

IPC STRAND	NC outcomes Year 5 and Year 6	MILEPOST 3	Bake It!: Y6 Sum	Being Human: Y5 Sum	Existing, Endangered, Extinct: Y6 Aut	Fairgrounds: Y6 Sum	Full Power: Y6 Sum	Roots, Shoots and Fruits: Y5 Spr	Space Scientists: Y5 Aut
	English National Curriculum coverage opportunities		6	6	6	6	6	5	5
Scientific enquiry		3.01 Be able to choose an appropriate way (research review, simulation or experimentation) to investigate a scientific issue	.	.	.	.	.	.	.
		3.02							
		3.03 Understand the limitations of scientific investigation	.	.	.	.	.	.	.
		3.04 Be able to suggest testable questions	.	.	.	.	.	.	.
		3.05 Be able to generate a hypothesis	.	.	.	.	.	.	.
	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	3.06 Be able to plan a fair (test) investigation	.	.	.	.	.	.	.
	using test results to make predictions to set up further comparative and fair tests	3.07 Be able to make predictions related to the independent variable	.	.	.	.	.	.	.
		3.08 Be able to conduct science investigations safely	.	.	.	.	.	.	.
	taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	3.09 Be able to take systematic and accurate measurements or observations using the most appropriate tools and conventions	.	.	.	.	.	.	.
	identifying scientific evidence that has been used to support or refute ideas or arguments.	3.10 Be able to analyse observations and results identifying those that are more or less significant	.	.	.	.	.	.	.
	reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	3.11 Be able to draw conclusions based on results and compare to original hypotheses and the real world	.	.	.	.	.	.	.
	recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	3.12 Be able to record the method and results including tables, graphs, diagrams and/or models	.	.	.	.	.	.	.
		3.13 Be able to evaluate investigations for fairness and suggest improvements	.	.	.	.	.	.	.

IPC STRAND	NC outcomes Year 5 and Year 6	MILEPOST 3	Bake It!: Y6 Sum	Being Human: Y5 Sum	Existing, Endangered, Extinct: Y6 Aut	Fairgrounds: Y6 Sum	Full Power: Y6 Sum	Roots, Shoots and Fruits: Y5 Spr	Space Scientists: Y5 Aut
	English National Curriculum coverage opportunities		6	6	6	6	6	5	5
Humans and animals	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood describe the ways in which nutrients and water are transported within animals, including humans.	3.14 Know the functions of the major internal and external parts of the human body							
		3.15 Be able to describe some of the connections between systems in the human body							
Plants	describe the life process of reproduction in some plants and animals	3.16 Know about factors that affect the growth of plants							
		3.17 Know that photosynthesis requires carbon dioxide and results in the excretion of oxygen							
	describe the life process of reproduction in some plants and animals	3.18 Know about pollination, fertilisation and methods of seed dispersal							
Living things		3.19 Know the seven characteristics							
	describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals give reasons for classifying plants and animals based on specific characteristics.	3.20 Be able to identify an animals' class according to its features, behaviours and lifecycle							
		3.21 Know the names of different types							
		3.22 Be able to predict the outcome of							
		3.23 Know the influences on the quality							

IPC STRAND	NC outcomes Year 5 and Year 6	MILEPOST 3	Bake It!: Y6 Sum	Being Human: Y5 Sum	Existing, Endangered, Extinct: Y6 Aut	Fairgrounds: Y6 Sum	Full Power: Y6 Sum	Roots, Shoots and Fruits: Y5 Spr	Space Scientists: Y5 Aut
English National Curriculum coverage opportunities			6	6	6	6	6	5	5
	identify how animals and plants are adapted to suit	3.24 Understand the effects that changes		.	.				
	identify how animals and plants are adapted to suit	3.25 Understand how plants and animals			.			.	
	recognise that living things have changed over time	3.26 Know that there is evidence that			.				
	recognise that living things produce offspring of the	3.27 Know that some characteristics of		.	.				
	recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function	3.28 Know the possible impact of too much or too little of a particular nutrient		.	.				
		3.29 Understand the consequences of			.				
Properties	compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets					.	.		
	give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic		.			.	.		
	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		3.32 Understand that changing some materials makes them more or less suitable for their purposes	.					

IPC STRAND	NC outcomes Year 5 and Year 6	MILEPOST 3	Bake It!: Y6 Sum	Being Human: Y5 Sum	Existing, Endangered, Extinct: Y6 Aut	Fairgrounds: Y6 Sum	Full Power: Y6 Sum	Roots, Shoots and Fruits: Y5 Spr	Space Scientists: Y5 Aut
	English National Curriculum coverage opportunities		6	6	6	6	6	5	5
	compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets	3.33 Know that insulators are designed to maintain temperature, whether it be hot or cold.	Covered in Science Extension task (LG not listed as not core task.)						
		3.34							
		3.35							
		3.36 Know that substances can be classified as acid or alkali and that acidity can be measured							
Matter		3.37 Know that matter is made up of particles							
		3.38							
	use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating	3.39 Be able to describe and illustrate the different arrangements of particles in solids, liquids and gases							
Changes	demonstrate that dissolving, mixing and changes of	3.40 Know that there are different ways							
	know that some materials will dissolve in liquid to	3.41 Know the basic factors that affect							
	use knowledge of solids, liquids and gases to decide	3.42 Be able to separate simple mixtures							
	demonstrate that dissolving, mixing and changes of	3.43 Know that different amounts of							
		3.44							
		3.45 Know that elements cannot be							
		3.46							
		3.47							
	use the idea of the Earth's rotation to explain day and	3.48 Understand that the position of the							
	describe the movement of the Moon relative to the	3.49 Know the names of the phases of							
	describe the movement of the Earth, and other	3.50 Know that the Sun is the largest							

IPC STRAND	NC outcomes Year 5 and Year 6	MILEPOST 3	Bake It!: Y6 Sum	Being Human: Y5 Sum	Existing, Endangered, Extinct: Y6 Aut	Fairgrounds: Y6 Sum	Full Power: Y6 Sum	Roots, Shoots and Fruits: Y5 Spr	Space Scientists: Y5 Aut
	English National Curriculum coverage opportunities		6	6	6	6	6	5	5
Earth and space	describe the movement of the Earth, and other planets, relative to the Sun in the solar system	3.51 Know that planets take different lengths of time and paths to orbit the Sun							
		3.52 Understand how the Earth meets the conditions for sustaining human life							
		3.53 Be able to use weight and mass correctly in experiments							
	explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	3.54 Know that a force called gravity keeps things on the ground							
Energy		3.55 Know that chemical, electricity and movement (kinetic) are stores of energy							
	compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets	3.56 Know that conductors and insulators affect the rate of heat energy transfer	Covered in Science Extension task (LG not listed as not core task.)						
		3.57 Be able to compare a renewable and non-renewable way of producing electricity							
		3.58 Know that different appliances consume different amounts of energy to do different tasks							
Circuits and Magnetism		3.59 Know the names of types of circuit							
	use recognised symbols when representing a simple circuit in a diagram	3.60 Be able to draw and build series and parallel circuits							
		3.61							

IPC STRAND	NC outcomes Year 5 and Year 6	MILEPOST 3	Bake It!: Y6 Sum	Being Human: Y5 Sum	Existing, Endangered, Extinct: Y6 Aut	Fairgrounds: Y6 Sum	Full Power: Y6 Sum	Roots, Shoots and Fruits: Y5 Spr	Space Scientists: Y5 Aut
	English National Curriculum coverage opportunities		6	6	6	6	6	5	5
Electricity and electromagnetism		3.62							
		3.63							
		3.64							
		3.65 Know that bar magnets have two poles and that opposite poles attract							
Waves		3.66							
		3.67 Know that sound requires a medium to travel through							
		3.68 Understand some of the risks associated with light and sound							
		recognise that light appears to travel in straight lines							
		use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye	3.69 Know that light travels in a straight line until it hits an object						
		use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them	3.70 Be able to predict how the shape of the shadow would change depending on the position of the light source relative to the object						
			3.71 Know that white light is a mixture of all of the colours in the visible spectrum						
			3.72 Understand why the eye changes in response to light and dark						

IPC STRAND	NC outcomes Year 5 and Year 6	MILEPOST 3	Bake It!: Y6 Sum	Being Human: Y5 Sum	Existing, Endangered, Extinct: Y6 Aut	Fairgrounds: Y6 Sum	Full Power: Y6 Sum	Roots, Shoots and Fruits: Y5 Spr	Space Scientists: Y5 Aut
	English National Curriculum coverage opportunities		6	6	6	6	6	5	5
Forces		3.73 Know the five possible effects a force can have							
		3.74 Be able to measure forces using a Newton meter							
	identify the effects of air resistance, water resistance and friction, that act between moving surfaces	3.75 Understand how friction and air resistance impact on movement							
		3.76 Know the forces involved in the stretching and squashing of springs and elastic bands							
	recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	3.77 Know that a fulcrum provides a pivot point							
		3.78							
		3.79							
	recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	3.80 Be able to sort simple machines by how they work							