



Outwood Primary Science Overview

Year Group	Autumn	Spring	Summer	
EYFS: Development Matters – Understanding the World	Seasons: Autumn, harvesting, keeping healthy, hand-washing, looking after wildlife, importance of exercise . . . Identifying, classifying and grouping Pattern seeking Observing over time	Seasons: Winter, observing changes around them, feeding the birds, looking after the environment, habitats for mini-beasts, keeping healthy, looking after yourself, keeping warm in winter, healthy eating . Identifying, classifying and grouping Pattern seeking Observing over time	Seasons: Spring, sowing seeds, planting bulbs etc. keeping healthy, looking after yourself Scientist: David Attenborough Identifying, classifying and grouping Pattern seeking Observing over time	Seasons: Summer, growing and changing, caterpillar to butterflies etc. keeping healthy, looking after yourself – sun safety Scientist: David Attenborough Identifying, classifying and grouping Pattern seeking Observing over time
	Outdoor learning opportunities: EYFS provision allows for daily outdoor learning opportunities			
Nat Curriculum 2014				
Y1	Animals including Humans: identify & name; carnivores, herbivores & omnivores; draw & label human body parts Pattern seeking Identifying, classifying and grouping Comparative and fair testing Observing over time	Everyday Materials: Identify & name everyday materials; describe physical properties; compare & group materials based on simple physical properties Observing over time Comparative and fair testing Identifying, classifying and grouping Pattern seeking	Plants: identify, name & describe common wild & garden flowering plants including trees Identifying, classifying and grouping Observing over time Pattern seeking Comparative and fair testing Research using secondary sources Outdoor learning – common birds and tree identifying	
Seasonal Changes Throughout year: observe changes in seasons; in weather, day length Identifying, classifying and grouping Observing over time Pattern seeking				
Working Scientifically throughout the year - build on EYFS plus: identify, classify; gather data; observe & make comparisons; ask Q's; perf simple tests				
Outdoor learning opportunities: Building rain gauges, monitoring weather patterns, flower identification in the school grounds, planting a wild garden, looking at plants and trees in the school grounds				



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Y2	<p style="text-align: center;">Uses of Everyday Materials:</p> <p>Identify & compare – variety of materials for particular uses (wood, metal, plastic, bricks, . . .) Find out how shapes of solids can be changed by squashing, bending, twisting & stretching</p> <p style="text-align: center;">Identifying, classifying and grouping Comparative and fair testing Pattern seeking Observing over time</p>	<p style="text-align: center;">Animals including humans:</p> <p>Animals have off-spring that grow to adults; what animals need to survive; importance of human exercise, food types/amount and hygiene</p> <p style="text-align: center;">Pattern seeking Research using secondary sources Observing over time</p>	<p style="text-align: center;">Plants:</p> <p>Seeds & bulbs grow; what plants need to be healthy;</p> <p style="text-align: center;">Comparative and fair testing Observing over time Pattern seeking</p>	<p style="text-align: center;">Living Things & their Habitats:</p> <p>Explore difs between living, dead & never lived things; identify how living things suit the habitat usually found; simple food chains; identify & name plants/animals incl micro habitats</p> <p style="text-align: center;">identifying, classifying and grouping Pattern seeking</p> <p style="text-align: center;">Outdoor learning – living, dead, never alive and microhabitats</p>	
<p>Working Scientifically throughout the year - build on Y1 plus: observe closely, perform simple tests; gather & record data to help answer Q's</p>					
<p>Outdoor learning opportunities: Use materials to plan and create something for the outdoors (such as bird boxes or feeders from recycled materials), plant bulbs (indoor and outdoor) and maintain the garden, search for micro-habitats in the school grounds and observe/photograph changes. Explore how to support micro habitats</p>					
Y3	<p style="text-align: center;">Rocks:</p> <p>Compare & group dif types of rocks based on properties and appearance; how fossils are formed; soil is made from organic matter & rocks, Life cycle of volcanoes and impact</p> <p style="text-align: center;">Identifying, classifying and grouping Comparative and fair testing Pattern seeking Observing over time</p>	<p style="text-align: center;">Plants:</p> <p>Identify and describe functions of dif parts of flowering plants; investigate how water is transported; explore life-cycle of flowering plants</p> <p style="text-align: center;">Identifying, classifying and grouping Observing over time</p>	<p style="text-align: center;">Forces Including Magnets:</p> <p>Compare how things move on dif surfaces; observe how magnets repel and attract some materials; compare & group magnetic /non-magnetic materials; 2 poles of magnets; predictions</p> <p style="text-align: center;">Identifying, classifying and grouping Comparative and fair testing Pattern seeking Observing over time</p>	<p style="text-align: center;">Animals including Humans:</p> <p>Importance of nutrition for living things; purpose of skeleton & muscles</p> <p style="text-align: center;">Comparative and fair testing Research using secondary sources</p>	<p style="text-align: center;">Light:</p> <p>We need light to see; light is reflected from surfaces; sun can be dangerous to eyes; find patterns in shadow size</p> <p style="text-align: center;">Comparative and fair testing Pattern seeking Observing over time</p>
<p>Working Scientifically throughout the year - build on KS1 plus: comparative & fair tests, bar-charts, labelling diagrams; group; identify; describe; make predictions; investigate; find patterns – use diff scientific enquiry skills</p>					



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	Outdoor learning opportunities: Use soil from school grounds – identify/photograph/mark out the areas. Looking at plants in the grounds comparing location and efficiency. Choose and identify locations for different plant purposes based on soil/water/light. Use outdoor space for light/shadows. Look at nature – explore where plants are located in regard to light/shade and investigate why.				
Y4	<p style="text-align: center;">Electricity: Identify common appliances run on electricity; simple series circuits – identifying & naming basic parts (cells, wires, bulbs, switches & buzzers)</p> <p style="text-align: center;">Comparative and fair testing Pattern seeking Observing over time</p> <p style="text-align: center;">Identifying, classifying and grouping</p> <p style="text-align: center;">Research using secondary sources</p>	<p style="text-align: center;">Animals including Humans: digestive system; teeth and their functions; food chains – producers, predators & prey</p> <p style="text-align: center;">Identifying, classifying and grouping Pattern seeking Research using secondary sources Observing over time Comparative and fair testing</p> <p style="text-align: center;">Outdoor learning – predators and prey</p>	<p style="text-align: center;">Sound: Vibrations & sound; travels to the ear; patterns of pitch and the object; patterns of vibrations & volume; increase & decrease of sound</p> <p style="text-align: center;">Comparative and fair testing Observing over time</p> <p style="text-align: center;">Identifying, classifying and grouping</p> <p style="text-align: center;">Research using secondary sources</p>	<p style="text-align: center;">Living Things & their Habitats: Rec that living things can be grouped; use classification keys to group, name & identify living things; changing of environments can be dangerous for living things Local environment; climate change; impact on habitats; helping habitats; global awareness Scientist: Esther Lederburg</p> <p style="text-align: center;">Identifying, classifying and grouping Pattern seeking Research using secondary sources Observing over time</p>	<p style="text-align: center;">States of Matter: Compare S, L & G; the water cycle; observe how some materials change state when heated/cooled</p> <p style="text-align: center;">Comparative and fair testing</p> <p style="text-align: center;">Observing over time Pattern seeking Identifying, classifying and grouping</p> <p style="text-align: center;">Research using secondary sources</p> <p style="text-align: center;">Outdoor learning – state of matter and the water cycle</p>
Working Scientifically throughout the year build on from Y3: ask Q's and use Scientific enquiries to find answers; comparative & fair tests; gather, record classify & present data; suggest improvements & raise further Q's					
Outdoor learning opportunities: Observe what happens to the water outside (frozen on cold days etc) build a model water cycle – leave in varied areas of the school grounds and observe over time Human impact on school grounds and dangers. States of matter					



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<p>Y5</p>	<p>Living Things & their Habitats: Describe dif in life-cycles of a mammal, amphibian, insect and a bird; life processes of reproduction in some plants & animals</p> <p>Comparative and fair testing Pattern seeking Observing over time</p> <p>Identifying, classifying and grouping</p> <p>Research using secondary sources</p>	<p>Forces: Gravity acts between Earth & falling object: identify effects of air, water-resistance & friction between moving surfaces; rec that some mechanisms (gears, pulleys & levers) allow a smaller force to have a greater effect</p> <p>Identifying, classifying and grouping Comparative and fair testing Pattern seeking Observing over time</p> <p>Outdoor learning – egg drop</p>	<p>Earth & Space: Solar system – movement of the Earth & other planets to the sun: describe movement of the Moon to the Earth; rotation to describe day 7 night and the apparent movement of the sun across the sky</p> <p>Observing over time Pattern seeking Research using secondary sources Identifying, classifying and grouping Comparative and fair testing</p>	<p>Animals including Humans: Describe changes as humans develop to old age</p> <p>Pattern seeking Research using secondary sources Observing over time</p> <p>Identifying, classifying and grouping</p> <p>Comparative and fair testing Pattern seeking</p>	<p>Properties & Change of Materials: Dissolving to form a solution & recover substances from a solution; use K & U of S, L & G to decide how mixtures might be separated; explain reversible an irreversible changes to materials</p> <p>Comparative and fair testing Observing over time Pattern seeking Research using secondary sources Identifying, classifying and grouping</p>
<p>Working Scientifically throughout the year build on from Y4: plan sci enquiries to answer Q's including controlling variables; take measurements & readings; use diagrams and labels classification keys, tables, bar and line graphs; report findings; identify scientific evidence used to support ideas/arguments</p>					
<p>Outdoor learning opportunities: Look wild plants in the outdoors. Observe similarities and differences – look at seed reproduction and evidence of this in the outdoors. Explore forces in nature – use the outdoors to test experiments.</p>					
<p>Y6:</p>	<p>Animals including Humans: Identify & name the circulatory system; functions of heart, blood vessels and blood; impact on body of diet, drugs & life-style; how nutrients & water are transported within animals incl humans</p>	<p>Living Things & their Habitats: Grouped according to similarities and diffs: micro-organisms, plants & animals; give reasons why grouped as such</p>	<p>Light: Appears to travel in straight lines; how we see things; shadows and their shape</p> <p>Comparative and fair testing Pattern seeking</p>	<p>Electricity: Brightness of lamp/volume of buzzer = number & voltage of cells used; use recognised symbols when presenting a simple circuit; conductors & insulators</p>	<p>Evolution & Inheritance: Living things have changed over time; fossils provide information about living things from millions of years ago; living things produce off-spring of the same kind – not normally identical to parents; identify how animals & plants are adapted to suit their environment in diff ways – may lead to evolution</p>



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	<p>Pattern seeking Research using secondary sources Observing over time Identifying, classifying and grouping Comparative and fair testing</p>	<p>Identifying, classifying and grouping Pattern seeking Research using secondary sources Comparative and fair testing</p>	<p>Observing over time Identifying, classifying and grouping</p>	<p>Comparative and fair testing Pattern seeking Observing over time Identifying, classifying and grouping</p>	<p>Identifying, classifying and grouping Observing over time Pattern seeking Research using secondary sources Comparative and fair testing Outdoor learning – adaptation</p>
<p>Working Scientifically continue from Y5</p>					
<p>Outdoor learning opportunities: Look at adaptation of surroundings and survival of the fittest , explore shadows and straight lines</p>					