

# IGCSE English as a Second Language 0510

## Unit 3 Science and Nature

### Recommended Prior Knowledge

This unit can be used at any stage of the course. It does not assume knowledge of previous units. Students have achieved a lower intermediate level of English to handle the materials effectively.

### Context

The unit is suitable for both core and extended tier students. Teachers can use the teaching activities to devise their own lesson plans, picking and choosing from the activities. It is assumed that the teacher will structure open and closed questions to elicit what students already know about a theme or topic and check vocabulary and comprehension before and after any activity, correct errors as appropriate, monitor and support the acquisition of skills. Teachers should carry out any other preparatory and consolidation exercises as they deem appropriate. The websites listed under 'Learning Resources' usually have additional help and guidance to develop topics and skills. The teacher is free to extend the unit with further ideas and materials of their own or from the resource guides listed to suit their particular situation and the needs of their learners. The activities and materials can be adapted to mixed ability classes by giving more or less guidance, shortening or extending activities, simplifying or editing material or closing some of the information gaps. Pacing and timing of the activities is at the teacher's discretion and should be incorporated into individual lesson planning.

### Outline

The content aim of the unit is for students to develop a greater understanding of environmental issues, including nuclear and alternative sources of power, climate change, global warming and why and how natural disasters may occur. The language aim of the unit is for students to develop the skills required to discuss the issues and read and write about them.

The language aim of the unit is for students to develop the skills required to discuss the issues and read and write about them. The skills are broken down into micro-skills in the 'Learning Outcomes' column. The teaching activities suggest a variety of methods for achieving the learning outcomes. It is hoped that the materials and activities will be thoroughly exploited in the classroom so that students can gain real benefit from doing them and clearly move forward in their skills as well as grow in confidence. In general, they are not materials or activities that should be rushed through, to 'get on to the next thing,' which would cut out a lot of potential learning. The activities include opportunities for information sharing, giving supportive peer feedback, sharing positive criticism and evaluation and providing scope for individual presentations. In addition, the materials and activities enable the development of underpinning knowledge and skills including: vocabulary, spelling, punctuation, paragraphing, sentence structure, tone, style and register. The degree of confidence with which the students achieve the learning outcomes will depend on their starting points, learning approach and opportunities for examples, practice and exploration. It is hoped that teachers will be able to expand on the unit as they judge best for their situation, with supplementary ideas of their own.

The learning resources are internet and textbook based. If teachers judge that students need more help to achieve the learning outcomes, they are advised to extend the unit at any stage with reinforcement activities.

| Assessment Objectives  | Learning Outcomes   | Teaching Activities   | Learning Resources  |
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| <p>Speaking:</p> <p>S1 Communicate clearly, accurately and appropriately.</p> <p>S3 Employ and control a variety of grammatical structures.</p> <p>S4 Demonstrate knowledge of a range of appropriate vocabulary.</p> <p>S5 Engage in and influence the direction of the conversation.</p> <p>S6 Employ suitable pronunciation and stress patterns.</p> <p>Listening</p> <p>L1 Understand and respond to information presented in a variety of forms</p> | <p>Students will be able to use stress an intonation so that meaning is clear.</p> <p>They are able to give opinions and select appropriate words to carry the stress in sentences eg People say that....</p> <p>They are able to pronounce new vocabulary and put the stress correctly on multi-syllable words such as 'endangered'.</p> <p>They are able to speak at an appropriate pace and speed and respond to the speaker. Some students will be able to influence the direction of the conversation.</p> | <p>Zoos: The pros and cons</p> <p>Discussion and vocabulary-building</p> <p>Students carry out a brainstorming exercise to identify the advantages and disadvantages of zoos. The class can be split into two groups to do this with a group taking each side. The results can then be feedback into the main group.</p> <p>Useful language for the topic can be identified e.g. 'cage', 'enclosures', 'zoo keeper', 'endangered', 'breeding', 'in captivity', 'natural', 'in the wild', 'happy'/'unhappy', 'habitat', 'predators', 'extinct'. New words are repeated, practised in sentences and written on the board. Stress in words, especially longer words, is highlighted and practised.</p> <p>Language expressions for expressing contrasting views and opinions are elicited, explored and practised. A list could be written on the board. E.g. People say that...but, A common misconception is that, Contrary to popular belief, it is unfair of people to say that.</p> <p>Sentence stress can be highlighted, repeated and practised in example sentences. Hurried or mumbled speech can be tactfully corrected.</p> | <p>Success International English Skills for IGCSE Georgian Press Unit 9 pages 165-167<br/>1-873630-44-1</p> |

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| <p>Reading:</p> <p>R1 respond to information presented in a variety of forms. R2 Select and organise material relevant to specific purposes</p> <p>R3 recognise, understand and distinguish between facts, ideas and opinions.</p> <p>R4 Infer information from texts (Extended only).</p> | <p>Reading strategies<br/>Building vocabulary: phrasal verbs</p> <p>Students are able to identify literal and non-literal uses of the phrasal verb 'look up' and develop further work on phrasal verbs, contrasting literal and non-literal uses.</p> <p>Reading strategies:<br/>Drawing inferences<br/>Awareness of bias<br/>Students are able to understand that bias creates a one-sided view.<br/>They can infer information from the tone of a text.</p> | <p>Zoos: Reading a newspaper report 'Zoo visitors look up to new baby'.</p> <p>Students can use this engaging text about the birth of a rare breed of giraffe, to explore further the role of zoos in protecting endangered species by developing breeding programmes.</p> <p>Language features to draw attention to are the use of the French word 'debut' which could lead to a discussion of foreign words in English, more practise on placing the stress correctly in longer words e.g. 'curator' is possible.</p> <p>The use of phrasal verbs e.g. 'look up' can be explored, including literal and non-literal aspects, other examples elicited, such as 'stand by me'; practised in sentences and written on the board.</p> <p>Bias in the article can be explored by considering what aspects of the zoo's activities were not mentioned eg how many animals might be unhappy, whether the giraffe might be better off born in a natural habitat. Inferences (very positive) about the overall standards and quality of care at the zoo can be drawn from the warm tone and positive, caring language of the article e.g. the newborn giraffe is a 'baby'/'delighted to welcome'/'coming along well'.<br/>Students can use highlighter pens to highlight and discuss examples of positive connotations in vocabulary and warm tone.</p> | <p>BBC Learning English Words in the news<br/>Zoo visitors look up to new baby</p> <p><a href="http://www.bbc.co.uk/worldservice/learningenglish/newsenglish/witn/2006/12/061220_giraffes.shtml">http://www.bbc.co.uk/worldservice/learningenglish/newsenglish/witn/2006/12/061220_giraffes.shtml</a></p> |

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| <p>Listening</p> <p>L2 Recognise, understand and distinguish between facts, ideas and opinions.</p> <p>L1 Understand and respond to information presented in a variety of forms.</p> <p>L4 Infer information from texts (Extended only).</p> | <p>Listening: The electronic zoo</p> <p>Students are able to orientate themselves to the text and mentally prepare for what they might hear, in terms of language and content.</p> <p>The are able to identity exact detail.</p> | <p>Listening: The electronic zoo.</p> <p>Students can listen to a talk about the concept of an electronic zoo. Modern technology is used to portray the animals in natural settings.</p> <p>Before listening, students can discuss the idea of an electronic zoo where most of the exhibits are seen on large screens, rather than in real life. They can predict what they might expect to hear on the recording.</p> <p>Important vocabulary to check before listening includes: 'audio-visual', 'on location', 'live exhibits', 'natural history', 'pre-recorded'.</p> <p>Students should listen about three times to the talk. First they can listen for the general idea and one or two specific pieces of information, such as whether any live animals are in the zoo. Secondly they can listen and answer the true/ false questions and thirdly listen and check their answers. The recording can be paused at specific points so students can listen carefully for detail when checking answers.</p> <p>Students can discuss whether it is possible to infer the speaker's attitude from his intonation and from the information given.</p> | <p>Electronic Zoo</p> <p>Success International English Skills for IGCSE Georgian Press Unit 9 page 1681-873630-44-1</p> |

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| <p>Writing:</p> <p>W1 Communicate clearly, accurately and appropriately.</p> <p>W2 Convey information and express opinions effectively.</p> <p>W3 Employ and control a variety of grammatical structures.</p> <p>W4 Demonstrate knowledge of a range of appropriate vocabulary.</p> | <p>Writing strategies:</p> <p>Zoo visit. Students are able to use appropriate sentence structure and grammar to achieve purpose.</p> <p>Students are able to recognise and use past simple, continuous and perfect forms. They are able to recognise and use countable and uncountable nouns when checking subject-verb agreement. They are able to identify and use the correct prepositions after verbs, adjectives etc.</p> | <p>Writing Activity:</p> <p>Students imagine they have visited a zoo and write about their visit for the school magazine. This can be based on real or imagined experience. If students have never been to a zoo, use of zoo leaflets or computer printouts would provide a good stimulus. The writing can be targeted as an article for a teenage magazine. After students have brainstormed ideas, planned and drafted writing, an error-correction activity in pairs or groups can be carried out. The focus could be on correct tense formation, subject-verb agreement and correct prepositions. Common errors can be extracted from students' work and written on the board for group checking and correction. Pairs of sentences can be demonstrated to contrast the use and purpose of various structures. More able students will need less preparation time than less able and can write at greater length. When focusing on error correction with less able students, prioritise those errors that are most likely to impede basic understanding.</p> <p>Weak language areas can be identified and rectified by the use of language study exercises. This is especially usefully for students achieving in the lower range.</p> | <p>Language study:</p> <p>Textbook for rectifying weak areas.<br/>         Success International Workbook<br/>         Revised Edition Unit 9<br/>         Georgian Press<br/>         1-873630-44-1</p> |

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| <p>Reading</p> <p>R1 respond to information presented in a variety of forms</p> | <p>Reading strategies:<br/>Linking devices<br/>Students are able to recognise and use pronoun references and subordinate d clauses. They understand their role in text cohesion.</p> | <p>Reading: Big cat in danger<br/>The reading text focuses on the Iberian lynx, which is in danger of becoming extinct. It lives in Spain and Portugal.<br/>The text can be cut up into separate sentences.<br/>Students can work in pairs to reorder the text.<br/>Students can discuss the role of pronoun references eg 'it' and other textual linking devices such as subordinate clauses eg If more isn't done...<br/>Examples from the text can be written on the board and explored. Further examples from students' own knowledge can be elicited and analysed.<br/>The whole text can be read and discussed, further exploring the problems of endangered species and identifying new vocabulary..<br/>Students can use new vocabulary in example sentences.</p> | <p>Big cat in danger<br/>BBC Learning English<br/>Words in the News</p> <p><a href="http://www.bbc.co.uk/worldservice/learn/ingenglish/newsenglish/witn/2004/04/040426_bigcatdanger.shtml">http://www.bbc.co.uk/worldservice/learn/ingenglish/newsenglish/witn/2004/04/040426_bigcatdanger.shtml</a></p> |

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| <p>R1 respond to information presented in a variety of forms</p> | <p>Spelling and Vocabulary for topic areas: Science and English<br/>           Students to recognise and use vocabulary from science.<br/>           They are able to apply knowledge of word structure and root.<br/>           They are aware of word borrowings to describe science inventions (eg mouse)and recognise and use them correctly.<br/>           Homophones and homonyms<br/>           Students are able to recognise and apply homonyms and homophones.<br/>           They are able to use spelling strategies such as syllabification to spell words correctly.</p> | <p>Science and Ethics</p> <p>The impact of science on animals and the consequences.</p> <p>Dolly the sheep- British Council lesson plans.</p> <p>The interesting lessons in 'Dolly the Sheep' enable students to consider the impact of science on our lives, and in particular, explore the controversial issue of cloning, starting with Dolly, a sheep who was the first clone.</p> <p>The package is way of exploring the ethics of cloning. It starts with a quiz to find out how much general scientific knowledge students have and leads into a discussion about the most important scientific discoveries. Students then read about and discuss the pros and cons of cloning. The package makes good curriculum links with aspects of science students may be studying in their school syllabus.<br/>           The debating issues should produce some heated and thoughtful debates.</p> <p>The package provides a basis for a lot of spelling and vocabulary development on word structure and parts of speech (to divide/division) word borrowings between science and everyday life, (mouse/hard drive) and homophones (genes/jeans) and homonyms</p> | <p>Lesson Plans and worksheets<br/>           Dolly the Sheep British Council</p> <p><a href="http://www.teachingenglish.org.uk/try/lesson-plans/science-cloning">http://www.teachingenglish.org.uk/try/lesson-plans/science-cloning</a></p> |

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|                       |                   | <p>(solution/ plant) . Students can explore these, suggest more examples, analyse similarities and differences, build word lists etc. Students can write sentences to show words in context, using dictionaries.<br/>Spelling: words can be broken into syllables, repeated and memorised.</p> |                    |



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| <p>R1 respond to information presented in a variety of forms</p> <p>R2 Select and organise material relevant to specific purposes.</p> <p>R3 recognise, understand and distinguish between facts, ideas and opinions.</p> <p>R4 Infer information from texts (Extended only).</p> | <p>Reading strategies:<br/>Students are able to use contextual clues and knowledge of vocabulary and grammar to predict meaning of unfamiliar words and expressions eg eg bio tech, regulatory hurdles; has won initial permission.</p> <p>They are able to analyse words using knowledge of sentence structure and word type and word derivation to work out meaning.</p> <p>Bias and conflict:<br/>Students are able to read the arguments and identify conflicting points of view.</p> <p>They can recognise and apply the difference between fact and point of view.</p> <p>They are able to use inference to draw conclusions.</p> | <p>Science and Genetic Modification.<br/>US to grow plants containing human genes</p> <p>The report explains the controversial proposal to grow a plant containing genes from human breast milk and saliva. The plant will be used to make medicine for diarrhoea.</p> <p>It is a very interesting basis for exploring the dilemma of genetically modified crops. Students can focus on the issues of risk assessment and the conflicting claims made by interest groups. They can consider why there might be bias in the way the biotech company presents information.</p> <p>Further examples of how presentation of information can be influenced by the needs of interest groups can be explored.</p> <p>They can explore the difference between inference and explicit information eg it is clear that the environmental groups are against the proposal-they make this clear by the language they use and they way they are described eg furious, outraged.</p> <p>Students can use highlighter pens to identify different viewpoints and opinions. They can underline fact and compare that to opinion in the text and further examples of fact form opinion from the text or students' own experience can be elicited, discussed and written on the board.</p> <p>They can use contextual clues or knowledge of word formation (eg bio tech) to work out the meaning of unfamiliar words. They can discuss when it is</p> | <p>US to grow plants containing human genes</p> <p>BBC Learning English</p> <p><a href="http://www.bbc.co.uk/worldservice/learn/ingenglish/newseenglish/witn/2007/03/07_0307_crops.shtml">http://www.bbc.co.uk/worldservice/learn/ingenglish/newseenglish/witn/2007/03/07_0307_crops.shtml</a></p> |

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| <p>R1 respond to information presented in a variety of forms<br/>R2 Select and organise material relevant to specific purposes</p> | <p>Reading strategies:<br/>Students will be able to use the text to extract the main points and ideas.<br/>They will be able to identify how the first sentence of a paragraph introduces a main point.<br/>They can practise skimming and scanning to locate the information required.</p> | <p>necessary to use a dictionary to check meaning.<br/>.</p> <p>Science and our future:<br/>Reading text:<br/>A Doctor in the House</p> <p>The intriguing text from a newspaper describes possible future scientific inventions to diagnose potential illnesses which will enable us to have more control over our lives in the future. Students can explore the possibilities of the inventions and the likelihood of them ever being used.<br/>The text is an ideal one for summarising and students can use highlighter pens to highlight main points from examples and supporting material.<br/>Students can underline topic sentences and analyse how the topic sentence introduces a main point or establishes a new idea eg The devices seem fanciful but the basic principles are simple.<br/>They practise skimming and scanning for detailed information in the text.<br/>.</p> | <p>Summary and Note taking Georgian press Revised edition pages 8-9<br/>1-873630-51-4</p> |

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| <p>W1 Communicate clearly, accurately and appropriately<br/> W3 Employ and control a variety of grammatical structures<br/> 4 Demonstrate knowledge of a range of appropriate vocabulary.<br/> W5 Observe conventions of paragraphing, punctuation, spelling.</p> | <p>Writing strategies<br/> Summarising<br/> Students are able to plan and draft writing and judge how much detail to include.<br/> They are able to identify suitable links and connectors to make a summary paragraph flow smoothly.<br/> They are able to use paraphrasing or words of similar meaning rather than copying from the text.<br/> They are able to correct spelling errors.</p> | <p>Writing Activity<br/> Summarising: A Doctor in the House<br/> Students make brief notes and write a summary of A Doctor in the House. Initial drafts can be exchanged and shared with the group to highlight areas which are a good example or need improvement.<br/> Students' ideas can be elicited and explored and contrasting examples written on the board.<br/> The focus when analysing extracts from initial drafts can be on ways to write more concisely, join ideas smoothly, use words of their own, or to consider spelling problems, or the inclusion of irrelevant ideas such as the students' personal opinions.<br/> Weaker students can be given one or two language points to focus on. More able students can work more extensively on more language points.<br/> Students can rewrite their drafts, taking account of improvements suggested.<br/> Consider giving model examples to help students write summaries. Lower achieving students benefit particularly from worked examples of good or weak summaries. Good examples provide a clear model but they enjoy analysing and correcting the errors in a weak example.</p> |                    |

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| <p>Writing</p> <p>W1 Communicate clearly, accurately and appropriately.</p> <p>W3 Employ and control a variety of grammatical structures</p> <p>W4 Demonstrate knowledge of a range of appropriate vocabulary.</p> <p>W5 Observe conventions of paragraphing, punctuation, spelling.</p> | <p>Writing strategies:</p> <p>Students are able to recognise and use a range of linking words and expressions, relative clauses and pronouns to produce a concise summary with some words and expressions of their own.</p> | <p>Writing Activity Note-making and summarising.</p> <p>Japanese Begin annual whale hunt</p> <p>Students read the text about the Japanese whaling industry which has been condemned by environmentalists. There are two arguments to consider. The Japanese claim the whaling is to benefit scientific studies, the environmentalists reject this claim.</p> <p>Students underline the key details for each argument in the text and make a few notes.</p> <p>The rewrite their notes into a complete paragraph, outlining the conflicting arguments and giving reasons for the different points of view. They use their own words where possible. Their complete paragraphs are exchanged around the class, compared and corrected for errors in sentence structure, vocabulary, spelling and text cohesion.</p> | <p>Learning English Words in the News</p> <p>Japanese Begin annual whale hunt</p> <p><a href="http://www.bbc.co.uk/worldservice/learn/ingenglish/newsenglish/witn/2006/12/061213_whaling.shtml">http://www.bbc.co.uk/worldservice/learn/ingenglish/newsenglish/witn/2006/12/061213_whaling.shtml</a></p> |

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| <p>R2 Select and organise material relevant to specific purposes<br/>W1 Communicate clearly, accurately and appropriately</p> | <p>They are able to write correctly punctuated dialogue.</p> | <p>Writing Activity: Making Notes</p> <p>Gorillas have a word for it</p> <p>Students read and discuss the text about a gorilla's intelligence and write a set of notes under the headings provided.</p> <p>Language activities: The text provides useful exam note-taking practice, but can also be treated as a learning exercise on a range of structural issues such as linking words and phrases (According to, for example, however) defining relative clauses (who) and pronoun use. Key words can be blanked out for students to discuss and replace. Less able students could focus on one of these language areas. Inverted commas around the doctor's direct speech can be blanked out for students to discuss and replace. Students can discuss and write sentences of their own using linking words and expressions, relative clauses etc. They can write a paragraph incorporating dialogue to show the use of inverted commas.</p> | <p>Gorillas have a word for it<br/>IGCSE ESL Past Paper<br/>Exercise 4<br/>0510/02<br/>November 2006<br/><a href="http://teachers.cie.org.uk">http://teachers.cie.org.uk</a></p> |

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