

NATIONAL CURRICULUM KEY STAGES 3 AND 4

Opportunities for the study of trees, forests and forestry

<i>Ref/page no</i>	<i>Aspect</i>	<i>Exemplification</i>	<i>Keyword</i>	<i>Domain</i>
ENGLISH				
Key Stages 3 & 4				
p46 KS 3&4 En1: 2a, b	To listen, understand and respond critically to others, pupils should be taught to: a) concentrate on and recall the main features of a talk, reading, radio or television programme	Relevant media sources	Information source	All
p48 KS 3&4 En1: 8 a, b, c	<i>Speaking</i> The range of purposes should include: a) describing, narrating, explaining, arguing, persuading, entertaining; c) presentations to different audiences.	Making a case for a sustainable practice eg forestry, use of timber as a renewable material	Information source	All
p48 KS 3&4 En1: 9 a, b, c	<i>Listening</i> The range should include listening to and watching: a) live talks and presentations; b) recordings [for example, radio, television, film]	Relevant sources, eg local forestry organisations	Information source	All
p48 KS 3&4 En1: 10 a, b	<i>Group discussion and interaction</i> a) exploring, hypothesising, debating, analysing and pupils should be given opportunities to: b) take different roles in groups	Role plays/ taking on different points of view; discussion of sustainable issues	Information source	All
p50 KS 3&4 En2: 4 a, b, c, d	<i>Printed and ICT-based information texts</i> To develop their reading of print and ICT-based information texts, pupils should be taught to: a) select, compare and synthesise information from different texts b) evaluate how information is presented c) sift the relevant from the irrelevant, and distinguish	Distinguishing between various claims made about sustainable issues and assessing their validity	Information source	All

	between fact and opinion, bias and objectivity			
p50 KS 3&4 En2: 5 a, b, c, d	<i>Media and moving image texts</i> c) how the nature and purpose of media products influence content and meaning	Detecting bias and appreciating the power of media to influence ideas about the environment	Information source	All
p51 KS 3&4 9 a, b, c	<i>Non-fiction and non-literary texts</i> a) literary non-fiction b) print and ICT-based information and reference texts c) media and moving image texts	Examples given are: David Attenborough, Rachel Carson, Charles Darwin, Steve Jones	Information source	All
p52 KS 3&4 En3 1 a - o	<i>Writing to imagine, explore, entertain</i> a) draw on their experience of good fiction, of different poetic forms and of reading, watching and performing plays <i>Writing to inform, explain, describe</i> e) form sentences and paragraphs that express connections between information and ideas precisely <i>Writing to persuade, argue, advise</i> i) develop logical arguments and cite evidence j) use persuasive techniques and rhetorical devices k) anticipate reader reaction, counter opposing views and use language to gain attention and sustain interest <i>Writing to analyse, review, comment</i> m) form their own view, taking into account a range of evidence and opinions n) organise their ideas and information, distinguishing between analysis and comment	Forests in literature and drama Connecting and supporting ideas of sustainability with relevant information Making and presenting cases for and against issues to do with forestry and sustainability Forming opinions based on evidence eg on the role of forests in ameliorating climate change	Personal experience Information source	All
<u>MATHE- MATICS</u>				
Key Stage 3				
p69 KS3 Ma4: 1 a	<i>Handling data; Problem solving</i> a) carry out each of the four aspects of the handling data cycle to solve problems:	All aspects of fieldwork and local study eg related to tree surveys	Fieldwork Data, source	All

	<p>i) specify the problem and plan: formulate questions in terms of the data needed, and consider what inferences can be drawn from the data; decide what data to collect and what statistical analysis is needed</p> <p>ii) collect data from a variety of suitable sources, including experiments and surveys, and primary and secondary sources</p> <p>iii) process and represent the data: turn the raw data into usable information that gives insight into the problem</p> <p>iv) interpret and discuss the data: answer the initial question by drawing conclusions from the data</p>	<p>and woodland habitat</p> <p>Other information retrieval, eg data from forestry organisations</p> <p>Draw conclusions eg of human influence</p>	of	
p69-70 KS3 Ma4: 2c, d, e	<p><i>Specifying the problem and planning</i></p> <p>c) discuss how data relate to a problem; identify possible sources of bias and plan to minimise it</p> <p>d) identify which primary data they need to collect and in what format</p> <p>e) design an experiment or survey; decide what secondary data to use.</p>	As for Ma4: 1a	Fieldwork Data, source of	All
p70 KS3 Ma4: 3a, b, c	<p><i>Collecting data</i></p> <p>a) design and use data-collection sheets for grouped discrete and continuous data; collect data using various methods including observation, controlled experiment, data logging, questionnaires and surveys</p> <p>b) gather data from secondary sources, including printed tables and lists from ICT-based sources</p> <p>c) design and use two-way tables for discrete and grouped data.</p>	<p>As for Ma4: 1a</p> <p>Eg leaf distribution and patterns.</p> <p>Opinion surveys eg concerning views on value of local woodland etc.</p> <p>Using data available from forestry and other organisations</p>	Fieldwork Data, source of	All
Key Stage 4				
p82 KS4 foundation Ma4: 1 a	<p><i>Handling data;</i></p> <p><i>Problem solving</i></p> <p>'a) carry out each of the four aspects of the handling data cycle to solve problems:</p>	All aspects of fieldwork and local study eg related to tree surveys and woodland habitat	Fieldwork Data, source of	All

	<p>i) specify the problem and plan: formulate questions in terms of the data needed, and consider what inferences can be drawn from the data; decide what data to collect and what statistical analysis is needed</p> <p>ii) collect data from a variety of suitable sources, including experiments and surveys, and primary and secondary sources</p> <p>iii) process and represent the data: turn the raw data into usable information that gives insight into the problem</p> <p>iv) interpret and discuss: answer the initial question by drawing conclusions from the data</p>	<p>Other information retrieval, eg data from forestry/other organisations</p> <p>Draw conclusions eg of human influence</p>		
p83 KS4 foundation Ma4: 2 d, e	<p><i>Specifying the problem and planning</i></p> <p>c) discuss how data relate to a problem; identify possible sources of bias and plan to minimise it</p> <p>d) identify which primary data they need to collect and in what format,</p> <p>e) design an experiment or survey; decide what secondary data to use.</p>	As for Ma4: 1a	Fieldwork Data, source of	All
p83 KS4 foundation Ma4: 3 a, b	<p><i>Collecting data</i></p> <p>a) design and use data-collection sheets for grouped discrete and continuous data; collect data using various methods, including observation, controlled experiment, data logging, questionnaires and surveys</p> <p>b) gather data from secondary sources, including printed tables and lists from ICT-based sources.</p>	As for Ma4: 1a Eg leaf distribution and patterns. Opinion surveys eg concerning views on value of local woodland etc. Using data available from forestry/other organisations	Fieldwork Data, source of	All
p84 KS4 foundation Ma4: 5: a - e	<p><i>Interpreting and discussing results</i></p> <p>a) relate summarised data to the initial questions</p> <p>b) interpret a wide range of graphs and diagrams and draw conclusions</p>	All aspects of data collection, analysis and inference in relation to field data and	Fieldwork Data, source of	All

	<p>c) look at data to find patterns and exceptions d) compare distributions and make inferences, using the shapes of distributions and measures of average and range.</p>	secondary sources		
<p>p98 KS4 higher Ma4: 1 a</p>	<p><i>Handling data:</i> <i>Problem solving</i> a) carry out each of the four aspects of the handling data cycle to solve problems: i) specify the problem and plan: formulate questions in terms of the data needed, and consider what inferences can be drawn from the data; decide what data to collect and what statistical analysis is needed ii) collect data from a variety of suitable sources, including experiments and surveys, and primary and secondary sources iii) process and represent the data: turn the raw data into usable information that gives insight into the problem iv) interpret and discuss the data: answer the initial question by drawing conclusions from the data.</p>	<p>All aspects of fieldwork and local study eg related to tree surveys and woodland habitat</p> <p>Other information retrieval, eg data from forestry/other organisations</p> <p>Draw conclusions eg of human influence</p>	<p>Fieldwork</p> <p>Data, source of</p>	All
<p>p99 KS4 higher Ma4: 2 d, e</p>	<p><i>Specifying the problem and planning</i> d) identify which primary data they need to collect and in what format, including grouped data, select and justify a sampling scheme and a method to investigate a population, including random and stratified sampling e) design an experiment or survey; decide what primary and secondary data to use.</p>	As for Ma4: 1a	<p>Fieldwork</p> <p>Data, source of</p>	All
<p>p99 KS4 higher Ma4: 3 a, b, c, d</p>	<p><i>Collecting data</i> a) collect data using various methods, including observation, controlled experiment, data logging, questionnaires and surveys b) gather data from secondary sources, including printed tables and lists from ICT-based sources c) design and use two-way tables for discrete and grouped</p>	<p>As for Ma4: 1a</p> <p>Opinion surveys eg concerning views on value of local woodland etc.</p>	<p>Fieldwork</p> <p>Data, source of</p>	All

	data d) deal with practical problems such as non-response or missing data.	Using data available from forestry/other organisations		
SCIENCE				
Key Stage 3				
	<i>Ideas and evidence in science</i> a) about the interplay between empirical questions, evidence and scientific explanations using historical and contemporary examples [for example, Lavoisier's work on burning, the possible causes of global warming]	Role of forests in relation to global warming	Climate change	All
p104 KS3 Sc1: 2a - e	<i>Investigative skills: Planning</i> a) use scientific knowledge and understanding to turn ideas into a form that can be investigated, and to decide on an appropriate approach b) decide whether to use evidence from first-hand experience or secondary sources c) carry out preliminary work and to make predictions, where appropriate d) consider key factors that need to be taken into account when collecting evidence, and how evidence may be collected in contexts [for example, fieldwork, surveys] in which the variables cannot readily be controlled e) decide the extent and range of data to be collected and the techniques, equipment and materials to use [for example, appropriate sample size for biological work]	All aspects of fieldwork	Fieldwork Data, source of	All
p106 KS3 Sc2: 1 a-e	<i>Cells and cell functions</i> a) that animal and plant cells can form tissues, and tissues can form organs b) the functions of chloroplasts and cell walls in plant cells and the functions of the cell membrane, cytoplasm and nucleus in both plant and animal cells c) ways in which some cells, including ciliated epithelial cells,	All aspects of plant biology as related to trees, for example relating to rigid cell walls and support, pollination etc; role of roots.	Plant biology	Environment and biodiversity

	<p>sperm, ova, and root hair cells, are adapted to their functions</p> <p>d) that fertilisation in humans and flowering plants is the fusion of a male and a female cell</p> <p>e) to relate cells and cell functions to life processes in a variety of organisms.</p>			
p107 KS3 Sc2: 3 a - e	<p><i>Green plants as organisms: Nutrition and growth</i></p> <p>a) that plants need carbon dioxide, water and light for photosynthesis, and produce biomass and oxygen</p> <p>c) that nitrogen and other elements, in addition to carbon, oxygen and hydrogen, are required for plant growth</p> <p>d) the role of root hairs in absorbing water and minerals from the soil</p>	All aspects of plant biology as exemplified by trees	Plant biology; Biomass; Photosynthesis; Carbon cycle	Environment and biodiversity
p107 KS3 Sc2: 4 a, b, c	<p><i>Variation, classification and inheritance</i></p> <p><i>Variation</i></p> <p>a) about environmental and inherited causes of variation within a species</p> <p><i>Classification</i></p> <p>b) to classify living things into the major taxonomic groups</p> <p><i>Inheritance</i></p> <p>c) that selective breeding can lead to new varieties.</p>	All aspects as exemplified by trees	Plant biology Taxonomy	Environment and biodiversity
p107 KS3 Sc2: 5 a - f	<p><i>Living things in their environment</i></p> <p><i>Adaptation and competition</i></p> <p>a) about ways in which living things and the environment can be protected, and the importance of sustainable development</p> <p>b) that habitats support a diversity of plants and animals that are interdependent</p> <p>c) how some organisms are adapted to survive daily and seasonal changes in their habitats</p> <p>d) how predation and competition for resources affect the size of populations [for example, bacteria, growth of vegetation]</p> <p><i>Feeding relationships</i></p> <p>e) about food webs composed of several food chains, and how food chains can be quantified using pyramids of numbers</p>	All aspects as exemplified by trees	Plant biology Living things Sustainable development Habitats Environment care for Pollution	Environment and biodiversity

	f) how toxic materials can accumulate in food chains.		Food chains	
p109 KS3 Sc3: 2 h, i	<i>Changing materials</i> h) that virtually all materials, including those in living systems, are made through chemical reactions, and to recognise the importance of chemical change in everyday situations [for example, ripening fruit] i) about possible effects of burning fossil fuels on the environment [for example, production of acid rain, carbon dioxide and solid particles] and how these effects can be minimised.	Role of trees and forests as source of materials and food, and in climate change	Wood as a material; Fuelwood; Energy sources; Climate, effects on; Pollution; Resources; Environmental issues	Environment and biodiversity Timber and forestry
p111-112 KS3 Sc4: 5 a, b	<i>Energy resources and energy transfer</i> <i>Energy resources</i> a) about the variety of energy resources, including oil, gas, coal, biomass, food, wind, waves and batteries, and the distinction between renewable and non-renewable resources b) about the Sun as the ultimate source of most of the Earth's energy resources and to relate this to how coal, oil and gas are formed <i>Conservation of energy</i> e) ways in which energy can be usefully transferred and stored g) that although energy is always conserved, it may be dissipated, reducing its availability as a resource.	Trees and forests as fuel sources, past and present	Biomass Wood as a fuel Energy sources Fuelwood Resources	Environment and biodiversity Timber and forestry
Key Stage 4				
p113 KS4 Single science Sc1: 1 a, d	<i>Ideas and evidence in science</i> d) to consider the power and limitations of science in addressing industrial, social and environmental questions, including the kinds of questions science can and cannot answer, uncertainties in scientific knowledge, and the ethical issues involved.	Role of trees and forests in industrial and social contexts	Environmental issues; Industry; Information, source of	All
p113 KS4	<i>Investigative skills</i>	All aspects of data	Information	All

<p>Single science Sc1: 2 a - j</p>	<p><i>Planning</i> a) use scientific knowledge and understanding to turn ideas into a form that can be investigated, and to plan an appropriate strategy b) decide whether to use evidence from first-hand experience or secondary sources c) carry out preliminary work and make predictions, where appropriate d) consider key factors that need to be taken into account when collecting evidence, and how evidence can be collected in contexts [for example, fieldwork, surveys] in which the variables cannot readily be controlled e) decide the extent and range of data to be collected [for example, appropriate sample size for biological work] and the techniques, equipment and materials to use <i>Obtaining and presenting evidence</i> g) make observations and measurements, including the use of ICT for datalogging to a degree of precision appropriate to the context j) represent and communicate qualitative and quantitative data using diagrams, tables, charts, graphs and ICT</p>	<p>collection and field work</p>	<p>source Fieldwork</p>	
<p>p116 KS4 Single science Sc2: 3 a, b, c, g, h, I</p>	<p><i>Variation, inheritance and evolution</i> <i>Variation</i> a) how variation arises from genetic causes, environmental causes, and a combination of both b) that sexual reproduction is a source of genetic variation, while asexual reproduction produces clones c) that mutation is a source of genetic variation and has a number of causes <i>Inheritance</i> g) the basic principles of cloning, selective breeding and genetic engineering <i>Evolution</i> h) that the fossil record is evidence for evolution i) how variation and selection may lead to evolution or to</p>	<p>Plant breeding and forestry</p> <p>Evolution of trees; formation of coal</p>	<p>Plant biology Genetic engineering Evolution</p>	<p>Environment and biodiversity Timber and forestry</p>

	extinction.			
p116 KS4 Single science Sc2: 4 a, b, c	<i>Adaptation and competition</i> a) how the distribution and relative abundance of organisms in habitats can be explained using ideas of interdependence, adaptation, competition and predation b) how the impact of humans on the environment depends on social and economic factors, including population size, industrial processes and levels of consumption and waste c) about the importance of sustainable development.	All aspects of woodland ecology and forestry. Loss of forests and sustainable use of woodlands	Plant biology; Environmental issues; Resources; Sustainable development	Biodiversity and environment Timber and forestry
p120 KS4 Single science Sc4: 4 b	<i>Energy resources and energy transfer</i> <i>Energy transfer</i> b) about the efficient use of energy, the need for economical use of energy resources, and the environmental implications of generating energy		Wood as a fuel; Resources; Environmental issues	Timber and forestry; Biodiversity and environment
p122 KS4 Double science Sc1: 1 a, d	<i>Ideas and evidence in science</i> d) to consider the power and limitations of science in addressing industrial, social and environmental questions, including the kinds of questions science can and cannot answer, uncertainties in scientific knowledge, and the ethical issues involved.	All aspects	Environmental issues Information, source of	Timber and forestry; Biodiversity and environment
p122 KS4 Double science Sc1: 2 a - j	<i>Investigative skills</i> <i>Planning</i> a) use scientific knowledge and understanding to turn ideas into a form that can be investigated, and to plan an appropriate strategy b) decide whether to use evidence from first-hand experience or secondary sources c) carry out preliminary work and make predictions, where appropriate d) consider key factors that need to be taken into account when collecting evidence, and how evidence can be collected in contexts [for example, fieldwork, surveys] in which the	All aspects of fieldwork Use of secondary sources about trees and forests	Information, source of Fieldwork Data, source of	Biodiversity and environment

	<p>variables cannot readily be controlled</p> <p>e) decide the extent and range of data to be collected [for example, appropriate sample size for biological work] and the techniques, equipment and materials to use</p> <p><i>Obtaining and presenting evidence</i></p> <p>g) make observations and measurements, including the use of ICT for datalogging to a degree of precision appropriate to the context</p> <p>h) make sufficient observations and measurements to reduce error and obtain reliable evidence</p> <p>i) judge the level of uncertainty in observations and measurements</p> <p>j) represent and communicate qualitative and quantitative data using diagrams, tables, charts, graphs and ICT.</p>			
<p>p124 KS4 Double science Sc2: 1a - e</p>	<p><i>Cell activity</i></p> <p>a) about similarities and differences in structure between plant and animal cells</p> <p>b) how substances enter and leave cells through the cell membrane by diffusion, osmosis and active transport</p> <p>e) to relate ways in which animals and plants function as organisms to cell structure and activity.</p>		<p>Plant biology</p>	<p>Biodiversity and environment</p>
<p>p125 KS4 Double science Sc2: 3 a - h</p>	<p><i>Green plants as organisms</i></p> <p><i>Nutrition</i></p> <p>a) the reactants in, and products of, photosynthesis</p> <p>b) that the rate of photosynthesis may be limited by light intensity, carbon dioxide concentration or temperature</p> <p>c) how the products of photosynthesis are utilised by the plant</p> <p>d) the importance to healthy plant growth of the uptake and utilisation of mineral salts</p> <p><i>Hormones</i></p> <p>e) the hormonal control of plant growth and development, including commercial applications</p> <p><i>Transport and water relations</i></p> <p>f) how plants take up water and transpire</p>		<p>Plant biology</p> <p>Photosynthesis</p>	<p>Biodiversity and environment</p>

	<p>g) the importance of water in the support of plant tissues h) that substances required for growth and reproduction are transported within plants.</p>			
<p>p125-126 KS4 Double science Sc2: 4 a, b, c, g, h, i j</p>	<p><i>Variation, inheritance and evolution</i> <i>Variation</i> b) that sexual reproduction is a source of genetic variation, while asexual reproduction produces clones <i>Inheritance</i> h) the basic principles of cloning, selective breeding and genetic engineering <i>Evolution</i> i) that the fossil record is evidence for evolution</p>		<p>Plant biology Genetic engineering Evolution</p>	<p>Biodiversity and environment Timber and forestry</p>
<p>p126 KS4 Double science Sc2: 5 a - f</p>	<p><i>Living things in their environment</i> <i>Adaptation and competition</i> a) how the distribution and relative abundance of organisms in habitats can be explained using ideas of interdependence, adaptation, competition and predation b) how the impact of humans on the environment depends on social and economic factors, including population size, industrial processes and levels of consumption and waste c) about the importance of sustainable development <i>Energy and nutrient transfer</i> d) how to describe food chains quantitatively using pyramids of biomass e) how energy is transferred through an ecosystem f) the role of microbes and other organisms in the decomposition of organic materials and in the cycling of carbon and nitrogen.</p>	<p>All aspects of woodlands and forestry</p>	<p>Living things Plant biology; Environmental issues Resources Biomass Wood as a Fuel Carbon cycle</p>	<p>Biodiversity and environment Timber and forestry</p>
<p>p128 KS4 Double science Sc3: 2 m, q</p>	<p><i>Changing materials</i> <i>Useful products from air</i> m) how nitrogenous fertilisers are manufactured, their effect on plant growth, and the environmental consequences of over-use q) how the carbon cycle helps to maintain atmospheric</p>		<p>Plant biology; Environmental issues; Pollution; Carbon cycle</p>	<p>Biodiversity and environment Timber and</p>

	composition.			forestry
p128 KS4 Double science Sc4: 5 b	<i>Energy resources and energy transfer</i> <i>Energy transfer</i> b) about the efficient use of energy, the need for economical use of energy resources, and the environmental implications of generating energy.		Wood as a fuel; Resources; Environmental issues	Biodiversity and environment; Timber and forestry
<u>DESIGN & TECHNOLOGY</u>				
Key Stage 3				
p136 KS3 2 b, e	<i>Working with tools, equipment, materials and components to produce quality products</i> b) to take account of the working characteristics and properties of materials and components when deciding how and when to use them e) about the working characteristics and applications of a range of modern materials, including smart materials.	All aspects of materials use and properties	Wood as a material	Timber and forestry Cultural and social
p137 KS3 3 c	<i>Evaluating processes and products</i> c) identify and use criteria to judge the quality of other people's products, including the extent to which they meet a clear need, their fitness for purpose, whether resources have been used appropriately, and their impact beyond the purpose for which they were designed [for example, the global, environmental impact of products and assessment for sustainability].	All aspects of materials use and properties	Wood as a material; Environmental issues; Sustainable development Deforestation	Cultural and social Biodiversity and environment;
p137 KS3 4 a, b, c	<i>Knowledge and understanding of materials and components</i> a) to consider physical and chemical properties and working characteristics of a range of common and modern materials b) that materials and components can be classified according to their properties and working characteristics c) that materials and components can be combined, processed and finished to create more useful properties and particular	All aspects of materials use and properties	Wood as a material	Cultural and social Timber and forestry

	aesthetic effects.			
Key Stage 4				
p139 KS4 1 b	<i>Developing, planning and communicating ideas</i> b) consider issues that affect their planning [for example, the needs and values of a range of users; moral, economic, social, cultural and environmental considerations; product maintenance; safety; the degree of accuracy needed in production]	All aspects of materials use and properties	Wood as a material; Environmental issues; Resources	Cultural and social Biodiversity and environment
p140 KS4 4 a, b, c, d, e	<i>Knowledge and understanding of materials and components</i> a) how materials are cut, shaped and formed to specified tolerances b) how materials can be combined and processed to create more useful properties, and how these changed materials are used in industry c) how materials are prepared for manufacture and how pre-manufactured standard components are used d) about a variety of finishing processes, and why they are important for aesthetic and functional reasons e) that to achieve the optimum use of materials and components, they need to take into account the relationships between material, form and intended manufacturing processes.	All aspects of materials use and properties	Wood as a material	Cultural and social Timber and forestry
ICT				
Key Stage 3				
p144 KS3 1 a, b, c	<i>Finding things out</i> c) how to collect, enter, analyse and evaluate quantitative and qualitative information, checking its accuracy [for example, carrying out a survey of local traffic, analysing data gathered in fieldwork].	All aspects of fieldwork and data collection	Data, source of	Biodiversity and environment
Key Stage 4				
p146 KS4	<i>Developing ideas and making things happen</i>	All aspects of fieldwork	Data, source	Biodiversity

2 a, b, c, d	<p>b) use ICT effectively to explore, develop and interpret information and solve problems in a variety of subjects and contexts</p> <p>c) apply, as appropriate, the concepts and techniques of using ICT to measure, record, respond to, control and automate events</p> <p>d) apply, as appropriate, the concepts and techniques of ICT-based modelling, considering their advantages and limitations against other methods.</p>	<p>and data collection</p> <p>Modelling forest ecosystems</p>	of	and environment
p146 KS4 3 a, b	<p><i>Exchanging and sharing information</i></p> <p>a) use information sources and ICT tools effectively to share, exchange and present information in a variety of subjects and contexts</p> <p>b) consider how the information found and developed using ICT should be interpreted and presented in forms that are sensitive to the needs of particular audiences, fit for purpose and suit the information content.</p>	<p>Making cases for or against aspects of sustainable forestry</p>	<p>Information, source of Data, source of</p>	<p>Biodiversity and environment</p>
HISTORY				
Key Stage 3				
p150 KS3 4 a, b	<p><i>Historical enquiry</i></p> <p>a) identify, select and use a range of appropriate sources of information including oral accounts, documents, printed sources, the media, artefacts, pictures, photographs, music, museums, buildings and sites, and ICT-based sources as a basis for independent historical enquiries</p> <p>b) evaluate the sources used, select and record information relevant to the enquiry and reach conclusions.</p>	<p>Woodland and forestry communities</p>	<p>Information, source of</p>	<p>Social and cultural</p>
p152 KS3 10	<p><i>Britain 1750-1900</i></p> <p>A study of how expansion of trade and colonisation, industrialisation and political changes affected the United Kingdom, including the local area.</p>	<p>Effects of colonisation and industry (eg shipbuilding) on forests</p>	<p>Land use changes; Industry; Resources; Local</p>	<p>Social and cultural; Leisure and recreation; Biodiversity</p>

			environment	and environment
<u>GEOG-RAPHY</u>				
Key Stage 3				
p156 KS3 1 a, b, c, d, e,	<i>Geographical enquiry and skills</i> a) ask geographical questions [for example, 'How and why is this landscape changing?', 'What is the impact of the changes?', 'What do I think about them?'] and to identify issues b) suggest appropriate sequences of investigation [for example, gathering views and factual evidence about a local issue and using them to reach a conclusion] c) collect, record and present evidence d) analyse and evaluate evidence and draw and justify conclusions [for example, analysing statistical data, maps and graphs, evaluating publicity leaflets that give different views about a planning issue] e) appreciate how people's values and attitudes [for example, about overseas aid], including their own, affect contemporary social, environmental, economic and political issues, and to clarify and develop their own values and attitudes about such issues.	All aspects of woodlands and forestry	Landscape Local environment Information, source of Environmental issues	All
p156 KS3 2 b, d	<i>Geographical enquiry and skills</i> b) to select and use appropriate fieldwork techniques [for example, land-use survey, datalogging] and instruments [for example, cameras] d) to select and use secondary sources of evidence, including photographs (including vertical and oblique aerial photographs), satellite images and evidence from ICT-based sources [for example, from the internet]	All aspects of fieldwork Satellite images or forest destruction	Information, source of Fieldwork	Biodiversity and environment Timber and forestry
p157 KS3	<i>Knowledge and understanding of places</i>	All aspects of	Landscape;	All

	<ul style="list-style-type: none"> i) the characteristics and distribution of one major biome [for example, savannah grassland, tropical rainforest, temperate forest] ii) how the ecosystems of this biome are related to climate, soil and human activity f iii) the interrelationship between population and resources g) the changing characteristics of settlements, including: <ul style="list-style-type: none"> i) the reasons for the location, growth and nature of individual settlements iv) patterns and changes in urban land use <ul style="list-style-type: none"> i) types and classifications of economic activity ii) the geographical distribution of one or more economic activities [for example, farming, tourism] iii) how and why the distribution has changed and is changing [for example, the impact of new technologies], and the effects of such changes <ul style="list-style-type: none"> i) development, including: <ul style="list-style-type: none"> iii) factors, including the interdependence of countries, that influence development j) environmental issues, including: <ul style="list-style-type: none"> i) how conflicting demands on an environment arise ii) how and why attempts are made to plan and manage environments iii) effects of environmental planning and management on people, places and environments k) resource issues, including: <ul style="list-style-type: none"> i) the sources and supply of a resource ii) the effects on the environment of the use of a resource iii) resource planning and management. 		<ul style="list-style-type: none"> Environmental hazards Water cycle Climate, effect on Ecosystem Habitat Resources Urban green space Business and industry Environmental management 	
p158 KS3 7 a, b, c, d	<p><i>Themes</i></p> <ul style="list-style-type: none"> a) study at a range of scales - local, regional, national, international and global b) study different parts of the world and different types of environments, including their local area, the United Kingdom, the European Union and parts of the world in different states of 	<ul style="list-style-type: none"> All aspects of local and global forestry Fieldwork 	<ul style="list-style-type: none"> Ecosystem; Local environment; Information, source of; Environmen- 	

	economic development c) carry out fieldwork investigations outside the classroom d) study issues of topical significance.		tal issues	
MODERN FOREIGN LANGUAGES				
Key Stages 3 & 4				
p165 KS 3&4 4 a, c, d	<i>Developing cultural awareness</i> a) working with authentic materials in the target language, including some from ICT-based sources [for example, handwritten texts, newspapers, magazines, books, video, satellite television, texts from the internet] c) considering their own culture and comparing it with the cultures of the countries and communities where the target language is spoken d) considering the experiences and perspectives of people in these countries and communities.	As exemplified by trees and forests	Information, source of	Social and cultural
ART & DESIGN				
Key Stage 3				
p168 KS3 1 a, b	<i>Exploring and developing ideas</i> a) record and analyse first-hand observations, to select from experience and imagination and to explore ideas for different purposes and audiences b) discuss and question critically, and select from a range of visual and other information [for example, exhibitions, interviews with practitioners, CD-ROMs] to help them develop ideas for independent work.	Trees and forests as a source of inspiration and material	Personal experience Information, source of	Social and cultural

p168 KS3 4 a	<i>Knowledge and understanding</i> a) the visual and tactile qualities of materials and processes and how these can be manipulated and matched to ideas, purposes and audiences.	Wood as material	Wood as a material Art and craft	Social and cultural
p169 KS3 5 a, c, d	a) exploring a range of starting points for practical work including themselves, their experiences and natural and made objects and environments c) using a range of materials and processes, including ICT [for example, painting, collage, print making, digital media, textiles, sculpture] d) investigating art, craft and design in the locality, in a variety of genres, styles and traditions, and from a range of historical, social and cultural contexts.	Woods and trees as a source of inspiration and material	Personal experience Wood as a material Art and craft	All
PHYSICAL EDUCATION				
Key Stage 3				
p178 KS3 11 a, b, c, d	<i>Outdoor and adventurous activities</i> a) meet challenges in outdoor activities and journeys b) use a range of orienteering and problem-solving skills and techniques in these challenges d) respond to changing conditions and situations	Outdoor work in wood and forest situations, including orienteering	Outdoor activity, venue for Leisure and recreation	Biodiversity and environment; Leisure and recreation; Social and cultural
Key Stage 4				
p181 KS3 11 a, b, c, d	<i>Outdoor and adventurous activities</i> a) meet challenges in large-scale outdoor activities and journeys b) use a range of complex outdoor activity skills and techniques [for example, canoeing, sailing, rock climbing, hillwalking] c) solve problems and overcome challenges in unfamiliar environments	Outdoor work in wood and forest situations, including orienteering	Outdoor activity, venue for Leisure and recreation	Biodiversity and environment; Leisure and recreation; Social and cultural

	d) respond to changing conditions and environments.			
<u>CITIZENSHIP</u>				
Key Stage 3				
p184 KS3 1 i	<i>Knowledge and understanding about becoming informed citizens</i> i) the world as a global community, and the political, economic, environmental and social implications of this, and the role of the European Union, the Commonwealth and the United Nations. ii)	The role of international bodies, eg UN, in forest protection	Environmental issues	All
p184 KS3 2 a, b, c	<i>Developing skills of enquiry and communication</i> a) think about topical political, spiritual, moral, social and cultural issues, problems and events by analysing information and its sources, including ICT-based sources b) justify orally and in writing a personal opinion about such issues, problems or events c) contribute to group and exploratory class discussions, and take part in debates.	All aspects of woodlands and forestry, eg in a political and social context	Environmental issues Information, source of	All
Key Stage 4				
p185 KS4 1 f, j	<i>Knowledge and understanding about becoming informed citizens</i> j) the wider issues and challenges of global interdependence and responsibility, including sustainable development and Local Agenda 21.	All aspects of woodlands and forestry	Environmental organisations; Environmental issues; Local Agenda 21; Sustainable development	All
p185 KS4 2 a, b, c	<i>Developing skills of enquiry and communication</i> a) research a topical political, spiritual, moral, social or cultural issue, problem or event by analysing information from different	Statistics on forest clearance and deforestation	Information, source of	All

	sources, including ICT-based sources, showing an awareness of the use and abuse of statistics b) express, justify and defend orally and in writing a personal opinion about such issues, problems or events c) contribute to group and exploratory class discussions, and take part in formal debates.	Discussion and debate on above issues		
PSHE				
Key Stage 3				
p189 KS3 2 c, f	<i>Developing a healthy, safer lifestyle</i> c) that good relationships and an appropriate balance between work, leisure and exercise can promote physical and mental health f) to recognise and manage risk and make safer choices about healthy lifestyles, different environments and travel.		Leisure and recreation	Leisure and recreation Social and cultural
p190 KS3 4 a, b, c, d, e, f, g, h	a) take responsibility [for example, for carrying out tasks and meeting deadlines such as taking assembly, running the school newspaper] b) feel positive about themselves [for example, by taking part in a public performance] d) make real choices and decisions [for example, about options for their future, based on their own research and career portfolios] e) meet and work with people [for example, people who can give them reliable information ...] f) develop relationships [for example, by working together in a range of groups and social settings with their peers and others; by being responsible for a mini-enterprise scheme as part of a small group] g) consider social and moral dilemmas [for example, how the choices they make as consumers affect other people's economies and environments].	Presentations in a woodlands/forestry context Careers Woodland or school grounds projects	Information, source of School grounds Local Environment Community Projects Environmental issues Environmental organisations	Timber and forestry Social and cultural Biodiversity and environment

Key Stage 4				
p193 KS4 3 d, k	<i>Developing good relationships and respecting the difference between people</i> d) to work cooperatively with a range of people who are different from themselves k) to develop working relationships with a range of adults, including people they meet during work experience, personal guidance and community activities.	Exchange trips Work experience	Community projects; Environmental organisations; Local environment	All
p193 KS4 4 a, b, c, d, e, g, h	b) feel positive about themselves [for example, by gaining recognition for the role they play in school life, such as organising activities for younger pupils or working in a resource centre] c) participate [for example, in an initiative to improve their local community; in challenging activities involving physical performance, public performance or organised events outside the school] d) make real choices and decisions [for example, about their priorities, plans and use of time; about their choices post-16, with regular review and support] e) meet and work with people [for example, through activities such as work experience and industry days; through having an employer as a mentor] g) consider social and moral dilemmas [for example, young parenthood, genetic engineering, attitudes to the law] h) find information and provide advice [for example, by providing peer support services to other pupils].	All aspects of woodlands and forestry Careers and work experience	Information, source of Community projects Environmental issues Environmental organisation Local environment Genetic engineering	All