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Escola Técnica Aberta do Brasil

Curso Técnico Em Meio Ambiente

Língua Estrangeira

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INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA
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PROGRAMA E-TEC BRASIL

Amigo(a) estudante!

O Ministério da Educação vem desenvolvendo Políticas e Programas para expansão da Educação Básica e do Ensino Superior no País. Um dos caminhos encontrados para que essa expansão se efetive com maior rapidez e eficiência é a modalidade a distância. No mundo inteiro são milhões os estudantes que frequentam cursos a distância. Aqui no Brasil, são mais de 300 mil os matriculados em cursos regulares de Ensino Médio e Superior a distância, oferecidos por instituições públicas e privadas de ensino.

Em 2005, o MEC implantou o Sistema Universidade Aberta do Brasil (UAB), hoje, consolidado como o maior programa nacional de formação de professores, em nível superior.

Para expansão e melhoria da educação profissional e fortalecimento do Ensino Médio, o MEC está implementando o Programa Escola Técnica Aberta do Brasil (e-Tec Brasil). Espera, assim, oferecer aos jovens das periferias dos grandes centros urbanos e dos municípios do interior do País oportunidades para maior escolaridade, melhores condições de inserção no mundo do trabalho e, dessa forma, com elevado potencial para o desenvolvimento produtivo regional.

O e-Tec é resultado de uma parceria entre a Secretaria de Educação Profissional e Tecnológica (SETEC), a Secretaria de Educação a Distância (SEED) do Ministério da Educação, as universidades e escolas técnicas estaduais e federais.

O Programa apóia a oferta de cursos técnicos de nível médio por parte das escolas públicas de educação profissional federais, estaduais, municipais e, por outro lado, a adequação da infra-estrutura de escolas públicas estaduais e municipais.

Do primeiro Edital do e-Tec Brasil participaram 430 proponentes de adequação de escolas e 74 instituições de ensino técnico, as quais propuseram 147 cursos técnicos de nível médio, abrangendo 14 áreas profissionais. O resultado desse Edital contemplou 193 escolas em 20 unidades federativas. A perspectiva do Programa é que sejam ofertadas 10.000 vagas, em 250 polos, até 2010.

Assim, a modalidade de Educação a Distância oferece nova interface para a mais expressiva expansão da rede federal de educação tecnológica dos últimos anos: a construção dos novos centros federais (CEFETs), a organização dos Institutos Federais de Educação Tecnológica (IFETs) e de seus *campi*.

O Programa e-Tec Brasil vai sendo desenhado na construção coletiva e participação ativa nas ações de democratização e expansão da educação profissional no País, valendo-se dos pilares da educação a distância, sustentados pela formação continuada de professores e pela utilização dos recursos tecnológicos disponíveis.

A equipe que coordena o Programa e-Tec Brasil lhe deseja sucesso na sua formação profissional e na sua caminhada no curso a distância em que está matriculado(a).

Brasília, Ministério da Educação – setembro de 2008.

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PALAVRAS DO PROFESSOR-AUTOR

Primeiramente, gostaria de parabenizar a você por entrar no curso Técnico em Meio Ambiente. A cada dia que passa, recebemos mais e mais informações que nos entristecem com relação ao estado do nosso planeta. A maior parte delas é veiculada em língua inglesa. Nesse sentido, espero que eu e você possamos intervir de forma efetiva na manutenção e preservação do meio ambiente para que nossos filhos e as gerações futuras possam gozar de um mundo mais limpo, mais civilizado e mais humano.

A seguir, gostaria de apresentar nosso curso de inglês, com duração de 25h/aula, sendo que dessas 20% (5h) são presenciais. O caderno que preparei para você com muito prazer está dividido em cinco unidades, cada uma contendo quatro textos, exercícios de compreensão textual e atividades com mídias integradas.

Boa leitura, bom trabalho, participe, reflita, interaja e conte com a ajuda do seu professor através dos fóruns e *chats*!

PROJETO INSTRUCIONAL

Cada texto é uma lição. Uma lição dura em média 45 minutos. O caderno segue uma estrutura: um título em inglês – que traz a tona o assunto da leitura; uma pequena introdução em português – com o intuito de despertar o interesse e a curiosidade; uma ilustração – visando uma abstração do conteúdo do texto; uma série de 10 palavras-chave – essenciais para a compreensão do texto a ser lido; o texto em si – com a referida fonte, caso você deseje buscar a informação na íntegra; uma série de exercícios variados, podendo ser de múltipla escolha, associar as colunas, enunciados verdadeiros e falsos, completar a frase, traduzir, etc.

Você deve ler o título do texto, traduzi-lo se necessário, ler a introdução, observar cuidadosamente a ilustração, tentar memorizar as 10 palavras-chave e fazer uma rápida leitura do texto do início ao fim, sem se importar, nesse primeiro momento, em entender o texto em sua totalidade. Responda as questões retomando a passagem do texto sempre que necessário. Por fim, faça a tradução integral do texto visto que ao longo dos exercícios as palavras mais difíceis e importantes já terão sido exploradas.

Procure obter um aproveitamento superior a 60% nos exercícios de compreensão. Havendo dúvidas com relação a qualquer tópico, entre no fórum, através do Ambiente Virtual de Ensino-Aprendizagem (AVEA) e o professor ou outros colegas poderão ajudá-lo.

Recomendo que tenha um caderno para anotar as palavras mais importantes e repetitivas a fim de evitar recorrer sempre ao dicionário, compondo assim seu próprio dicionário de apoio.

As atividades com vídeo serão avaliadas. Cada uma irá compor 20% da sua nota final. São 5 (cinco) vídeos perfazendo 100% da sua avaliação. Então, comecemos a trabalhar!

ÍCONES E LEGENDAS

Caro estudante! Oferecemos para seu conhecimento os ícones e sua legenda que fazem parte da coluna de indexação. A intimidade com estes e com o sentido de sua presença no caderno ajudará você a compreender melhor as atividades e exercícios propostos (DAL MOLIN, *et al.*,2008).

Saiba mais

Ex: http://www.etecbrasil.mec.gov.br

Este ícone apontará para atividades complementares ou para informações importantes sobre o assunto. Tais informações ou textos complementares podem ser encontrados na fonte referenciada junto ao ícone.

Para refletir...

Ex: Analise o caso... dentro deste tema e compare com..., assista ao filme...

Toda vez que este ícone aparecer na coluna de indexação indicará um questionamento a ser respondido, uma atividade de aproximação ao contexto no qual você vive ou participa, resultando na apresentação de exemplos cotidianos ou *links* com seu campo de atuação.

Mídias integradas

Ex.: Assista ao filme... e comente-o.

Quando este ícone for indicado em uma dada unidade significa que você está sendo convidado a fazer atividades que empreguem diferentes mídias, ou seja, participar do Ambiente Virtual de Ensino-Aprendizagem (AVEA), assistir e comentar um filme, um videoclipe, ler um jornal, comentar uma reportagem, participar de um *chat*, de um fórum, enfim, trabalhar com diferentes meios de comunicação.

Avaliação

Este ícone indica uma atividade que será avaliada dentro de critérios específicos da unidade.

Lembre-se

Ex.: O canal de satélite deve ser reservado com antecedência junto à Embratel.

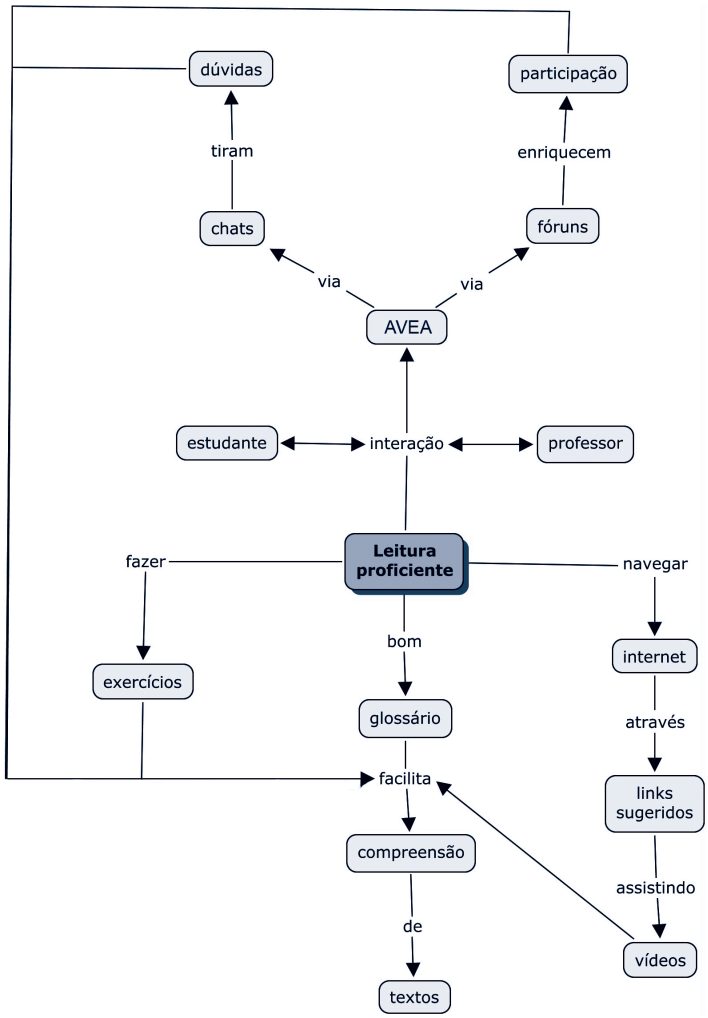
A presença deste ícone ao lado de um trecho do texto indicará que aquele conteúdo significa algo fundamental para a aprendizagem.

Destaque

Retângulo com fundo colorido.

A presença do retângulo de fundo indicará trechos importantes do texto, destacados para maior fixação do conteúdo.

MAPA CONCEITUAL



INTRODUÇÃO

Com o advento da internet, as notícias chegam a nós em tempo real por diferentes canais de comunicação. Se você quiser fazer parte desse mundo globalizado deve pelo menos entender textos em inglês. Assim, este curso de inglês foi elaborado com o intuito de capacitar você a ler e entender textos em língua inglesa relacionados com o Curso Técnico em Meio Ambiente. Para isso, a cada lição são apresentados textos relacionados ao tema do curso, seguidos de exercícios a fim de medir o nível de compreensão do conteúdo. O objetivo é que a cada lição você aumente o seu vocabulário do idioma, sua capacidade de compreensão textual e reflita sobre os tópicos, interagindo com seus colegas e seu professor, discutindo e ampliando os temas apresentados nos *chats* e fóruns de nosso *website*.

UNIT 1 – NATURE AND ENVIRONMENT

1.1 Objetivos de aprendizagem

- Refletir sobre as ações do homem e suas conseqüências na vida do planeta;
- Compreender as causas do aquecimento global e sua conseqüência na biodiversidade do planeta.

1.2 Text 1 – Global warming*

O aquecimento global do planeta é um dos tópicos mais falados no momento. Leia aqui com o que ele está relacionado.

1.2.1 Glossário

1- warming	aquecimento	6- fuels	combustíveis
2- greenhouse	(efeito) estufa	7- coal	carvão
3- Earth	(planeta) Terra	8- oil	petróleo
4- heat	calor	9- weather	tempo (clima)
5- burning	queima	10- sea levels	níveis do mar

Figura 1.1:

http://archives.zinester.com/13183/128920/202817_global-warming%20%20(Small).jpg

Global warming[1] is caused by the build up of greenhouse[2] gases in the atmosphere such as carbon dioxide and methane, which form a sort of blanket over the Earth[3], trapping in heat[4] that would normally escape the atmosphere. The leading greenhouse gas is carbon dioxide, a pollutant emitted from the burning[5] of fossil fuels[6], such as coal[7], oil[8], and natural gas. While it is true that there has always been some natural climate variability, record levels of carbon dioxide are having a far reaching change over our weather[9], sea levels[10], and climate.

Throughout ice ages, higher concentrations of carbon dioxide have correlated with higher temperatures. Humans are exacerbating global temperatures through industrial activity which dramatically increases carbon dioxide concentrations in the atmosphere. In its recent report, the Intergovernmental Panel on Climate Change found that 2005 carbon dioxide levels significantly exceed average concentration levels over the past 650,000 years.

While it is true that global warming is already occurring and affecting the way we live, we can prevent global temperatures from reaching dangerous levels if we take steps now to begin dramatically reducing our carbon emissions. If we do not begin to shift to clean energy, the heat waves and hurricanes that we have already suffered through will worsen.

* Este texto completo está disponível em:

http://www.sierraclub.org/energy/overview/

Thankfully, we have all the tools necessary to curb our emissions of greenhouse gases - tools like clean energy, energy efficiency, and cars that go farther on a gallon of gas.

1.2.2 Atividades de avaliação

- Escolha a alternativa correta:

1. O assunto do texto é:
   a) a relação entre o aquecimento global e o crescimento industrial
   b) as causas do aquecimento global
   c) as medidas tomadas para reduzir o aquecimento global
2. De acordo com o texto, o maior vilão do aquecimento global é:
   a) o calor que normalmente escapa da atmosfera
   b) a variação climática
   c) a queima de combustíveis fósseis
3. O pronome "its" sublinhado no segundo parágrafo se refere a:
   a) the Intergovernmental Panel on Climate Change
   b) recent report
   c) carbon dioxide levels
4. Na frase "affecting the **way** we live", a palavra *way* significa:
   a) caminho
   b) maneira
   c) direção
5. A melhor tradução para a frase abaixo é:

dramatically increases carbon dioxide concentrations

   a) em muito aumentam as concentrações de dióxido de carbono
   b) dramaticamente aumentam o dióxido de carbono concentrado
   c) infelizmente incrementam o concentrado de dióxido de carbono

- Relacione as colunas para traduzir as palavras extraídas do texto:

(6)	while	( )	através
(7)	through	( )	já
(8)	found	( )	encontrado
(9)	average	( )	enquanto
(10)	already	( )	média

1.3 Text 2 – Weather change*

A forma mais sensível de perceber o aquecimento global é a mudança climática em nosso planeta. O aumento do nível do mar também é visível .

1.3.1 Glossário

1- change	mudança	6- waves	ondas
2- role	papel / função	7- environmental	ambiental
3- cause	causar	8- glacier	geleira
4- rise / increase	aumento	9- shrinkage	encolhimento
5- rainfall	chuva	10- patterns	padrões

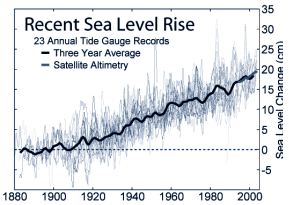


Figura 1.2:

http://en.wikipedia.org/wiki/Image:Recent_Sea_Level_Rise.png

Climate change[1] is already happening, and greenhouse gas emissions over the last century or so have played a major role[2]. The climate in the future may cause[3] stress to areas that have previously escaped and in many parts of the world this may also give rise[4] to an increase[4] in the intensity of severe weather events – including heavy rainfall[5] events and heat waves[6].

Tackling climate change will be one of the most important things this generation does, and everyone needs to get involved. Every day, more and more people are taking actions to help reduce carbon emissions and tackle other environmental[7] problems.

The predicted effects of global warming on the environment and for human life are numerous and varied. It is generally difficult to attribute specific natural phenomena to long-term causes, but some effects of recent climate change may already be occurring. Raising sea levels, glacier[8] retreat, Arctic shrinkage[9], and altered patterns of agriculture are cited as direct consequences, but predictions for secondary and regional effects include extreme weather events, an expansion of tropical diseases, changes in the timing of seasonal patterns[10] in ecosystems, and drastic economic impact. Concerns have led to political activism advocating proposals to mitigate, eliminate, or adapt to it.

From 1961 to 2003, the global ocean temperature has risen by 0.10°C from the surface to a depth of 700 m. As well as having effects on ecosystems (e.g. by melting sea ice, affecting algae that grow on its underside), warming reduces the ocean's ability to absorb CO_2.

* Este texto completo está disponível em:

http://www.metoffice.gov.uk/research/hadleycentre/google/

Veja também:

http://en.wikipedia.org/wiki/Effects_of_global_warming

1.3.2 Atividades de avaliação

- Marque "V" (verdadeiro) ou "F" (falso) de acordo com o texto 2:

( ) A causa da mudança climática é a emissão de gases em áreas verdes.

( ) As pessoas não estão ajudando a reduzir as emissões de carbono.

( ) Acredita-se que teremos um aumento no número de doenças tropicais.
( ) Organized groups argue we should soften or adjust to weather change.
( ) CO_2 is best absorbed by the ocean in boiling temperatures.

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	severe	( )	outros
(2)	happening	( )	derreter
(3)	major	( )	forte
(4)	heavy	( )	longo prazo
(5)	tackle	( )	grave
(6)	concern	( )	doença
(7)	led to	( )	acontecendo
(8)	advocating	( )	levado a
(9)	other	( )	profundidade
(10)	long-term	( )	preocupação
(11)	retreat	( )	principal
(12)	depth	( )	crescer
(13)	melting	( )	recuo
(14)	grow	( )	defendendo
(15)	disease	( )	lidar

Para saber mais sobre os textos 1 e 2, visite os *sites* da internet abaixo e interaja com as atividades propostas

http://www.bbc.co.uk/climate/evidence/greenhouse_effect_img.shtml

http://www.bbc.co.uk/climate/adaptation/jack.shtml

1.4 Text 3 – Oceans in danger*

A vida na Terra começou na água. Lá existem formas de vida que ainda desconhecemos e que podemos estar destruindo sem nem mesmo saber.

1.4.1 Glossário

1- Born	nascer	6- deep	profundidade
2- evolve	evoluir	7- fish	peixe
3- inhabit	habitar	8- birds	pássaros
4- coastal	costeira	9 - humankind	humanidade
5- abysses	abismos	10- threat	ameaça

Figura 1.3:

http://www.onearth.org/files/onearth/article_images/07spr_sonar7_slideshow.jpg

Some 3.6 billion years ago, life on Earth was born[1] in the oceans. Since then, their size and composition, as well as the organisms living in them, have continued to change and evolve[2]. Today, millions of species and numerous ecosystems inhabit[3] the oceans, from coastal[4] areas to abysses[5] more than 11,000 metres deep[6].

Within their 1.4 billion cubic kilometres of water and 370 million square kilometres of expanse, we can find coral forests, deserts, mountains, volcanoes, minerals, bacteria, algae, complex plants, mammals, fish[7], reptiles, birds[8], crustaceans, molluscs and a very long list of life forms, many of which are still unknown to us.

Humankind[9] has been using the oceans for aeons, but not until the last few centuries have our activities become a real threat[10]. Pollution, over-fishing and over-hunting, mining, the destruction of the oceans' richest areas, the massive occupation of the coasts and the alteration of their chemical composition and temperature are leaving a mark that is difficult to erase.

More than 50 companies control almost 300 cruise ships that carry millions of passengers from one point of the planet to another. Some of the most popular tourist destinations are those which, at the same time, are the most sensitive to environmental disturbance. The Caribbean, Alaska, the Mediterranean, the Nordic fiords and the coasts of many small islands are subjected to visits from these giant vessels. Their natural beauty is the attraction, but also their Achilles heel, as these spots are very vulnerable.

Big cruise liners can carry up to 5,000 people, including a crew of more than 1,000. They generate hundreds of tons of waste of every kind, part of which is thrown into the seas and oceans plied by these ships.

* Este texto completo está disponível em:

http://www.oceana.org/index.php?id=1023

1.4.2 Atividade de avaliação

- Traduza para o português as seguintes palavras extraídas do texto:

some		cruise ship	
Ago		carry	
Life		another	
Since		most	
Then		disturbance	
Size		same	
Change		sensitive	
Than		fiords	
Within		small	
Square		islands	
Which		subject/ed	
unknown		giant	
Aeon		vessels	
Until		heel	
Still		spots	
Last		vulnerable	
Few		big	
Century/ies		up to	
hunt/ing		crew	
mine/ing		ton/s	
rich/est		waste	
chemical		kind	
leave/ing		throw/thrown	
Erase		into	
Almost		ply/plied	

1.5 Text 4 – Endangered species*

Várias espécies de animais estão perto de serem extintas, outras já estão. Não há retorno para uma população já extinta.

1.5.1 Glossário

Figura 1.4:

http://en.wikipedia.org/wiki/Image:Siberischer_tiger_de_edit02.jpg

1- endangered	ameaçada	6- evolutionary	evolucionária
2- species	espécie	7- sample	amostra
3- risk	risco / perigo	8- laws	leis
4- predation	predatório	9- forbidding	proibindo
5- taxonomic	taxonômica	10- preserves	reservas

An endangered[1] species[2] is a population of an organism which is at risk[3] of becoming extinct because it is either few in numbers, or threatened by changing environmental or predation[4] parameters. An endangered species is usually a taxonomic[5] species, but may be another evolutionary[6] significant unit. The World Conservation Union (IPCN) has calculated the percentage of endangered species as 40 percent of all organisms based on the sample[7] of species that have been evaluated through 2006. Many nations have laws[8] offering protection to these species: for example, forbidding[9] hunting, restricting land development or creating preserves[10]. Only a few of the many species at risk of extinction actually make it to the lists and obtain legal protection. Many more species become extinct, or potentially will become extinct, without gaining public notice.

- Black rhino populations fell from 60,000 in 1970 to 2,500 in 1990 as poachers targeted their horns.
- African elephant numbers fell from 1,200,000 in 1970 to 600,000 in 1989 as a result of the trade in ivory.
- The Spix macaw is believed to be extinct in the wild. Most of the last individuals were trapped illegally for collectors.
- There are believed to be fewer than 50,000 Asian elephants left in the wild.
- World sturgeon catches for caviar declined from nearly 28,000 to 8,140 tons between 1982 and 1994.
- An estimated 100 million sharks, skates and rays are caught every year.
- There may be fewer than 5,000 tigers surviving in the wild.

* Este texto completo está disponível em:

http://en.wikipedia.org/wiki/Endangered_species

http://www.wildaid.org/index.asp?CID=3&PID=482

1.5.2 Atividades de avaliação

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	land	( )	arara
(2)	only	( )	arraia
(3)	actually	( )	tornar-se
(4)	become	( )	terra
(5)	without	( )	rinoceronte
(6)	macaw	( )	tubarão
(7)	between	( )	realmente
(8)	shark	( )	sem
(9)	skate	( )	entre
(10)	rhino	( )	somente

- Traduza para o português as seguintes frases extraídas do texto:

11. fell from 60,000 in 1970 to 2,500

_____

12. poachers targeted their horns

_____

13. a result of the trade in ivory

_____

14. to be extinct in the wild

_____

15. most of the last

_____

Veja quais são algumas das espécies ameaçadas de extinção em:

http://www.wildaid.org/index.asp?CID=3&PID=482

Assista ao vídeo do *link* abaixo para ver como os efeitos do aquecimento global estão afetando Bangladesh. Acompanhe a reportagem lendo a transcrição.

http://www.youtube.com/watch?v=sz25JXOtwIA

1.6 Video 1 – Global warming

1. And staying on the same subject, the world's leading scientists on global warming, the so-called inter-government panel on climate change, have began a four-day meeting in Brussels. It's the second of four meetings this year. This time, they'll be looking at the impact of developing countries like Bangladesh, which is expected to suffer from increasingly devastating flooding and rising sea levels. Our Bangladesh correspondent, John Subworth reports.

2. This week, many miles from these shores, the latest evidence will be published about what global warming, rising sea levels, and the change in weather will mean for communities like these. But here in Bangladesh, some believe that global climate change could already be having a profound effect.

3. Telhua Hussain is a farmer with a big problem: he has no farmland left. Where he used to graze his cattle, fishermen now cast their nets. The increasing river erosion has once again forced him to abandon his home.

4. "If you're talking about the damage, well… the water has taken away everything," he tells me, "the tide is much higher nowadays."

5. Bangladesh sits on an enormous river dale that carries water all the way from the high Himalayas in the north to here, the Bay of Bangor. And it's clear that farmers, like Telhua, believe they are already the victims of climate changes. This rising sea water washes back up those rivers and takes their farmland.

6. Fifteen-year-old Rina has lost everything she had to river erosion. She's now been taken in by a charity which gives her a home and an education. If Bangladesh is to face more floods, the human and social cost could be huge.

7. "When all of our possessions were lost in the river, we had nothing left to pay for the treatment of my mother," she says. The family was forced to beg and her mother eventually died.

8. As these banks here are swallowed up by the river so too are homes and livelihoods. It's difficult to say with any certainty, of course, whether this increasing river bank erosion is due to global warming, but scientists say it does fit the pattern. If is a result of global climate change, rivers like this one had to take more water, then it's the people living along them who will suffer.

9. Dr. Atiq Rahman is one of the lead authors of this latest IPCC report looking at the impacts of climate change.

10. "Reduce the greenhouse gas now. It's not tomorrow, it's not beyond the future regime, it's now. Because, otherwise, it would be totally out of control. And the communities practically the coastal Bangladesh communities and many more small islanders will have to pay with their lives."

11. Telhua Hussain says he hasn't heard of global warming, but this week we'll hear the latest evidence for how much it may already be affecting people like him. The report is likely to show that this watery land is one of the most vulnerable places on the planet.

John Subworth, BBC news in Bangladesh.

1.6.1 Atividade de avaliação

1. Dentre os parágrafos 2,3,5,6,8,11 do Vídeo 1 – Global Warming, escolha 4 (quatro) e traduza para o português.

UNIT 2 – POLLUTION

2.1. Objetivos de aprendizagem

- Identificar os diferentes tipos de poluição e suas fontes geradoras;
- Refletir acerca das conseqüências da poluição na vida humana.

2.2 Text 5 – Traffic pollution*

O aumento no número de veículos nas estradas tem diminuído a qualidade do ar nas grandes cidades.

2.2.1 Glossário

1- very few	muito poucas	6- all over	por todo
2- safe	segura/s	7- source	fonte
3- exceed	excedem	8- pollutants	poluentes
4- health	saúde	9- dust	poeira
5- standards	padrões	10- soot	fuligem

Figura 2.1:

http://news.bbc.co.uk/olmedia/125000/images/_128360_traffic_pollution_300.jpg

Very few[1] areas of the UK are safe[2] from air pollution. Pollution levels exceed[3] Government health[4] standards[5] all over[6] the country on many days every year, even in rural areas. The impact of this pollution is huge: even the government now accepts that several thousand people die prematurely every year as a result of air pollution.

Road transport is a major source[7] of air pollution in the UK. The forms of transport, energy production, industry and domestic sources emit five key pollutants[8]: particulates (fine dust[9] and soot[10] particles - PM), carbon monoxide (CO), nitrogen oxides (NOx), benzene and hydrocarbons (HCs).

The contribution of road transport is higher still in towns and cities. In London, traffic is responsible for 99% of carbon monoxide, 76% of nitrogen oxides and 90% of hydrocarbons.

Road transport is also the main cause of ozone (summertime smog). Ozone does not come directly from vehicles or factories but is created by chemical reactions between other nitrogen oxides and hydrocarbons.

One of the most well-known impacts of air pollution is an increase in asthma attacks. The incidence of asthma appears to have more than doubled in the last 15 years. Some of this increase may be due to changes in how doctors categorise asthma, but it is now widely accepted that the incidence of asthma has increased considerably. Asthma is the most common chronic disease of childhood with around 1 in 7 children affected.

* Este texto completo está disponível em:

http://www.foe.co.uk/pubsinfo/briefings/html/19971215145637.html

Pollution

You can play your part in cutting air pollution from traffic: cut your car use. Use alternatives such as public transport, cycling and walking.

2.2.2 Atividades de avaliação

- Escolha a alternativa correta:

1. O assunto do texto é:

   a) como o Reino Unido conseguiu diminuir a emissão de poluentes automotivos

   b) as atitudes que estão sendo tomadas para diminuir a poluição no trânsito

   c) as causa e conseqüências da poluição no trânsito do Reino Unido

2. De acordo com o texto, o maior vilão da poluição do ar no Reino Unido é:

   a) a forma de produção de energia

   b) o transporte rodoviário

   c) a emissão de poluentes pelas fábricas

3. Qual é o principal impacto da poluição no ar?

   a) O aumento nos casos de asma.

   b) O aumento do transporte rodoviário.

   c) O uso de transporte público alternativo.

- Traduza para o português as seguintes frases extraídas do texto:

even		well-known	
huge		more than	
die		may be	
prematurely		due to	
fine		widely	
road		childhood	
traffic		play your part	
summertime		such as	
smog		cut/ting	
vehicles		cycling	
factories		walking	

2.3 Text 6 – Nuclear and chemical waste*

A energia nuclear pode ser invisível, mas o lixo que ela deixa não é. O que podemos fazer com ele?

2.3.1 Glossário

1- byproducts	subproduto	6- unwanted	indesejável
2- reactions	reações	7- efforts	esforços
3- chemistry	química	8- wage war	iniciar guerra
4- yields	produz	9- manage	lidar / gerir
5- fissile	divisível	10- nuclei	núcleo

Figura 2.2:

https://env-ngo.wikispaces.com/file/view/wast1.gif

What do we do with the byproducts[1] of nuclear reactions[2] and the chemistry[3] of nuclear materials? Every chemical and nuclear process, at a macroscopic level, yields[4] both the desired product: fissile[5] uranium, plutonium, electricity, radioactive isotopes for medical use such as Co^{60} or Sr^{89} and a series of unwanted[6] byproducts. In contrast to the byproducts of other industrial efforts[7] to support the ongoing culture - or to maintain defense or wage war[8] - these byproduct materials are especially difficult to manage[9] because of their complex composition of actively radiating nuclei[10].

Nuclear waste problems are national rather than regional or local. Waste is generated across the country and no one wants it or wants it transported through their community. They initiate powerful personal fears resulting in a sweeping political debate and extraordinary levels of discussion and planning before action.

The isolation and treatment problem is exacerbated by the fact that many of the radioactive species have half-lives such that they will essentially never go away. Any cleanup effort carries the risk of exposure to unseen, damaging radiation.

Radioactive waste comes from a number of sources. The majority originates from the nuclear fuel cycle and nuclear weapon reprocessing. However, other sources include medical and industrial wastes, as well as naturally occurring radioactive materials (NORM) that can be concentrated as a result of the processing or consumption of coal, oil and gas, and some minerals.

* Este texto completo está disponível em:

http://www.chemcases.com/nuclear/nc-11.htm

2.3.2 Atividades de avaliação

- Marque "V" (verdadeiro) ou "F" (falso) de acordo com o texto:

( ) O lixo nuclear é um problema nacional e não local.

( ) Alguns países aceitam que o lixo de outro país passe por seu território.

( ) Há elementos radiativos que têm uma vida infinita.

( ) Most of nuclear waste comes from the production of energy.

( ) It is extremely dangerous to try to clean nuclear waste.

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	support	( )	antes
(2)	ongoing	( )	forte
(3)	maintain	( )	prejudicial
(4)	rather than	( )	manter
(5)	across	( )	querer
(6)	want	( )	existente
(7)	powerful	( )	desaparecer
(8)	fear	( )	ao invés de
(9)	sweeping	( )	assim como
(10)	before	( )	extenso / longo
(11)	go away	( )	apoiar
(12)	effort	( )	invisível
(13)	unseen	( )	através
(14)	damaging	( )	medo
(15)	as well as	( )	esforço

Saiba mais sobre lixo químico visitando o *link* abaixo:

http://www.chemcases.com/nuclear/nc-11.htm

2.4 Text 7 – Space garbage*

Tudo o que sobe desce, ou não? O que acontece quando o lixo deixado no espaço decide voltar para a Terra?

2.4.1 Glossário

1- nuts	porcas	6- dump	depósito
2- bolts	parafusos	7- hazard	perigo
3- gloves	luvas	8- spacecraft	espaçonave
4- debris	fragmentos	9- bits and pieces	coisas pequenas
5- garbage	lixo	10- fall back	cair de volta

Figura 2.3:

http://www.daviddarling.info/images/space_garbage.jpg

Thousands of nuts[1], bolts[2], gloves[3] and other debris[4] from space missions form an orbiting garbage[5] dump[6] around Earth, presenting a hazard[7] to spacecraft[8]. Some of the bits and pieces[9] scream along at 17,500 mph.

When these objects fall back[10] into Earth's atmosphere, which they inevitably do, they behave just like any other meteor, lighting up the sky. A 1999 study estimated there are some 4 million pounds of space junk in low-Earth orbit, just one part of a celestial sea of roughly 110,000 objects larger than 1 centimeter - each big enough to damage a satellite or space-based telescope.

* Este texto completo está disponível em:

http://www.space.com/spacewatch/space_junk.html

Some of the objects, baseball-sized and bigger, could threaten the lives of astronauts in a space shuttle or the International Space Station. As an example of the hazard, a tiny speck of paint from a satellite once dug a pit in a space shuttle window nearly a quarter-inch wide.

Aware of the threat, the U.S. Space Command monitors space debris and other objects, reporting directly to NASA and other agencies whenever there's threat of an orbital impact.

As of June 21 2000, the agency counted 8,927 man-made objects in the great above and beyond; some are there more or less permanently. Of the total, 2,671 are satellites (working or not), 90 are space probes that have been launched out of Earth orbit, and 6,096 are mere chunks of debris zooming around the third planet from the Sun. The United States leads the former Soviet Union in the total quantity of orbital junk, but some companies and other organizations contribute significantly to the count.

But there are more objects up there!

2.4.2 Atividades de avaliação

- Marque "V" (verdadeiro) ou "F" (falso) de acordo com o texto:

(1)	sky	( )	pequenino
(2)	junk	( )	onde quer que
(3)	roughly	( )	ônibus
(4)	shuttle	( )	céu
(5)	tiny	( )	acima
(6)	once	( )	aproximadamente
(7)	wide	( )	além
(8)	whenever	( )	uma vez
(9)	above	( )	lixo
(10)	beyond	( )	largura

- Traduza para o português as seguintes frases extraídas do texto:

1. which they inevitably do

   _____

2. they behave just like any other meteor

   _____

3. each big enough to damage a satellite

   _____

4. could threaten the lives of astronauts

   _____

Descubra seis formas de limpar o espaço visitando o *site*:

http://www.wired.com/wired/archive/15.05/st_houston.html

5. dug a pit in a space shuttle window

_____

6. aware of the threat

_____

7. some are there more or less permanently

_____

8. space probes that have been launched out

_____

9. around the third planet from the Sun

_____

10. other organizations contribute significantly to the count

_____

2.5 Text 8 – Water pollution*

Há tanta água que ela até parece ser infinita. Porém uma pequena parte dessa água é potável. A poluição da água pode acabar com a vida.

2.5.1 Glossário

1- surface	superfície	6- grow	crescer
2- water	água	7- prosper	prosperar
3- precious	precioso	8- rivers	rios
4- resource	recurso	9- lakes	lagos
5- invaluable	incalculável	10- harming	ferindo

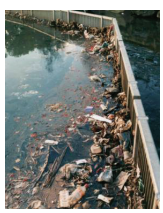


Figura 2.4:

http://www.uprct.nsw.gov.au/HTML/Info%20Sheets/Enviro%20Issues/E7%20Water%20Pollution_files/creek%20grate.jpg

Comprising over 70% of the Earth's surface[1], water[2] is undoubtedly the most precious[3] natural resource[4] that exists on our planet. Without the seemingly invaluable[5] compound comprised of hydrogen and oxygen, life on Earth would be non-existent: it is essential for everything on our planet to grow[6] and prosper[7]. Although we as humans recognize this fact, we disregard it by polluting our rivers[8], lakes[9], and oceans. Subsequently, we are slowly but surely harming[10] our planet to the point where organisms are dying at a very alarming rate. In addition to innocent organisms dying off, our drinking water has become greatly affected as is our ability to use water for recreational purposes. In order to combat water pollution, we must understand the problems and become part of the solution.

According to the American College Dictionary, pollution is defined as: to make foul or unclean; dirty. Water pollution occurs when a body of water is adversely affected due to the addition of large amounts of materials to the water. When it is unfit for its intended use, water is considered pollu-

* Este texto completo está disponível em:

http://www.umich.edu/~gs265/society/waterpollution.htm

ted. Two types of water pollutants exist; point source and nonpoint source. Point sources of pollution occur when harmful substances are emitted directly into a body of water. The Exxon Valdez oil spill best illustrates a point source water pollution. A nonpoint source delivers pollutants indirectly through environmental changes. An example of this type of water pollution is when fertilizer from a field is carried into a stream by rain, in the form of run-off which in turn affects aquatic life. The technology exists for point sources of pollution to be monitored and regulated, although political factors may complicate matters. Nonpoint sources are much more difficult to control.

2.5.2 Atividades de avaliação

- Use as palavras abaixo para completar as frases:

humans	rate	ability	part	intended

1. He _____ to save the planet.
2. We _____ do not fully understand the problem.
3. Her _____ on the job was very helpful.
4. The _____ of pollution has increased dramatically.
5. Your _____ to solve arguments is needed.

- Encontre no texto palavras que tenham o seguinte significado:

água potável		embora	
suja		certamente	
morrendo		quantias	
lentamente		riachos	
prejudicial		sem dúvida	
distribui		entender	
fins		reconhecer	
tudo		imprópria	
campo		menosprezar	
derramamento		corpo	

Assista ao vídeo do *link* abaixo para ver como a poluição no ar está afetando a vida dos residentes de uma aldeia na China. Acompanhe a reportagem lendo a transcrição.

http://www.youtube.com/watch?v=-1DNjJd2YfA

2.6 Video 2 – Air pollution

1. Try not to take a deep breath. If you breathe the air for too long in the village of Ghodi Oto it may make you ill, and it may even end up killing you.

2. One of the things you notice here is that there is almost no wind in this village and that means that the pollution from the nearby mines and factories simply rises into the air and then it stays. A lot of people live on houses along lanes like this one. As you can see, there are almost no plants and no flowers. People here say that it's very difficult to grow anything with all the pollution.

3. On my first night here, I joined the man of the Wandeman family for dinner. They try to wash away the taste of pollution with some weak soup. They tell me they've been abandoned. Their own village leaders left long ago in search of better air.

4. "No one cares about us," says Gian Siang Jin, "our leaders live in the city, where it's clean up. But we don't have any money, so we have to stay here."

5. The next morning the sky settles into a kind of orange haze. We're told this is what a good day looks like in Ghodi Oto.

6. The villagers take us to see someone suffering from the bad air. Jean Ming Jan has lung disease. He can barely move. He has to be spoon fed by his wife.

7. "The air is so bad," she says, "on winter days like this, he can't go out, he gets worse, and he just can't breathe."

8. Before dawn, on our third day here, we wait outside the village school for classes to begin. It's minus ten degrees (-10º) and the sky is full of smog.

9. The pupils get straight into their lessons as noisily as they can. No one here has a clean face. In this village, you get grubby and you stay grubby.

10. Outside the classroom, the school slide is too filthy to use. Above the playground, you can see the red flag of China covered in grain.

James Reynolds, BBC News, Ghodi Oto.

2.6.1 Atividade de avaliação

1. Traduza para o português o parágrafo de número 2 (dois) e mais 4 (quatro) outros parágrafos do texto. No total você deverá traduzir 5 parágrafos, o segundo e mais quatro que você escolherá.

UNIT 3 – AGRICULTURE

3.1 Objetivos de aprendizagem

- Identificar as causas da degradação do solo e suas conseqüências para a vida do homem;
- Refletir sobre a influencia da engenharia genética na produção de alimentos e medicamentos;
- Reconhecer as fontes de biocombustiveis e seus benefícios para o eco-sistema;
- Provocar reflexão a respeito das conseqüências do desmatamento florestal no mundo, principalmente nas áreas tropicais.

3.2 Text 9 – Land degradation*

Cada vez mais o homem danifica o solo. De onde sairá nosso sustento? Veja algumas causas e conseqüências desse mal.

3.2.1 Glossário

1- land	terra	6- survival	sobrevivência
2- degradation	degradação	7- crop	plantação
3- storing	armazenamento	8- clearing	limpeza
4- desertification	desertificação	9- deforestation	desmatamento
5- dry	seca	10- soil	solo

Figura 3.1:

http://www.wiolab.org/Server/Server/Images/image/Demo%20Mauritius%202.JPG

Land[1] degradation[2] is a human induced or natural process which negatively affects the land to function effectively within an ecosystem, by accepting, storing[3] and recycling water, energy, and nutrients.

Desertification[4] is land degradation occurring in the arid, semiarid and dry5 subhumid areas of the world. These susceptible drylands cover 40 percent of the earth's surface and puts at risk more than 1 billion people who are dependent on these lands for survival[6].

Land degradation cancels out gains advanced by improved crop[7] yields and reduced population growth. The causes of land degradation are mainly anthropogenic and mainly agriculture related.

The Major Causes: land clearing[8] and deforestation[9], agricultural mining of soil[10] nutrients, urban conversion, irrigation, pollution.

The Major Stresses: accelerated erosion by wind and water, removal of nutrients, acidity increase, salination, alkalinization, destruction of soil structure, loss of organic matter.

* Este texto completo está disponível em:

http://soils.usda.gov/use/worldsoils/landdeg/degradation.html

Severe land degradation affects a significant portion of the earth's arable lands, decreasing the wealth and economic development of nations. The link between a degraded environment and *poverty* is direct and intimate.

As the land resource base becomes less productive, food security is compromised and competition for dwindling resources increases, the seeds of potential conflict are sown. Species diversity is lessened and often lost as lands are cleared and converted to agriculture.

Thus a downward eco-social spiral is created when marginal lands are nutrient depleted by unsustainable land management practices resulting in lost soil stability leading to permanent damage.

3.2.2 Atividades de avaliação

- Escolha a alternativa correta:

1. O texto de uma forma geral é:

   a) hipotético, pois apresenta cenários e não fatos reais

   b) otimista, pelas medidas que estão sendo empregadas

   c) pessimista, devidos as causa e conseqüências do tópico

2. De acordo com o texto, o maior vilão da degradação da terra é:

   a) o crescimento populacional

   b) a agricultura

   c) o avanço das áreas áridas e semi-áridas

3. A palavra "poverty" sublinhada no 6º parágrafo é sinônima de:

   a) property

   b) wealthy

   c) misery

4. Na frase "the seeds of potential conflict are sown", o autor quer dizer que:

   a) uma briga está por começar

   b) as sementes devem ser semeadas

   c) houve um forte conflito pelas sementes

Para saber mais sobre a degradação do solo, visite o *site* do *link* abaixo:

http://www.undp.org/gef/undp-gef_focal_areas_of_action/sub_land_degradation.html

5. A melhor tradução para a frase abaixo é:

   the wealth and economic development of nations

   a) a saúde e o desenvolvimento econômico das nações

   b) a riqueza e o desenvolvimento econômico das nações

   c) a riqueza e a economia das nações em desenvolvimento

- Relacione as colunas para traduzir as palavras extraídas do texto:

(6)	gains	( )	principalmente
(7)	improved	( )	lucros
(8)	mainly	( )	perda
(9)	wind	( )	vento
(10)	loss	( )	melhorada

3.3 Text 10 – GMO*

Os produtos geneticamente modificados e as gorduras trans já estão nas prateleiras dos nossos supermercados. Quem são eles?

3.3.1 Glossário

1- engineered	projetado	6- create	criar
2- altered	alterado	7- transferred	transferido
3- techniques	técnicas	8- novel	novo
4- recombinant	recombinação	9- traits	traços
5- molecules	moléculas	10- mice	camundongos

Figura 3.2:

http://i.pbase.com/u46/cslr_challenge/upload/29470348.GMO.jpg

A genetically modified organism (GMO) or genetically engineered[1] organism (GEO) is an organism whose genetic material has been altered[2] using genetic engineering techniques[3]. These techniques are generally known as recombinant[4] DNA technology. With recombinant DNA technology, DNA molecules[5] from different sources are combined *in vitro* into one molecule to create[6] a new gene. This DNA is then transferred[7] into an organism and causes the expression of modified or novel[8] traits[9].

Examples of GMOs are highly diverse, and include transgenic (genetically modified by recombinant DNA methods) animals such as mice[10], fish, transgenic plants, or various microbes, such as fungi and bacteria. The generation and use of GMOs has many reasons, chief among them are their use in research that addresses fundamental or applied questions in biology or medicine, for the production of pharmaceuticals and industrial enzymes, and for direct, and often controversial, applications aimed at improving human health (e.g., gene therapy) or agriculture (e.g., golden rice). The term "genetically modified organism" does not always imply, but can include, targeted insertions of genes from one into another species. For example, a gene from a jellyfish, encoding a fluorescent protein called GFP, can be physically linked and thus co-expressed with mammalian genes to identify the location of the protein encoded by the GFP-tagged gene in the mammalian cell. These and other methods are useful and indispensable *tools* for biologists in many areas of research, including tho-

* Este texto completo está disponível em:

http://en.wikipedia.org/wiki/Genetically_modified_organism

se that study the mechanisms of human and other diseases or fundamental biological processes in eukaryotic or prokaryotic cells.The use of GMOs has sparked significant controversy in many areas.

3.3.2 Atividades de avaliação

- Marque "V" (verdadeiro) ou "F" (falso) de acordo com o texto:

( ) Um produto que ainda não foi modificado é o arroz.
( ) GMOs são usados na fabricação de produtos farmacêuticos.
( ) A palavra *tools* no fim do texto pode significar "recursos"
( ) So far no research has been made in the field of agriculture.
( ) The benefits of using GMOs is a global consensus.

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	fungi	( )	geralmente
(2)	chief	( )	útil
(3)	among	( )	chamada
(4)	research	( )	sempre
(5)	applied	( )	água-viva
(6)	often	( )	entre
(7)	aimed	( )	assim
(8)	always	( )	fungos
(9)	imply	( )	pesquisa
(10)	jellyfish	( )	envolve
(11)	encoding	( )	principal
(12)	called	( )	codificando
(13)	linked	( )	focada
(14)	thus	( )	aplicada
(15)	useful	( )	ligada

3.4 Text 11 –Biofuels*

O mundo busca um meio energético que venha a substituir o petróleo. Nesse campo os bio-combustíveis se destacam.

3.4.1 Glossário

1- broadly	geralmente	6- issues	questões
2- fuel	combustível	7- prices	preços
3- dead	morto	8- sustainable	sustentável
4- renewable	renovável	9- rights	direitos
5- enhances	aumenta	10- balance	equilíbrio

Figura 3.3:

http://keetsa.com/blog/tag/biofuels/

Biofuel (if cultivated, then also called agrofuel or agrifuel) can be broadly1 defined as solid, liquid, or gas fuel2 consisting of, or derived from, recently dead3 biological material, most commonly plants. This distinguishes it from fossil fuel, which is derived from long dead biological material.

Biofuels are used globally and biofuel industries are expanding in Europe, Asia and the Americas. The most common use for biofuels is as liquid fuels for automotive transport. The use of renewable[4] biofuels provides increased independence from petroleum and enhances[5] energy security. There are various current issues[6] with biofuel production and use, which are presently being discussed in the popular media and scientific journals. These include: the effect of moderating oil prices[7], the "food vs fuel" debate, carbon emissions levels, sustainable[8] biofuel production, deforestation and soil erosion, impact on water resources, human rights[9] issues, poverty reduction potential, biofuel prices, energy balance[10] and efficiency, and centralised versus decentralised production models.

* Este texto completo está disponível em:

http://en.wikipedia.org/wiki/Biofuel

One of the greatest technical challenges is to develop ways to convert biomass energy specifically to liquid fuels for transportation. To achieve this, the two most common strategies are:

- To grow sugar crops (sugar cane, sugar beet, and sweet sorghum), or starch (corn/maize), and then use yeast fermentation to produce ethanol (ethyl alcohol).

- To grow plants that (naturally) produce oils, such as oil palm, soybean, algae, or jatropha. When these oils are heated, their viscosity is reduced, and they can be burned directly in a diesel engine, or the oils can be chemically processed to produce fuels such as biodiesel.

3.4.2 Atividades de avaliação

- Escolha a alternativa correta:

1. O assunto principal do texto está focado em:

a) sugestões de materiais biológicos que podem substituir os recursos fósseis

b) grupos organizados que não querem o cultivo dos bio-combustíveis

c) a centralização na produção dos bio-combustíveis pelos países ricos

2. De acordo com o texto, o maior emprego dos bio-combustíveis está:

   a) nos países que têm grandes reservas de petróleo

   b) nas produções de açúcar e milho

   c) no transporte automotivo

3. A palavra "journals" sublinhada no terceiro parágrafo é sinônima de:

   a) magazines

   b) newspapers

   c) newsletters

4. Na frase "the seeds of potential conflict are sown", o autor quer dizer que:

   a) as sementes devem ser semeadas

   b) uma briga está por começar

   c) houve um forte conflito pelas sementes

5. A melhor tradução para a frase abaixo é:

   decreasing the wealth and economic development of nations

   a) diminuindo a riqueza e o desenvolvimento econômico das nações

   b) diminuindo a saúde e o desenvolvimento econômico das nações

   c) diminuindo a riqueza e a economia das nações em desenvolvimento

Para ver um vídeo de biocombustível, visite o site do *link* abaixo:

http://www.youtube.com/watch?v=1MeIgaRfyD4

- Use as palavras abaixo para completar as frases:

fuel	oil	biofuel	sugar cane	ethanol

6. _____ is a type of alcohol fuel.

7. _____ is produced by dead biological material.

8. Diesel is a kind of _____ used to power trucks.

9. _____ is the raw material used to produce gasoline.

10. Crops of _____ are harvested to produce alcohol.

3.5 Text 12 – Cutting of trees*

A cada dia milhares de árvores são cortadas em todo o mundo. Toda uma biodiversidade é perdida para sempre. Será esse o passo do progresso?

3.5.1 Glossário

1- deforestation	desmatamento	6- wasteland	devastação
2- forested	florestada	7- shaping	moldando
3- arable	arável	8- trees	árvores
4- pasture	pasto	9- wood	madeira
5- logged	corte de lenha	10- worldwide	todo o mundo

Figura 3.4:

http://farm3.static.flickr.com/2042/1806684844_1a58c59ff3.jpg

Deforestation1 is the conversion of forested[2] areas to non-forest land for use such as arable[3] land, pasture[4], urban use, logged[5] area, or wasteland6. Generally, the removal or destruction of significant areas of forest cover has resulted in a degraded environment with reduced biodiversity. In many countries, massive deforestation is ongoing and is shaping[7] climate and geography. Deforestation results from removal of trees[8] without sufficient reforestation, and results in declines in habitat and biodiversity, wood[9] for fuel and industrial use, and quality of life.

From about the mid-1800s, the planet has experienced an unprecedented[10] rate of change of destruction of forests worldwide. Forests in Europe are adversely affected by acid rain and very large areas of Siberia have been harvested since the collapse of the Soviet Union. In the last two decades, Afghanistan has lost over 70% of its forests throughout the country. However, it is in the world's great tropical rainforests where the destruction is most pronounced at the current time and where clear cutting is having an adverse effect on biodiversity and contributing to the ongoing Holocene mass extinction.

About half of the mature tropical forests, between 750 to 800 million hectares of the original 1.5 to 1.6 billion hectares that once covered the planet have fallen. The forest loss is already acute in Southeast Asia, the second of the world's great biodiversity hot spots. Much of what remains is in the Amazon basin, where the Amazon Rainforest covered more than 600 million hectares. The forests are being destroyed at a pace tracking the rapid pace of human population growth. Unless significant measures are taken on a world-wide basis to preserve them, by 2030 there will only be ten percent remaining with another ten percent in a degraded condition.

* Este texto completo está disponível em:

http://en.wikipedia.org/wiki/Deforestation

3.5.2 Atividades de avaliação

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	removal	( )	florestas tropicais
(2)	cover	( )	a não ser que
(3)	rate	( )	remoção
(4)	adversely	( )	queda
(5)	harvested	( )	metade
(6)	collapse	( )	em contrário
(7)	throughout	( )	cobertura
(8)	rainforests	( )	por todo
(9)	half	( )	taxa
(10)	unless	( )	ceifada

- Traduza para o português as seguintes frases extraídas do texto:

11. deforestation is ongoing and is shaping climate

_____

12. removal of trees without sufficient reforestation

_____

13. adversely affected by acid rain

_____

14. Afghanistan has lost over 70% of its forests

_____

15. about half of the mature tropical forests

_____

3.6 Video 3 – About biomass fuels

Assista ao vídeo do *link* abaixo para ver como os biocombustíveis podem contribuir para reduzir a quantidade de poluentes no ar. Acompanhe a reportagem lendo a transcrição.

http://www.youtube.com/watch?v=Asnqy6kC0as

1. Everybody is talking about carbon these days: carbon emissions, carbon footprints, and even more about global warming. As we burn more and more fossil fuels like coal and oil, we damage our world. We need a green alternative. We need to burn green. What kind of fire burns green? It's a fire burning a fuel that is clean and doesn't add to global warming, renewable, and renews quickly. And, of course, inexpensive compared to coal and oil. These are biomass fuels. Biomass fuels are made from a variety of materials, plants such as willow or rape seed, papilla or hemp, even biodegradable wastes, and they replace fuels like carbon or oil for central heating in your home.

2. Biomass fuels are carbon neutral. They're part of the carbon cycle. Carbon from the atmosphere absorbed by the plants during the photosynthesis and when the plants decays or is burned that carbon goes back into the atmosphere. But because it's a cycle, the next couple of plants absorb the carbon over again so there's a balance between the amount of carbon that the biomass fuel releases into the atmosphere and the amount that they extract from it. This is why biomass fuels do not contribute to global warming. So biomass fuels are clean, growing them takes as much carbon out in the air as burning puts into it.

3. Biomass fuels are renewable. As you convert this year's crop to fuel, you are growing another one for next year's fuel. Renewing takes just as long as it takes to grow and that can be as little as months, in some cases. Biomass fuels are inexpensive comparing to coal or oil. Typically, they cost about one third less than a fossil fuel doing the same job. This means you spend one third less every year on heating your home. And over ten, fifteen or twenty years, that adds up to a considerable saving.

4. There are different types of biomass fuels: pallets, wood chips, and wood logs are among the most common, but there are other forms too. They're used in specially designed stoves and boilers. These are highly efficient; virtually no energy is wasted, unlike a back boiler where half of the energy goes up to chimney. They're clean to use. Biomass fuels burn very efficiently. A single bag of pallets would power a boiler or a stove for two or three days, and they produce very little ash, especially when compared to coal. And a full year supply of pallets, would take up no more than one third of an ordinary domestic garage.

3.6.1 Atividade de avaliação

1. Traduza para o português 2 (dois) parágrafos dos 4 (quatro) do texto inteiro. Escolha apenas dois para serem traduzidos.

UNIT 4 – MODERN PROBLEMS

4.1 Objetivo de aprendizagem

- Refletir a cerca das ações do homem em relação ao desmatamento da floresta amazônica, poluição das águas e clonagens de animais em nome do aumento da produção de alimentos por causa do crescimento populacional

4.2 Text 13 – Population growth*

O crescimento populacional segue em progressão geométrica. Quais serão as conseqüências desse fenômeno.

4.2.1 Glossário

1- centuries	séculos	6- fast	rápido
2- people	pessoas	7- family tree	árvore genealógica
3- many times	muitas vezes	8- parents	pais
4- by the	até	9- children	filhos
5- ago	atrás	10- larger	maior

Figura 4.1:

http://www.instructables.com/files/orig/FNS/ALQ1/FEHJYCWL/FNSALQ1FEHJYCWL.jpg

In the last few centuries[1], the number of people[2] living on Earth has increased many times[3] over. By the[4] year 2000, there will be 10 times more people on Earth than there were 300 years ago5.

How can population grow so fast6? Think of a family tree[7]. At the top are 2 parents[8], and beneath them the children[9] they had. Listed beneath those children are the children they had, and so on and so on, down through each generation. As long as the family members continue to reproduce, the family tree continues to increase in size, getting larger[10] with each passing generation. This same basic idea applies to the world's population.

Population grows in the same way that money grows when it's left to compound interest in a bank. With money, growth comes through accumulating interest upon interest. The interest payments you accumulate eventually earn interest, increasing your money. With population growth, new members of the population eventually produce other new members of the population. The population increases exponentially as time passes.

A crucial difference between money and population is that money can increase without limits while population can't. Any population of living creatures is constrained by the availability of food, water, land, or other important resources. Once those resources are depleted, a population won't continue to grow exponentially. It will plateau, or even decline, as a result of

* Este texto completo está disponível em:

http://www.learner.org/interactives/dailymath/population.html

disease or malnutrition. Unlike calculating interest, calculating population growth is an imprecise business.

The rate of Earth's population growth is slowing down. Family planning initiatives, an aging population, and the effects of diseases such as AIDS are some of the factors behind this rate decrease.

4.2.2 Atividade de avaliação

- Traduza para o português as seguintes palavras de acordo com o seu significado no texto:

there were		eventually	
how		between	
can		without	
grow		while	
so		any	
think		constrained	
beneath		availability	
those		land	
each		resources	
as long as		once	
increase		depleted	
size		plateau	
with		even	
this		decline	
same		disease	
way		unlike	
when		rate	

4.3 Text 14 – The Amazon rainforest*

Conhecida como o "pulmão do mundo", a floresta amazônica está ameaçada a desaparecer do mapa, para sempre.

4.3.1 Glossário

Figura 4.2:

http://www.galapagos-inc.com/amazon_pic/1.jpg

1- rainforest	floresta tropical	6- canopy	cobertura
2- aka	conhecida como	7- floor	solo
3- greatest	maior	8- lizards	lagartos
4- lungs	pulmões	9- fierce	feroz
5- largest	maior	10- evolved	evoluído

The Amazon rainforest[1], aka[2] Amazonia, is one of the world's greatest[3] natural resources. Because its vegetation continuously recycles carbon

dioxide into oxygen, it has been described as the "Lungs[4] of our Planet". About 20% of earth's oxygen is produced by the Amazon rainforest.

The world's largest[5] tropical rainforest, Amazonia covers more than half of Brazil. The canopy[6] of Amazonia is less studied than the ocean floor[7]. Scientists believe that the canopy may contain half of the world's species. Over 500 mammals, 175 lizards[8] and over 300 other reptiles species, and one third of the world's birds live in Amazonia. It is estimated that about 30 million insect types can be found here. Competition for survival is fierce[9]. This may explain why over millions of years of evolution so many highly adapted species have evolved[10] in the canopy of Amazonia. The most intense competition is between animals and plants. Both plants and animals have made adaptations to defend themselves from being eaten, and to overcome these defensive systems. Plants trap sunlight and turn it into energy for themselves and the herbivores of the canopy.

Today, more than 20% of the Amazon rainforest has been destroyed and is gone forever. The land is being cleared for cattle ranches, mining operations, logging, and subsistence agriculture. Some forests are being burned to make charcoal to power industrial plants. More than half of the world's rainforests have been destroyed by fire and logging in the last 50 years. Over 200,000 acres are burned every day around the world, or over 150 acres every minute. Experts also estimate that 130 species of plants, animals, and insects are lost every day. At the current rate of destruction, it is estimated that the last remaining rainforests could be destroyed in less than 40 years.

* Este texto completo está disponível em:

http://www.blueplanetbiomes.org/amazon.htm

4.3.2 Atividade de avaliação

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	because	( )	luz do sol
(2)	continuously	( )	ambos / tanto
(3)	less	( )	para sempre
(4)	about	( )	devido a / porque
(5)	why	( )	também
(6)	highly	( )	comidos
(7)	both	( )	carvão
(8)	being	( )	continuamente
(9)	eaten	( )	queimadas
(10)	overcome	( )	em torno de
(11)	trap	( )	transformam
(12)	sunlight	( )	serem (vb. ser)
(13)	turn	( )	menos
(14)	forever	( )	gado

Leia mais sobre a Amazônia no site do *link* abaixo:

http://www.amazon-rainforest.org/

(15)	cattle	( )	energizar
(16)	burned	( )	superar
(17)	charcoal	( )	porque / o motivo pelo qual
(18)	power	( )	peritos
(19)	experts	( )	capturar
(20)	also	( )	altamente

4.4 Text 15 – Cloning*

O sucesso da ovelha clone Dolly inspirou cientistas a serem ainda mais ousados nas pesquisas com células embrionárias.

Figura 4.3:

http://www.theage.com.au/ffximage/2007/11/17/PM_Dolly_narrowweb__300x395,0.jpg

4.4.1 Glossário

1- reproductive	reprodutiva	6- created	criada (criar)
2- cloning	clonagem	7- transfer	trasferir
3- generate	gerar	8- donor	doador
4- another	um outro	9- cell	célula
5- previously	previamente	10- egg	óvulo

Reproductive[1] cloning[2] is a technology used to generate[3] an animal that has the same nuclear DNA as another[4] currently or previously[5] existing animal. Dolly was created[6] by reproductive cloning technology. In a process called "somatic cell nuclear transfer" (SCNT), scientists transfer[7] genetic material from the nucleus of a donor[8] adult cell[9] to an egg[10] whose nucleus, and thus its genetic material, has been removed. The reconstructed egg containing the DNA from a donor cell must be treated with chemicals or electric current in order to stimulate cell division. Once the cloned embryo reaches a suitable stage, it is transferred to the uterus of a female host where it continues to develop until birth.

Dolly or any other animal created using nuclear transfer technology is not truly an identical clone of the donor animal. Only the clone's chromosomal or nuclear DNA is the same as the donor. Some of the clone's genetic materials come from the mitochondria in the cytoplasm of the enucleated egg. Mitochondria, which are organelles that serve as power sources to the cell, contain their own short segments of DNA. Acquired mutations in mitochondrial DNA are believed to play an important role in the aging process.

Dolly's success is truly remarkable because it proved that the genetic material from a specialized adult cell, such as an udder cell programmed to express only those genes needed by udder cells, could be reprogrammed to generate an entire new organism. Before this demonstration, scientists believed that once a cell became specialized as a liver, heart, udder, bone,

* Este texto completo está disponível em:

http://www.ornl.gov/sci/techresources/Human_Genome/elsi/cloning.shtml

or any other type of cell, the change was permanent and other unneeded genes in the cell would become inactive. Some scientists believe that errors or incompleteness in the reprogramming process cause the high rates of death, deformity, and disability observed among animal clones.

4.4.2 Atividades de avaliação

- Escolha a alternativa correta:

1. O pronome "its" sublinhado no primeiro parágrafo se refere a:
   a) nucleus
   b) egg
   c) cell
2. Na frase "are believed to play an important role", o verbo to play significa:
   a) tocar
   b) brincar
   c) desempenhar
3. A palavra "truly" sublinhada no 3º parágrafo é sinônima de:
   a) honestly
   b) really
   c) actually

- Use as palavras abaixo, do primeiro parágrafo, para completar as frases:

embryo	uterus	female	host	birth

1. A _____ egg is needed for the procedure.
2. Her _____ developed a cancer and was removed.
3. The _____ has developed into a fetus.
4. Her _____ was celebrated with a party.
5. A _____ horse is called a "mare."

- Encontre, no terceiro parágrafo, palavras que tenham o seguinte significado:

Veja como um porco é clonado no site do link abaixo:

http://www.genome.gov/Images/feature_images/illustration_of_cloning.jpg

somente		fígado	
morte		entre	
desnecessário		osso	
coração		notável	
realmente		totalmente	
taxas		ubre / teta	

4.5 Text 16 – Oil spill*

Desastres nos oceanos como os derramamentos de óleo podem acabar com a vida marinha de uma região inteira.

4.5.1 Glossário

Figura 4.4:

http://library.thinkquest.org/CR0215471/oil_spill_on_fire.jpg

1- spills	derramamento	6- breaking down	quebra mecânica
2- mistakes	enganos	7- get stuck	ficar preso
3- careless	descuidados	8- shallow	rasa
4- oil tanker	navio petroleiro	9- hole	furo
5- leak	vazar	10- dumpers	despejadores

Oil spills[1] happen when people make mistakes[2] or are careless[3] and cause an oil tanker[4] to leak[5] oil into the ocean. There are a few more ways an oil spill can occur. Equipment breaking down[6] may cause an oil spill. If the equipment breaks down, the tanker may get stuck[7] on shallow[8] land. When they start to drive the tanker again, they can put a hole[9] in the tanker causing it to leak oil.

Illegal dumpers[10] are people that will dump crude oil into the oceans because they do not want to spend money on decomposing their waste oil. Because they won't spend money on breaking up the oil (decomposing it) they will dump oil into the oceans, which is illegal.

Natural disasters (like hurricanes) may cause an oil spill, too. If a hurricane was a couple of miles away, the winds from the hurricane could cause the oil tanker to flip over, pouring oil out.

Birds die from oil spills if their feathers are covered in oil. The bird will then be poisoned because it will try to clean itself. Animals may die because they get hypothermia, causing their body temperature to be really low. They may die from really low body temperature. Oil may also cause the death of an animal by entering the animal's lungs or liver. The animal will then be poisoned by the oil. Oil also can kill an animal by blinding it. The animal will not be able to see and be aware of their predators. If they are not aware of other animals, they may be eaten.

Oil spills sometimes are the reason for animals becoming endange-

* Este texto completo está disponível em:

http://library.thinkquest.org/CR0215471/oil_spills.htm

red. This means that a certain type of animal is getting so small that it is in danger of becoming extinct.

4.5.2 Atividades de avaliação

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	happen	( )	de novo
(2)	occur	( )	acontecem
(3)	drive	( )	furacão
(4)	again	( )	gastar
(5)	want	( )	manobrar
(6)	spend	( )	baixa
(7)	dump	( )	ocorrer
(8)	hurricane	( )	despejar
(9)	a couple of	( )	querem
(10)	low	( )	algumas

- Traduza para o português as seguintes frases extraídas do texto:

1. dump crude oil into the oceans

   _____

2. they do not want to spend money

   _____

3. may cause an oil spill

   _____

4. if their feathers are covered in oil

   _____

5. the bird will then be poisoned

   _____

6. die from really low body temperature

   _____

7. oil may also cause the death

   _____

8. can kill an animal by blinding it

   _____

9. if they are not aware of other animals

   _____

10. it is in danger of becoming extinct

    _____

Veja algumas fotos impressionantes nos *sites*:

http://www.theage.com.au/ffximage/2007/12/09/OIL_ST_wideweb__470x298,0.jpg

http://www.habeeb.com/images/lebanon.photos/Beirut.war.photos/beirut.oil.spill.war.july.2006.jpg

http://graphics.boston.com/resize/bonzai-fba/Globe_Photo/2007/12/08/1197159710_9587/539w.jpg

http://esapub.esrin.esa.it/eoq/eoq44/images/greenf2.gif

4.6 Video 4 – The Exxon Valdez*

Assista ao vídeo do *link* abaixo para ver uma tragédia ocorrida no final da década de 80 no Alasca, EUA. A seguir, leia rapidamente as 5 perguntas para, posteriormente, fazer a atividade na página seguinte. As perguntas apenas complementam o vídeo:

http://www.youtube.com/watch?v=hsxV-w0gdZ8&feature=related

1. What is the Exxon Valdez Oil Spill?

The Exxon Valdez incident was a major oil spill. This oil spill took place on March 23, 1989 at Prince William Sound in Alaska.

2. How did it happen?

The drivers of the Exxon Valdez noticed icebergs in their planned route. Instead of trying to weave through the icebergs, they decided to go in another direction. On the new route, the oil tanker hit shallow land. The shallow land was not a beach, it was called Bligh Reef.

3. How much oil was spilled?

Imagine an Olympic-sized swimming pool. The Exxon Valdez spilled about 125 Olympic-sized swimming pools. You also can think of it as 108 homes or 430 classrooms. 797 living rooms or 9 school gyms can explain about how much oil was spilled by the Exxon Valdez.

4. How did the Exxon Valdez Oil Spill affect the animals at Prince William Sound?

* Este texto completo está disponível em:

http://library.thinkquest.org/CR0215471/oil_spills.htm

The Exxon Valdez affected many animals at Prince William Sound in Alaska. The spill greatly affected sea otters and sea birds. There were about 2,800 sea otters and 250,000 seabirds killed by the spill. Harbor seals, bald eagles, killer whales, and salmon were also greatly affected by the spill.

5. How long did it take to clean the up spill?

Because the spill impacted 1,300 miles, it took the Exxon Valdez Company four summers to clean up the spill. Some oil may still remain on the beaches. It took 10,000 workers, 1,000 boats, 100 airplanes, and the Navy, Army, and Air Force to clean up the spill. Exxon spent about $2.1 billion for the clean up.

4.6.1 Atividade de avaliação

1. Traduza para o português 3 (três) das respostas dadas entre as questões 2 (dois) e 5 (cinco). A resposta da questão 1 (um) NÃO deve ser traduzida. Escolha qualquer três respostas para serem traduzidos, exceto a primeira.

UNIT 5 – HOPES FOR THE FUTURE

5.1 Objetivo de aprendizagem

- Observar a preocupação de diferentes nações acerca de problemas que afetam a vida no planeta como fontes renováveis de energia, reciclagem de lixo e problemas relacionados ao trafego de veículos.

5.2 Text 17 – Alternative energy*

Pesquisadores do mundo inteiro buscam recursos renováveis, que não agridam o meio ambiente, para a geração de energia.

5.2.1 Glossário

1- renewable	renovável	6- field	campo
2- sources	fontes	7- harnessed	apreendida
3- power	energia	8- tidal	das marés
4- heating	aquecer	9- tapped	prendido
5- wind	vento	10- tools	ferramentas

Figura 5.1:

http://www.sandomenico.org/uploaded/photos/Library/energy_windmills_copenhagen.jpg

What are renewable[1] energy sources[2]? Solar power[3] can be used directly for heating[4] and producing electricity or indirectly via biomass, wind[5], ocean thermal, and hydroelectric power. Energy from the gravitational field[6] can be harnessed[7] by tidal[8] power; and the internal heat of the Earth can be tapped[9] geothermally.

These tools[10] and more can help make the transition from non-renewable to renewable and environmentally friendly energy. However, none of these is sufficiently developed or abundant enough to substitute for fossil fuels use. Every one of these power sources (with the exception of hydroelectric) has low environmental costs, and combined have the potential to be important in avoiding a monumental crisis when the fossil fuel crunch hits. These energy sources are often non-centralized, leading to greater consumer control and involvement.

However, currently each of these energy forms is significantly more expensive than fossil fuels, which will lead to economic dislocations and hardship if they become the only power source for the future.

There are many forms of renewable energy. Most of these renewable energies depend in one way or another on sunlight. Wind and hydroelectric power are the direct result of differential heating of the Earth's surface which leads to air moving about (wind) and precipitation forming as

* Este texto completo está disponível em:

http://www.altenergy.org/

the air is lifted. Solar energy is the direct conversion of sunlight using panels or collectors. Biomass energy is stored sunlight contained in plants. Other renewable energies that do not depend on sunlight are geothermal energy, which is a result of radioactive decay in the crust combined with the original heat of accreting the Earth, and tidal energy, which is a conversion of gravitational energy.

5.2.2 Atividade de avaliação

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	friendly	( )	cada
(2)	none	( )	armazenada
(3)	developed	( )	baixo
(4)	enough	( )	superfície
(5)	fuels	( )	maior
(6)	low	( )	nenhum
(7)	avoiding	( )	painéis
(8)	crunch	( )	camada
(9)	hits	( )	o bastante / suficiente
(10)	greater	( )	amigável
(11)	however	( )	levar a
(12)	each	( )	evitando
(13)	lead to	( )	diminuição
(14)	hardship	( )	combustíveis
(15)	surface	( )	entretanto
(16)	lifted	( )	erguido
(17)	panels	( )	chegar / atacar
(18)	stored	( )	dificuldades
(19)	decay	( )	quebra / pane
(20)	crust	( )	desenvolvida

5.3 Text 18 – Recycling waste*

A reciclagem do lixo é uma atividade relativamente nova. O homem moderno ainda está se adaptando a essa prática.

Figura 5.2:

http://www.ace.mmu.ac.uk/eae/Images/sd_recycle.gif

5.3.1 Glossário:

1- recycling	reciclagem	6- waste	lixo
2- pass	passar	7- fewer	menos
3- through	através	8- saving	economizando
4- enables	capacita	9- raw material	matéria-prima
5- reused	reusada	10- consumption	consumo

Hopes for the Future

The definition of recycling[1] is to pass[2] a substance through[3] a system that enables[4] that substance to be reused[5]. Waste[6] recycling involves the collection of waste materials and the separation and clean-up of those materials. Recycling waste means that fewer[7] new products and consumables need to be produced, saving[8] raw materials[9] and reducing energy consumption[10].

Plastics make up a large amount of waste, since they are available in numerous forms. There are two main types of plastic: thermoplastics, which are the most common; and thermosetts. Thermoplastics melt when heated and can therefore be remoulded. This enables thermoplastics to be recycled relatively easily. In Western Europe the largest amounts of plastic occur in the form of packaging. Plastic waste tends to be sorted by hand, either at a materials recycling facility or the householder can separate it. This may then be taken to a plastic recycling point or collected by the council. The UK produces approximately about 4.5 million tonnes of plastic waste each year. Most of this waste arises from packaging. The UK has a plastics recycling rate of only 3%. In Germany the recycling rate for plastic is 70%.

* Este texto completo está disponível em:

http://www.ace.mmu.ac.uk/eae/sustainability/Older/Waste_Recycling.html

The UK has a recycling rate of approximately 60% for iron and steel. Most of this waste comes from scrap vehicles, cooker, fridges and other kitchen appliances. It is estimated that the metal content of household waste is between 5 and 10%. It is mainly made up of aluminium drinks cans and tin-plated steel food cans. Aluminium recycling is widely established in the UK. It is an expensive metal and can therefore produce high incomes for recycling schemes. Copper, zinc and lead are also recycled in the UK. At present, over a third of aluminium drinks cans are recycled. Some other countries have very high recycling figures for aluminium drinks cans. The USA and Australia for example, recycle nearly two thirds.

5.3.2 Atividades de avaliação

- Escolha a alternativa correta:

1. O pronome "it" sublinhado no segundo parágrafo se refere a:
   a) hand
   b) plastic waste
   c) recycling facility
2. A palavra "waste" usada no texto é sinônima de:
   a) water
   b) rubbish
   c) aluminium

3. A melhor tradução para a frase abaixo é:

since they are available in numerous forms

a) visto que elas estão disponíveis em várias formas

b) desde que elas estejam disponíveis em formas numerosas

c) contando que elas sejam avaliadas em número e forma

- Marque "V" (verdadeiro) ou "F" (falso) de acordo com o texto:

( ) Os termo-plásticos são derretidos para serem reciclados.
( ) O plástico é separado a mão para que seja reciclado.
( ) As embalagens representam metade do lixo reciclado no Reino Unido.
( ) The UK is presently recycling more waste than Germany.
( ) The USA and Australia are not good role models regarding recycling.

- Encontre, no terceiro parágrafo, palavras que tenham o seguinte significado:

http://www.styromelt.com/images/Styromelt-Chinese-Image.jpg

latas		chumbo	
fogão		doméstico	
renda		taxa	
aproximadamente		aço	
ferro		geladeira	
cozinha		ferro-velho	

5.4 Text 19 – Traffic matters*

Com mais carros nas estradas veremos congestionamentos cada vez mais longos. Onde essa estrada vai nos levar?

5.4.1 Glossário

1- traffic	trânsito	6- trip	viagem
2- network	rede de comunicação	7- queueing	fila
3- slower	mais lento	8- stream	fluxo
4- speeds	velocidades	9- fully	completamente
5- longer	mais longo	10- traffic jam	engarrafamento

Figura 5.3:

http://en.wikipedia.org/wiki/Image:RitaHoustonEvacuation.jpg

Traffic[1] congestion is a condition on any network[2] as use increases and is characterized by slower[3] speeds[4], longer[5] trip[6] times, and increased queueing[7]. The most common example is for physical use of roads by vehicles. When traffic demand is great enough that the interaction between

vehicles slows the speed of the traffic stream[8] congestion is incurred. As the demand approaches the capacity of a road, extreme traffic congestion sets in, where vehicles are fully[9] stopped for periods of time, is colloquially known as a traffic jam[10]. Traffic congestion has a number of negative effects:

- Wasting time of motorists and passengers. As a non-productive activity for most people, congestion reduces regional economic health.
- Delays, which may result in late arrival for employment, meetings, and education, resulting in lost business, disciplinary action or other personal losses.
- Inability to forecast travel time accurately, leading to drivers allocating more time to travel "just in case", and less time on productive activities.
- Wasted fuel increases air pollution and carbon dioxide emissions contributing to global warming owing to increased idling, acceleration and braking. Increased fuel use may also in theory cause a rise in fuel costs.
- Wear and tear on vehicles as a result of idling in traffic and frequent acceleration and braking, leading to more frequent repairs and replacements.
- Stressed and frustrated motorists, encouraging road rage and reduced health of motorists.
- Emergencies: blocked traffic may interfere with the passage of emergency vehicles traveling to their destinations where they are urgently needed.

* Este texto completo está disponível em:

http://en.wikipedia.org/wiki/Traffic_congestion

5.4.2 Atividades de avaliação

- Relacione as colunas para traduzir as palavras extraídas do texto:

(1)	approaches	( )	previsão
(2)	known	( )	saúde
(3)	wasting	( )	encontros
(4)	health	( )	emprego
(5)	delays	( )	menos
(6)	late	( )	conhecido
(7)	arrival	( )	atrasos
(8)	employment	( )	aproxima

(9)	meetings	( )	com exatidão
(10)	lost	( )	atrasada
(11)	forecast	( )	desperdiçar
(12)	accurately	( )	raiva
(13)	less	( )	chegada
(14)	idling	( )	ociosidade
(15)	rage	( )	perdido

- Traduza para o português as seguintes frases extraídas do texto:

1. contributing to global warming owing to increased idling

_____

2. increased fuel use may also in theory cause a rise in fuel costs

_____

3. wear and tear on vehicles as a result of idling in traffic

_____

4. leading to more frequent repairs and replacements

_____

5. may interfere with the passage of emergency vehicles

_____

A expressão carpool em inglês significa dar carona, compartilhar um veículo. Assista a esse vídeo que mostra como um grupo de mães se organizou para economizar o dinheiro da gasolina e, ao mesmo tempo, ajudar na redução da poluição causada pelo trânsito.

http://www.youtube.com/watch?v=pSfehnQRyoQ

Poste seu comentário em nosso fórum sobre a postura tomada pelas mães e dê idéias para reduzir a quantidade de carros nas estradas e ruas.

5.5 Text 20 – Protocols*

Existem vários protocolos, acordos entre países, celebrados com o intuito de melhorar as condições de vida na Terra.

5.5.1 Glossário

1- framework	sistema	6- treaty	tratado
2- greenhouse	estufa	7- intending	pretendendo
3- ratified	aprovado	8- obligation	obrigação
4- developed	desenvolvido	9- beyond	além
5- party	grupo	10- usefulness	utilidade

Figura 5.4:

http://www.treebankinginc.com/LinkClick.aspx?link=j0433058.jpg&tabid=60&mid=664

The Kyoto Protocol is a protocol to the international Framework[1] Convention on Climate Change with the objective of reducing greenhouse[2] gases that cause climate change. As of June 2008, 182 parties have ratified[3] the protocol. Of these, 36 developed[4] countries (plus the EU as a party[5] in its own) are required to reduce greenhouse gas emissions to the levels specified for each of them in the treaty[6] with three more countries intending[7] to participate. One hundred thirty-seven developing countries have ra-

tified the protocol, including Brazil, China and India, but have no obligation[8] beyond[9] monitoring and reporting emissions. The USA has not ratified the treaty. Among various experts, scientists, and critics, there is debate about the usefulness[10] of the protocol, and there have been cost-benefit studies performed on its usefulness.

The Montreal Protocol on Substances That Deplete the Ozone Layer is an international treaty designed to protect the ozone layer by phasing out the production of a number of substances believed to be responsible for ozone depletion. Due to its widespread adoption and implementation it has been hailed as an example of exceptional international co-operation with Kofi Annan quoted as saying it is "Perhaps the single most successful international agreement to date...".

The Basel Convention is an international treaty that was designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries (LDCs). It does not, however, address the movement of radioactive waste. The Convention is also intended to minimize the amount and toxicity of wastes generated, to ensure their environmentally sound management as closely as possible to the source of generation, and to assist LDCs in environmentally sound management of the hazardous and other wastes they generate.

* Este texto completo está disponível em:

http://en.wikipedia.org/wiki/Kyoto_Protocol

5.5.2 Atividades de avaliação

- Escolha a alternativa correta:

1. O pronome "them" sublinhado no primeiro parágrafo se refere a:
   a) developed countries
   b) gas emissions
   c) the levels
2. Na frase "Substances That Deplete the Ozone Layer", no segundo parágrafo, Deplete significa:
   a) effect
   b) protect
   c) reduce
3. A palavra "treaty" sublinhada no 2° parágrafo é sinônima de:
   a) group
   b) treatment
   c) agreement

Saiba mais sobre protocolos. Visite esses três *sites*:

http://ec.europa.eu/environment/climat/kyoto.htm

http://www.asiapacificpartnership.org/

http://www.afeas.org/montreal_protocol.html

- Marque "V" (verdadeiro) ou "F" (falso) de acordo com o texto:

( ) Kofi Annan fez exceções à cooperação do Protocolo de Montreal.
( ) É preciso que 137 países assinem um protocolo para que seja aprovado.
( ) Já foram feitos estudos da relação custo-benefício do Protocolo de Kyoto.

- Encontre, no terceiro parágrafo, palavras que tenham o seguinte significado:

lixo		evitar	
fonte		tratado	
quantia		ajudar	
produzir		diminuir	
perigoso		projetado	
entre		entretanto	
garantir		desenvolvido	

5.6 Video 5 – Alternative energy

1. Global warming and energy dependence make it necessary for us to adapt our motive energy production and consumption without delay. Renewable energy sources available locally can make a greater contribution with little or no CO_2 emissions. In 2005 these energies made up 8.5% of the final energy consumption of the European Union. By 2020, the objective is to reach a share of 20%.

2. The water mills and wind mills of our grandparents produced mechanical energy from renewable sources. Their modern versions produce electricity. Thus wind mill transforms wind into electricity. The European production of wind and electricity, which has made great progress, is now equivalent for example to the combined electricity energy needs of Denmark and Hungary.

3. Hydraulic energy produces electricity. Small hydraulic plants or big dams, the production process is the same: the energy potential of a head of water is converted into electric energy.

4. Geothermal energy uses heat from the depths of the Earth to produce heat or electricity. And just a few meters below the surface already heat pumps connect extract heat from gardens to heat houses. This is relatively new but promising application.

Assista ao vídeo do *link* abaixo para ver algumas soluções que os europeus encontraram para fontes de energia renováveis.

http://www.youtube.com/watch?v=1cysaOnlv_E&eurl=

Acompanhe a reportagem lendo a transcrição:

http://www.alternative-energy-news.info/

5. Solar energy can produce heat or electricity. Solar heat panels installed on a roof can cover most of the hot water needs for sanitary purposes and conserves a back up for domestic heating. It's estimated that over 20 million square meters of solar heat panels were installed throughout Europe in 2006 and not only in the southern countries, far from it. Solar energy is also converted into electricity in solar mirror plants or directly using panels of photo voltaic cells grouped together in plants or placed on façade of buildings or roofs, or in isolated sites.

6. Biomass is produced from vegetable animal urban waste. It's called "the sleeping giant" because it's probably the most important renewable energy of the future. It has multiple applications. The most widespread is combustion of wood or wood pallets for domestic heating. In industry or in towns, the aim is to cogenerate heat and electricity, which offers a much better overall yield. Biogass is produced by fermentation of waste, such as liquid manure used in farming or other organic waste. It produces heat and electricity. Purified biogass can be used as gaseous biofuel. Biomass makes it possible also to produce liquid biofuels, biodiesel, and bioethanol. The European Union has proposed that 10% of diesel and petrol needs be covered by biofuels by 2020, with strict respect of the conditions for sustainable development in this domain.

7. The European Union is the world leader in the development of renewable energy with over 350,000 jobs and an annual turnover of €30 billion (Euros). It intends to stay in the lead and is committed to reaching the objective of 20% of renewable energy by 2020. Governments have a crucial role to play through their good example and their support, but each individual can also help to achieve this ambitious but necessary objective.

5.6.1 Atividade de avaliação

1. Traduza para o português os parágrafos [1, 3 e 5] ou [2, 4 e 7] ou [4 e 6]. Escolha apenas um desses conjuntos de parágrafos.

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