



General Certificate of Education
Advanced Level Examination
June 2012

General Studies (Specification B)

GENB4

Unit 4 Change

Insert

STIMULUS MATERIAL

These texts are to be read in conjunction with unit GENB4.

The questions arise from the texts, but they should **not** be answered by reference to the texts alone.

Text A

Science needs a 'better dialogue with public'

The scientific community should have a more grown-up dialogue with the public, according to the former UK Science Minister Lord Sainsbury. He was speaking in his capacity as president of the British Science Association, at Aston University in Birmingham. He said that distrust of scientific ideas was not due to a failure by the public to understand the issues. Instead, it was because the public felt they were being forced to accept changes that they had not been consulted over and that seemed to offer them no benefit.

He rejected suggestions that people in Britain are anti-science. All the same, according to Lord Sainsbury, there is concern that the pace of current scientific advance is too fast for government to keep up with through effective oversight and regulation.

"When I was Minister of Science and Innovation there was an initiative called the 'public understanding of science'," he explained. "This was based on the assumption that if people knew more about science they would automatically look more favourably on science. But unfortunately this is not the case."

A study done a number of years ago of the then 15 European Union countries found that those nations scoring lowest on scientific understanding were, in general, the most unequivocally enthusiastic.

"We should not be surprised by this finding. A good education in science should lead people to ask questions about the impact of science," according to Lord Sainsbury.

He also rejects the view taken by some scientists that the public's distrust of new ideas and technologies is due to people not understanding risk. "The public understands risk all too well," he said, but "if there is no benefit to them then why take any risk at all, however small?"

What is important, according to Lord Sainsbury, is for government to assess the risks of new technologies effectively, and to keep the public properly informed. "People become very angry if they feel that the government is not doing this job properly or is in any way hiding the facts from them."

He believes the public debate on stem cells is an instance which has been handled well. The scientific community had identified potential problems and ethical issues well in advance and had engaged the public in what he called an open and honest debate. Conversely, with GM crops, the technology had already been foisted on the public and a debate ensued only after it had been rejected.

"To improve the level of that debate I think that the Government should now ask, say, the Royal Society and the Academy of Medical Sciences to review openly and publicly the current position on GM technology so that the Government and the public can make up their minds on this issue on the basis of the best scientific advice. If this is done, I believe it will be seen that plant biotechnology is another case of a new technology which can help the world solve one of its most difficult problems."

Source: adapted from an article by PALLAB GHOSH, September 2010
Science correspondent, BBC © 2011

Text A (continued)
Student Performance in Science: a comparison of selected countries

	Above OECD average	Near OECD average	Below OECD average
Finland	554		
Japan	539		
Netherlands	522		
Germany	520		
United Kingdom	514		
Belgium	507		
USA		502	
OECD Average		501	
Norway		500	
Denmark		499	
France		498	
Sweden		495	
Austria			494
Italy			489
Spain			488
Russia			478
Bulgaria			439
Romania			428

- Notes: 1. OECD = Organisation for Economic Co-operation and Development
 2. 'Above', 'near' and 'below' = statistically significantly above, not statistically significantly different from, and statistically significantly below the OECD average, respectively.

Source: OECD (2010), PISA 2009 Results: Executive Summary, www.oecd.org/edu/pisa/2009
 Programme for International Student Assessment (PISA)

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Text B

Back in business

When Neil Davis was 25, life seemed a breeze. He had a job, a girlfriend, and a beautiful five-year-old daughter. Then his mother died suddenly from a motor neurone condition, plunging him into despair.

“Everything was fine until she passed away, but then I just lost interest in everything,” says Davis, now 31. “She was more like my best friend than my mum. I just spiralled into depression and drugs to block out the pain. She died on her birthday. She would have been 50 years old.”

First he lost his job. “I didn’t really care about anything,” he says. Then he moved out of his house after falling out with his father over his late nights and drug binges. “I told them I’d go, so I went. I was sofa-surfing, sleeping on floors, living in squats,” he says.

Soon Davis’s use of crack and heroin escalated and he started shoplifting to support his habit, which inevitably led to prison.

Now, having escaped his habit through a rehabilitation programme, Davis lives in a shared house and has been selling *The Big Issue* for a year. In that time he has repaired relations with his father, sister and ex-girlfriend, and has earned enough money to throw a party for his dad’s 70th and to spend time with his daughter.

“To be honest I was sceptical at first,” he says. “I thought I was above asking people for money and selling *The Big Issue*. Now I’ve done it for a year it’s a good way to get your respect and self-esteem back and make a decent living legally,” he says.

“My dad was really proud of me for using *The Big Issue* to get back on my feet, and my daughter can see the difference in me,” he adds.

Already blessed with the gift of the gab, Davis is looking for a career in sales. “Hopefully this time next year I’ll be suited and booted in a job,” he says, “buying my own magazine from a vendor and giving them the chance to earn a living and get themselves together.”

Source: *The Big Issue*, 20 December 2010 – 2 January 2011

Text C**HSBC sees China and America leading global megaboom**

A report just published by the HSBC bank, 'The World in 2050', predicts that China's economic growth will overtake America's within the next 40 years, but only by a small margin. The economies of these two countries will dominate the global economy: India's, in third place, will only be one third as big as China's.

Turkey and the Islamic states Egypt, Malaysia and Indonesia are all likely to climb up the world rankings, whilst the stars of Russia and Brazil may well shine less brightly.

The assumption made in the report is that national birth-rates are a key, perhaps *the* key, to forecasting economic growth. Thus, the US is reckoned to be well placed because of its high fertility rate (at 2.1)*, and therefore, its population of relatively employable young people. Russia's fertility rate, by contrast, is 1.4, the same as that of Italy and Spain; and countries that have enjoyed high rates of economic growth in the recent past, such as Germany (1.3), Singapore (1.2) and Korea (1.1), are unlikely to be able to sustain their momentum.

Countries in Europe with small populations, Sweden, Belgium, Austria, and the like, will suffer decline; and even that power-house of post-war economic growth, Japan, will lose its edge – on current trends, its population will shrink by 37 per cent in the next forty years. Even in China, the workforce will begin to contract, as the population ages, in the 2020s. The UK's fertility rate, at 1.9, is grounds for Anglo-Saxon optimism, according to the report.

It should be noted that a forecast of economic growth of this sort is subject to three very important provisions: the first is that, wherever they are in the economic pecking order, countries refrain from engaging in trade wars, or worse, in real wars; the second is that supplies of food and fresh water grow in proportion with the growth of the world's population; and the third is that we find a way to satisfy our energy needs in non-carbon-based ways.

The second of these provisions will be the real test: world food demand is expected to rise by 70 per cent in the next 40 years, yet the yield from food crops is only growing by something like 1.5 per cent per year. The supply of fresh water, of course, is not growing at all – quite the reverse. If countries do go to war with each other, it is more likely to be over water than oil.

Source: based on an article by AMBROSE EVANS-PRITCHARD, *The Daily Telegraph*, 4 January 2011
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*A fertility rate of 2.0 represents population stability (2 parents having 2 children, and thus replacing themselves).

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Text D

Being coy about celebrity cocaine debate

How typically Irish was the attitude expressed by Ryan Tubridy on his show on Monday that we should let Gerry Ryan¹ 'rest in peace', and that he 'would not abandon his friend'. What Tubridy meant was that we shouldn't talk about Ryan's cocaine habit and that for him to do so would be disloyal. The protective instinct was notable by the awkward silence across the RTÉ² network last week and in stark contrast to the days of tribute broadcasting that followed Ryan's death.

It's a misguided position, but common in cases where one has just buried a 'larger than life' friend who was the 'life and soul of the party' or who 'lived life to the full'. These are the usual euphemisms for people who drank a lot and then died as a direct consequence of their behaviour – usually at the wheel of a car – leaving a trail of misery behind them. In Ryan's case, he's left debts, five children, a wife with no apparent income and a broken-hearted girlfriend. What a mess. He's not the first and he won't be the last, but for Heaven's sake, don't talk about the sheer irresponsibility of it all, for then you might start to figure out what's wrong with a society that continually produces such needless pain.

When Katy French died her family were also quick to shut down any discussion on her drug use. The same week, two young men, John Grey and Kevin Doyle from Waterford, also died from cocaine use. Rather than hide behind platitudes, the Doyle family issued a statement acknowledging the cause of death and begging others to take heed. They said: "We would earnestly ask all those, both young and old, who may be tempted to dabble in potentially lethal substances to simply say no. No amount of so-called fun is worth the loss of life that so often befalls young people in Ireland today."

That's an honourable message worth giving at times like this.

People in the public eye set the standard by which the rest of us judge ourselves and others. I'm sure some broadcasters feel their socialising is blown out of proportion, but Ryan cultivated an image of a whiskey drinker who loved his big meals in well-known restaurants. It's telling that his most successful chat show featured a restaurant-style set that included champagne on the table and whiskey underneath it. The pressure is on and the message is clear: "Have fun! Lots! Even if you're too tired and don't feel like it! We had SUCH a laugh last night!"

Why is it still socially unacceptable to say you don't want to live like that? If Gerry Ryan really was enjoying himself he wouldn't have needed the coke or the whiskey to keep going. If the pressure to be the person other people thought he should be was so great that he needed the props, imagine how hard it is for anyone else who wants to give it up.

Source: adapted from an article by SARAH CAREY, *The Irish Times*, 16 December 2010

¹ The death of Gerry Ryan had a similar impact in Ireland to the death of Michael Jackson in America.

² RTÉ – Raidió Teilifís Éireann, Ireland's national broadcasting company.

Text E

Tweets and texts in court

The Lord Chief Justice yesterday opened the way for the reporting of some court proceedings by journalists using Twitter, texting and email, but made clear it was unlikely to happen where such use of social media could influence witnesses.

Media organisations and journalists can apply for permission to use social media on a case-by-case basis, but Lord Judge said it might be necessary to bar its use by non-journalists to ensure the 'proper administration of justice', to prevent distractions in court, and to limit the potential for interference with courts' own recording equipment.

The Lord Chief Justice issued interim guidance on the use of social media, pending a public consultation involving the judiciary, prosecutors, lawyers, the media, and 'interested members of the public'. The guidance applies only to courts in England and Wales.

Lord Judge had been considering the issue already, and he highlighted it at a lecture in Belfast last month. Under the guidance, anyone wanting to tweet from a court-room will first need the permission of the judge, who will consider the risk posed to justice. This would be at its highest in criminal trials where witnesses outside of court would be able to find out what had happened inside the court.

Lord Judge said: "There is no statutory prohibition on the use of live text-based communications in open court. But before such use is permitted, the court must be satisfied that its use does not pose a danger of interference to the proper administration of justice in the individual case.

"Subject to this consideration, the use of an unobtrusive, hand-held, virtually silent piece of modern equipment for simultaneous reporting of proceedings to the outside world as they unfold in court is generally unlikely to interfere with the proper administration of justice. The most obvious purpose would be to enable the media to produce fair and accurate reports of proceedings."

Source: adapted from an article by JAMES MEIKLE, *The Guardian*, 21 December 2010
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END OF STIMULUS MATERIAL

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