin to discuss if the test was unfair
<b>Year 1</b>	With help, carry out a simple test/comparative test  With help, make a simple prediction or suggestion about what might happen  Begin to suggest some ideas e.g. choose which equipment to use, choose which materials to test from a selection  Talk about ways of setting up a test	Measure using non-standard units e.g. how many lolly sticks/cubes/handfuls, etc.  Observe closely, using simple equipment (e.g. hand lenses, egg timers)  Use senses to compare different textures, sounds and smells	Communicate their ideas to a range of audiences in a variety of ways  Complete a pre-constructed table / chart using picture records or simple words  Contribute to a class display  Add annotations to drawings or photographs  Begin to use some simple scientific language from yr1 PoS  Record simple visual representations of observations made	Use recordings to talk about and describe what happened  Sequence photographs of an event/observation	Begin to use simple scientific language (from yr1 PoS) to talk about what they have found out or why something happened	N/A in Year 1