Pearson Primary Progress and Assess
Science Progression Map

Child's name: _____

Objective	Working Scientifically LKS2						
	General/asking questions	**Observing changes over time**	**Comparative and fair tests**	**Identifying and classifying**	**Looking for naturally occurring patterns and relationships**	**Recording and reporting findings**	**Researching and using secondary sources**
	Be able to raise their own questions about the world around them.	Make observations about everyday phenomena.	Suggest a practical way to find something out.	Use simple observable features to compare objects or living things.	Recognise links between observations and answers to questions.	Use notes, simple tables and standard units.	Use information from secondary sources to help answer a question.
	Be able to suggest one way of finding an answer to a question.	Decide what is important or relevant to observe.	Make decisions about which practical method is best to find something out.	Be able to group objects and living things in different ways.	Notice patterns and relationships.	Help to make decisions about how to record and analyse data.	Recognise when and how secondary sources might help answer questions that cannot be answered through practical investigations.
	Understand that some questions may not be relevant to enquiries.	Make increasingly careful observations.	Be able to identify two variables in an investigation, e.g. water and light when investigating plant growth.	Talk about criteria for grouping, sorting and classifying.	Look for naturally occurring patterns and relationships and decide what data to collect to identify them.	Make independent choices about appropriate ways to record data.	
	Be able to suggest more than one way of finding an answer to a question, e.g. by research, by testing.	Make systematic observations.	Be able to set up a comparative test.	Use observable features of objects to identify them.	Be able to collect data from their own observations and measurements.	**Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.**	
	Suggest 'testable questions' that can be answered in classroom investigations.	Decide for how long to make observations.	Recognise when a simple fair test is necessary to answer a scientific question.	Use simple keys.	With help, look for changes, patterns, similarities and differences in their data.	Use relevant scientific language to discuss their ideas.	
	Recognise alternative methods of scientific enquiry used to find answers to questions.	Use a range of equipment correctly to observe and measure.	Be able to identify variables to measure and variables to observe.	Begin to classify and identify by linking observable features to already known objects or things.	Use patterns in their data to draw simple conclusions and answer questions.	Communicate findings in ways that are appropriate to different audiences.	

Works with Science Bug

Pearson Primary Progress and Assess
Science Progression Map

Child's name: _____

Objective

General/asking questions	Observing changes over time	Comparative and fair tests	Identifying and classifying	Looking for naturally occurring patterns and relationships	Recording and reporting findings	Researching and using secondary sources
Make own decisions about which method of enquiry is best to answer a question.	Be able to select appropriate equipment to observe and measure.	With others, help to set up a fair test.	Begin to classify by behavioural features, e.g. conducts electricity, is magnetic.	Use evidence to answer questions and make predictions.	Identify relevant evidence used to draw conclusions.	
Asking relevant questions and using different types of scientific enquiries to answer them.	Use new equipment such as data loggers appropriately.	Start to recognise when a test is not fair and suggest improvements.	Explain which observable or behavioural features have led them to classify in a particular way.	Say whether what happened was what they expected.	**Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.**	
Be able to refine a question.	Accurately use standard measures.	**Setting up simple practical enquiries, comparative and fair tests.**	**Identifying differences, similarities or changes related to simple scientific ideas or processes.**	With support, identify new questions arising from the data.	**Using straightforward scientific evidence to answer questions or to support their findings.**	
Draw simple conclusions and talk about what they have found out using some scientific language.	**Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.**	Be able to develop features of a test to give a better outcome.	Be able, independently, to use simple databases or keys to identify or classify living things, objects or events.	Make predictions for new values within or beyond the data they have collected.	Use scientific language and facts to describe processes and what they have observed.	
Draw simple conclusions and write about what they have found out using some scientific language.	Use an increasing range of standard measures accurately.			Find ways of improving what they have already done.	Explain findings reported and recorded using more complex scientific language.	
Use relevant scientific language to discuss their ideas.	Explain why particular equipment chosen is appropriate to the task.			Link results to their own experiences.		

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Objective	General/asking questions	Observing changes over time	Comparative and fair tests	Identifying and classifying	Looking for naturally occurring patterns and relationships	Recording and reporting findings	Researching and using secondary sources
	Use relevant scientific language to communicate their findings. ☐				**Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.** ☐		
	Communicate their ideas in ways that are appropriate for different audiences. ☐				Recognise when a result seems unusual when compared with other values. ☐		
	Use a variety of written communication methods, e.g. guides, keys, drawings and other pictorial representations which are suggested to them. ☐				Identify when repeated results are necessary. ☐		
	Choose their own way of communicating ideas to different audiences. ☐						
	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. ☐						

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Pearson Primary Progress and Assess
Science Progression Map

Child's name: _____

Objective	Knowledge Year 4				
	Biology		**Chemistry**	**Physics**	
	Animals, including humans	**Living things and their habitats**	**States of matter**	**Sound**	**Electricity**
	Know that the human body has organs and be able to name some. *Y4 HN L1*	Recognise that there is a vast array of living things. *Y4 GLT L1*	Understand that objects are made from materials. *Y4 COS L1*	Identify a variety of sounds. *Y4 S L1*	Understand that electricity is needed to make some appliances work. *Y4 E L1*
	Know that each organ has a function. *Y4 HN L1, L2*	Know that living things can be grouped according to features that they share. *Y4 GLT L2*	Know that different materials have different properties. *Y4 COS L1*	Know that sounds come from a source. *Y4 S L1*	Sort (pictures of) household objects into those that use electricity and those that don't. *Y4 E L1*
	Understand that some groups of organs work together in a system. *Y4 HN L1, L2*	Use more than one way to sort the same group of living things. *Y4 GLT L2*	Know that solids, liquids and gases are groups of materials with different general properties. *Y4 COS L2*	Recognise that sounds can be classified in different ways, e.g. loud, quiet, high, low. *Y4 S L1*	**Identify common appliances that run on electricity.** *Y4 E L1, L2*
	Recognise that humans have a body system which digests (breaks down) food. *Y4 HN L1*	**Recognise that living things can be grouped in a variety of ways.** *Y4 GLT L1, L2*	Be able to describe and name some solids, liquids and gases. *Y4 COS L2*	Understand the term 'vibrate' (to move very quickly from side to side). *Y4 S L1*	Explore making bulbs light and buzzers buzz. *Y4 E L2*
	Know that this system is called the digestive system. *Y4 HN L1*	Recall and use appropriately the term 'classification'. *Y4 GLT L3*	Know that collectively, solids, liquids and gases are called the states of matter. *Y4 COS L2*	Understand and identify that all sounds are made by something vibrating. *Y4 S L1*	Record in their own way how to make a bulb light and/or a buzzer buzz. *Y4 E L2*
	Be able to name and describe the main organs of the digestive system: teeth, mouth, tongue, oesophagus, stomach, small and large intestines, rectum and anus. *Y4 HN L1, L2*	Use a simple classification key to identify and name a living thing. *Y4 GLT L5, L6*	Be able to identify the state of matter of a material by its physical properties. *Y4 COS L1, L2*	**Identify how sounds are made, associating some of them with something vibrating.** *Y4 S L1, L2*	Describe how to use a switch to turn off a light or to stop a buzzer buzzing. *Y4 E L2*

Works with Science Bug

Key to Science Bug units: HN: Human Nutrition, S: Sound, E: Electricity,
DLT: Dangers to Living Things, GLT: Grouping Living Things, COS: Changes of State

Pearson Primary Progress and Assess
Science Progression Map

Child's name: _____

Year 4
Knowledge

Objective	Animals, including humans	Living things and their habitats	States of matter	Sound	Electricity
	Be able to sequence the process of digestion. *Y4 HN L2*	**Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.** *Y4 GLT L3, L4, L5, L6*	**Compare and group materials together, according to whether they are solids, liquids or gases.** *Y4 COS L1, L2*	Know that we hear with our ears. *Y4 S L1, L2*	**Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.** *Y4 E L2*
	Describe the simple functions of the basic parts of the digestive system in humans. *Y4 HN L1, L2*	Recall the term 'environment'. *Y4 DLT L1, L4*	Know that materials can exist as solids, liquids or gases. *Y4 COS L2, L3*	Know that sounds can travel. *Y4 S L2*	From photographs of circuits including a bulb, predict whether the bulb will light, and then test their prediction. *Y4 E L3*
	Know that teeth are part of the digestive system. *Y4 HN L1, L2, L3*	Understand that environments can be changed in positive ways, e.g. the creation of nature reserves, and in negative ways, e.g. deforestation. *Y4 DLT L1, L4, L5, L6*	Understand that the state of a material can be changed. *Y4 COS L2, L3, L4*	Know that sound can travel through solids, liquids and gases. *Y4 S L2*	Understand that a lamp will light only if it is part of a complete loop with a battery. *Y4 E L3*
	Recognise that human teeth are not all the same size or shape. *Y4 HN L3*	Identify ways in which humans can reduce the effects of environmental change. *Y4 DLT L5*	Know that heating or cooling materials can change their properties. *Y4 COS L2, L3, L4*	**Recognise that vibrations from sounds travel through a medium to the ear.** *Y4 S L2*	**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.** *Y4 E L3*
	Be able to identify and name the main types of teeth in humans: incisor, canine, pre-molar, molar. *Y4 HN L3*	Record the effects of small scale change on living things in a local environment. *Y4 DLT L5*	Know that heating a solid can change it to a liquid and that this process is called melting. *Y4 COS L2, L3, L4*	Know that the highness or lowness of a sound is called the pitch of the sound. *Y4 S L3*	Explore placing a switch in a circuit that lights a lamp and describe what happens when it is used. *Y4 E L6*
	Understand that the shape of a tooth is linked to its function, e.g. slicing, tearing, chewing or grinding food. *Y4 HN L2, L3*	**Recognise that environments can change and that this can sometimes pose dangers to living things.** *Y4 DLT L1, L3, L4, L5, L6*	Know that heating a liquid can change it to a gas and that this process is called evaporation. *Y4 COS L3, L4*	Recognise that there are high and low pitched sounds. *Y4 S L3, L4*	**Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.** *Y4 E L6*
	Identify the different types of teeth in humans and their simple functions. *Y4 HN L1, L3, L4, L5, L6*		Know that cooling a gas can change it to a liquid and that this process is called condensation. *Y4 COS L3, L4, L5*	Understand that the pitch of sounds can be changed. *Y4 S L3*	Explain what an electrical conductor and insulator are. *Y4 E L4*
	Recognise that animals obtain their food from plants and other animals. *Y4 DLT L1*		Know that cooling a liquid can change it to a solid and that this process can be called freezing (or solidification). *Y4 COS L3, L4*	Identify features of an object that can be changed to alter its pitch, e.g. length of tube, length of string, tension of string. *Y4 S L4*	Test and then classify objects as those that conduct electricity and those that do not. *Y4 E L4, L5*

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Pearson Primary Progress and Assess
Science Progression Map

Child's name: _____

Objective

Animals, including humans	Living things and their habitats	States of matter	Sound	Electricity
Know that food is a basic need and the availability of food affects the animals found in an environment. *Y4 DLT L1*		Understand that melting and freezing are processes that can be reversed. *Y4 COS L4, L5*	**Find patterns between the pitch of a sound and features of the object that produced it.** *Y4 S L3, L4*	Know that metals are good conductors of electricity. *Y4 E L5*
Recognise that all food chains start with a plant and that arrows show the direction of the energy (food) being transferred, i.e. 'gets eaten by...' *Y4 DLT L2*		Know that temperature is a measure of how hot or cold something is and is measured in degrees Celsius using a thermometer (°C). *Y4 COS L4*	Know that volume refers to how loud a sound is. *Y4 S L5*	**Recognise some common conductors and insulators, and associate metals with being good conductors.** *Y4 E L4, L5*
Know that green plants are producers because they make their own food. *Y4 DLT L2*		Know that water exists in three states and changes from one to another at different temperatures. *Y4 COS L3*	Know that the volume of sounds can be changed. *Y4 S L5*	
Recognise that there is only one herbivore in a food chain. *Y4 DLT L2*		Recognise that not every substance needs to be put in a cold place to become solid, e.g. melted wax, and that not every substance will become solid in a commercial freezer but that different substances change state at different temperatures. *Y4 COS L4*	Know that the volume of sounds can be measured with a sound meter (data logger). *Y4 S L5*	
Define a predator as an animal that eats another animal and prey as an animal that gets eaten by another animal. *Y4 DLT L2*		**Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).** *Y4 COS L3, L4*	Know that the unit of measurement of volume is a decibel (dB). *Y4 S L5*	
Recognise that the same animal can be both a predator and prey. *Y4 DLT L2*		Know that evaporation and condensation are changes of state. *Y4 COS L5*	**Find patterns between the volume of a sound and the strength of the vibrations that produced it.** *Y4 S L5*	

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Child's name: _____

Objective	Animals, including humans	Living things and their habitats	States of matter	Sound	Electricity
	Construct and interpret a variety of food chains, identifying producers, predators and prey. *Y4 DLT L1, L2, L3*		Recognise that changes of state require changes of temperature. *Y4 COS L3, L4, L5, L6*	Know that sounds can travel from a source. *Y4 S L1, L2, L6*	
			Understand that evaporation is the process in which liquid water is changed to water vapour by heating. *Y4 COS L5*	**Recognise that sounds gets fainter as the distance from the sound source increases.** *Y4 S L6*	
			Understand that condensation is the reverse of evaporation and is the process in which water vapour in the air is cooled down to form liquid water. *Y4 COS L5*		
			Be able to describe the changes of state in the water cycle. *Y4 COS L6*		
			Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. *Y4 COS L5, L6*		

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