Programmes of study and Early learning goals Beenham Primary School Curriculum 22 (187 projects, 4798 lessons) live



Big idea	Aspect	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Humankind	Human body	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants.	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Optional	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Covered	Notice that animals, including humans, have offspring which grow into adults. Know key facts about puberty and the changing adolescent body, particularly from age 9 through to age 11, including physical and emotional changes. Covered	Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Covered	Describe the simple functions of the basic parts of the digestive system in humans.	Describe the life process of reproduction in some plants and animals. Covered	Identify and name the main parts of the human circulator system, and describe the functions of the heart, blood vessels and blood. Covered
	Staying safe	AOL: PSED Explain the reasons for rules, know right from wrong and try to behave accordingly.	AOL: PSED Explain the reasons for rules, know right from wrong and try to behave accordingly. Covered Optional	Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. breadth Know about safe and unsafe exposure to the sun, and how to reduce the risk of sun damage, including skin cancer. covered	Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). covered optional	Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Know about safe and unsafe exposure to the sun, and how to reduce the risk of sun damage, including skin cancer. Covered Optional	disciplines of biology, chemistry and physics. covered breadth	Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. Covered breadth	Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
	Healthy lifestyle	attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions. required coverage AOL: PSED Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.		Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. breadth Know about personal hygiene and germs including bacteria, viruses, how they are spread and treated, and the importance of handwashing. covered		Identify 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. Know what constitutes a healthy diet (including understanding calories and other nutritional content). covered	Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. breadth Know the characteristics of a poor diet and risks associated with unhealthy eating (including, for example, obesity and tooth decay) and other behaviours (e.g. the impact of alcohol on diet or health). Know about dental health and the benefits of good oral hygiene and dental flossing, including regular check ups at the dentist. covered	Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. breadth Know about personal hygiene and germs including bacteria, viruses, how they are spread and treated, and the importance of handwashing. Know key facts about puberty and the changing adolescent body, particularly from age 9 through to age 11, including physical and emotional changes. covered	

Big idea	Aspect	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Respective the impact of diet,
					Describe the importance for				exercise, drugs and lifestyle on the way their bodies
					humans of exercise, eating the				function.
					right amounts of different				
					types of food, and hygiene.				Know the benefits of physica exercise, time outdoors,
					Know the risks associated				community participation,
					with an inactive lifestyle				voluntary and service-based
					(including obesity).				activity on mental wellbeing
					Know what constitutes a				and happiness.
					healthy diet (including				Know the risks associated
					understanding calories and				with an inactive lifestyle
					other nutritional content).				(including obesity).
					Know the characteristics of a				Know what constitutes a
					poor diet and risks associated				healthy diet (including
					with unhealthy eating				understanding calories and
					(including, for example,				other nutritional content).
					obesity and tooth decay) and				Know the characteristics of
					other behaviours (e.g. the				poor diet and risks associate
					impact of alcohol on diet or				with unhealthy eating
					health).				(including, for example,
					Know the importance of				obesity and tooth decay) and
					sufficient good quality sleep				other behaviours (e.g. the
					for good health and that a				impact of alcohol on diet or
					lack of sleep can affect				health).
					weight, mood and ability to				Know the facts about legal
					learn.				and illegal harmful substance
					Know about dental health and				and associated risks, including
					the benefits of good oral				smoking, alcohol use and dru
					hygiene and dental flossing,				taking.
					including regular check ups at				covered optional x 2
					the dentist.				
					Know about personal hygiene				
					and germs including bacteria,				
					viruses, how they are spread and treated, and the				
					importance of handwashing.				
					covered covered				
_									_
Processes	Pattern seeking	AOL: World Understand	AOL: World Understand	Observe changes across the	_	Find patterns in the way that	Find patterns between the	Use the idea of the Earth's	Use the idea that light travel
			some important processes	four seasons.	and conceptual understanding		pitch of a sound and features	rotation to explain day and	in straight lines to explain w
		changes in the natural world	and changes in the natural	covered x 6 optional x 2	through the specific	covered optional	of the object that produced it.		shadows have the same shap
		around them, including the	world around them, including		disciplines of biology,		Find patterns between the	movement of the sun across	as the objects that cast then
		seasons and changing states	the seasons and changing		chemistry and physics.		volume of a sound and the	the sky.	covered
		of matter.	states of matter.		covered optional broadth		strength of the vibrations that	covered	
		optional	covered x 2 optional		breadth		produced it.		
							covered		

Big idea **Aspect** Reception Year 1 Year 3 Year 4 Year 5 Year 6 Nursery Year 2 Changes AOL: World Understand AOL: World Understand Observe and describe Find out how the shapes of Describe in simple terms how Observe that some materials Demonstrate that dissolving, Recognise that living things some important processes some important processes and weather associated with the solid objects made from some fossils are formed when change state when they are mixing and changes of state have changed over time and and changes in the natural changes in the natural world seasons and how day length materials can be changed by things that have lived are heated or cooled, and are reversible changes. that fossils provide world around them, including around them, including the varies. squashing, bending, twisting trapped within rock. measure or research the information about living Explain that some changes things that inhabited the Earth the seasons and changing seasons and changing states covered and stretching. covered temperature at which this result in the formation of new states of matter. of matter. happens in degrees Celsius millions of years ago. covered materials, and that this kind of (°C). optional x 2 optional x 2 covered change is not usually covered x 3 reversible, including changes associated with burning and the action of acid on bicarbonate of soda. covered x 5 **Earth** AOL: World Understand AOL: World Understand Observe and describe Develop scientific knowledge Recognise that soils are made Describe the movement of the Recognise that light appears Identify the part played by to travel in straight lines. some important processes some important processes weather associated with the and conceptual understanding from rocks and organic evaporation and condensation Earth, and other planets, and changes in the natural and changes in the natural seasons and how day length through the specific matter. in the water cycle and relative to the Sun in the solar covered optional x 2 world around them, including world around them, including varies. disciplines of biology, covered associate the rate of system. Use the idea that light travels the seasons and changing the seasons and changing covered x 2 chemistry and physics. evaporation with in straight lines to explain that Describe the movement of the states of matter. states of matter. optional | breadth temperature. objects are seen because they Moon relative to the Earth. covered x 5 optional x 6 optional give out or reflect light into the eye. covered x 2 optional Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. covered x 2 optional Phenomena AOL: World Develop AOL: World Develop Develop scientific knowledge Develop understanding of the Recognise that they need light Describe the Sun, Earth and Develop scientific knowledge Identify how sounds are scientific knowledge through and conceptual understanding in order to see things and that made, associating some of and conceptual understanding scientific knowledge through nature, processes and Moon as approximately play activities, sharing stories play activities, sharing stories through the specific methods of science through dark is the absence of light. them with something spherical bodies. through the specific and non-fiction books and and non-fiction books and disciplines of biology, different types of science covered optional vibrating. covered disciplines of biology, discussion. discussion chemistry and physics. chemistry and physics. enquiries that help them to Recognise that shadows are Recognise that vibrations breadth breadth covered breadth overed x 5 breadth answer scientific questions formed when the light from a from sounds travel through a about the world around them. light source is blocked by a medium to the ear. breadth solid object. covered x 2 **Forces** AOL: World Develop AOL: World Develop Develop understanding of the Develop understanding of the Notice that some forces need Identify whether or not a lamp Explain that unsupported Associate the brightness of a scientific knowledge through scientific knowledge through nature, processes and nature, processes and contact between two objects, will light in a simple series objects fall towards the Earth lamp or the volume of a buzzer with the number and play activities, sharing stories play activities, sharing stories methods of science through methods of science through but magnetic forces can act at circuit, based on whether or because of the force of gravity voltage of cells used in the and non-fiction books and and non-fiction books and different types of science different types of science a distance. not the lamp is part of a acting between the Earth and discussion. discussion. enquiries that help them to covered x 3 complete loop with a battery. the falling object. circuit. enquiries that help them to covered x 2 optional x 2 covered x 5 optional x 2 answer scientific questions answer scientific questions breadth breadth about the world around them. about the world around them. covered x 4 optional x 2 covered breadth breadth

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Big idea	Aspect	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Modelling	AOL: World Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. covered optional breadth	AOL: World Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. Covered x 3 breadth	Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. breadth	Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. Covered x 3 breadth	Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. Covered breadth	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. covered x 3 optional	Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. Covered	Use recognised symbols who representing a simple circuit a diagram. Covered x 2
Creativity	Report and conclude	AOL: CL Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. Covered x 4 Optional x 3	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Covered x 12 Optional x 12	Use their observations and ideas to suggest answers to questions. Covered x 9 Optional x 8	Use their observations and ideas to suggest answers to questions. Covered x 10 Optional x 2	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Use straightforward scientific evidence to answer questions or to support their findings.	for new values, suggest improvements and raise further questions. Use straightforward scientific	Report and present 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.	Use test results to make predictions to set up further comparative and fair tests. Report and present findings from enquiries, including conclusions, causal relationships and explanation of and degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.
	Gather and record data		AOL: Maths Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Covered x 2 Optional	Gather and record data to help in answering questions. covered x 8 optional x 5	Gather and record data to help in answering questions. covered x 9 optional x 5	Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Covered x 7 Optional x 7	Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Covered x 8 Optional x 7	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Covered x 10 Optional	Record data and results of increasing complexity using scientific diagrams and laber classification keys, tables, scatter graphs, bar and line graphs. Covered x 6 Optional x 9
Investigation	Questioning	AOL: CL Make comments about what they have heard and ask questions to clarify their understanding. Covered x 3 Optional x 7	AOL: CL Make comments about what they have heard and ask questions to clarify their understanding. Covered x 18 Optional x 19	Ask simple questions and recognise that they can be answered in different ways.	Ask simple questions and recognise that they can be answered in different ways. Covered x 7 Optional	Ask relevant questions and using different types of scientific enquiries to answer them. Covered x 5	Ask relevant questions and using different types of scientific enquiries to answer them. Covered x 5	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Covered x 5 Optional x 2	Plan different types of scientific enquiries to answ questions, including recognising and controlling variables where necessary. Covered x 7 Optional x 3

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Big idea A	Aspect	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
N	Measurement	AOL: World Make observations about the world around them. breadth	AOL: World Make observations about the world around them. covered x 2 optional x 4 breadth	Observe closely, using simple equipment. covered x 9 optional	Observe closely, using simple equipment. covered x 5 optional x 2	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Covered x 5 Optional	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Covered x 4 Optional	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Covered x 6 Optional	Take measurements, using a range of scientific equipment with increasing accuracy and precision, taking repeat readings when appropriate. Covered x 6
Ir	nvestigation	AOL: Exp A&D Test their ideas. covered optional x 4 breadth	AOL: Exp A&D Test their ideas. covered x 7 optional x 4 breadth	Perform simple tests. covered x 7	Perform simple tests. covered x 7 optional x 3	Set up simple practical enquiries, comparative and fair tests. Covered x 9 Optional	Set up simple practical enquiries, comparative and fair tests. Covered x 5 Optional	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Covered x 10 Optional	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
C	Observation	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Covered x 5 Optional x 11	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Covered x 23 Optional x 36	Identify and classify. covered x 7 optional x 4	Identify and classify. covered x 7 optional x 9	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Covered x 5 Optional x 2	Take measurements, using a range of scientific equipment with increasing accuracy and precision, taking repeat readings when appropriate. Covered x 4 Optional
						Identify differences, similarities or changes related to simple scientific ideas and processes. Covered x 11 Optional x 8	Identify differences, similarities or changes related to simple scientific ideas and processes. covered x 6 optional x 2		
	dentification and classification	AOL: World Sort and group materials and resources and talk about how they are similar or different. covered optional breadth	AOL: World Sort and group materials and resources and talk about how they are similar or different. Covered x 4 Optional x 2 breadth	Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. covered x 2	Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. Covered breadth	Notice that light is reflected from surfaces. Covered	Compare and group materials together, according to whether they are solids, liquids or gases. Covered x 2	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. Covered x 3 Optional x 2 Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.	Develop understanding of the nature, processes and method of science through different types of science enquiries that help them to answer scientific questions about the world around them. Optional breadth

Big idea	Aspect	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Properties and uses	AOL: World Sort and group materials and resources and talk about how they are similar or different. Covered breadth	AOL: World Sort and group materials and resources and talk about how they are similar or different. Covered x 3 Optional breadth	Describe the simple physical properties of a variety of everyday materials. Covered Optional	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Covered x 5 Optional x 2	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Covered Optional x 3 Observe how magnets attract or repel each other and attract some materials and not others. Covered 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. Covered	Recognise some common conductors and insulators, and associate metals with being good conductors. Covered x 2 Optional	Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Covered x 4 Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Covered x 2	Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. Covered breadth
Nature	Identification and classification	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Covered x 10 Optional x 7	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Covered x 5 Optional x 3	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Covered x 8 Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Covered x 5	plants and animals in their habitats, including microhabitats.	Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Covered	Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Covered x 7 Optional	Describe the life process of reproduction in some plants and animals. Covered	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 covered x 5
	Parts and functions	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Covered x 4 Optional	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Covered x 16 Optional x 9	Identify and describe the basic structure of a variety of common flowering plants, including trees. Covered x 2 Optional Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). Covered x 2	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Covered x 4	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Covered x 2 Optional x 2 Investigate the way in which water is transported within plants. Covered x 2	Identify the different types of teeth in humans and their simple functions. Covered	Describe the life process of reproduction in some plants and animals. Covered	Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents covered x 3
	Nutrition	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Optional x 2	AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. Covered x 3 Optional x 2	Identify and name a variety of common animals that are carnivores, herbivores and omnivores.	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.	Identify 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.	Construct and interpret a variety of food chains, identifying producers, predators and prey.	Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. Covered breadth	Describe the ways in which nutrients and water are transported within animals, including humans.

discussion.

optional

breadth

discussion

covered x 7 optional x 2 breadth

enquiries that help them to answer scientific questions about the world around them. breadth

enquiries that help them to answer scientific questions about the world around them. breadth

Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.

covered

Change Living things AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants.

optional

AOL: World Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

covered x 9 optional x 5

nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.

optional covered x 4 breadth

Develop understanding of the Observe and describe how seeds and bulbs grow into mature plants.

covered x 4

Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

optional

Recognise that environments Describe the changes as can change and that this can humans develop to old age. sometimes pose dangers to living things.

Know key facts about puberty and the changing adolescent body, particularly from age 9 through to age 11, including physical and emotional changes.

covered x 3 optional x 3

Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth

covered x 2

millions of years ago.



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