leave King's as the only college in the UK to teach medicine but not chemistry, and one of only two Russell Group institutions (the group of the top 19 colleges and universities in the UK) not to have a chemistry department – and we can hardly be surprised that the London School of Economics does not lecture in chemistry.

So, the department at which John Daniell invented the precursor to the battery, and at which Rosalind Franklin took the first X-ray pictures of DNA, is to be closed. One more nail in the coffin of universal education. London, UK

Sun shield

From Paul Thomas
Your article suggests that life will probably be extinguished in as few as 1 billion years, due to the combination of plate tectonics, the moon's orbit and the increase in the sun's brightness (6 December, p 36).

However, by far the largest of these factors is the sun's output, and we can handle this with relative ease. Even with today's technology we would be able to build a sunscreen in orbit at the Langrange Li point between the Earth and the sun.

Such a shield would have to be several thousand miles in diameter to block even a few per



cent of the radiation, so this would be a very large and costly exercise. But we have several hundred million years to build it, and it would probably enable life to exist for maybe an extra billion years, so it would be a very worthwhile project. Birmingham, UK

Light-rich niche

From Merrelyn Emery, Fred Emery Institute I was delighted to read that biology has caught up with the concept of co-evolution through niche construction (15 November, p 43). This appears to be one of the few instances where the social sciences have led the way. Fred Emery and Eric Trist provided a rigorous conceptualisation of co-evolution in 1965. Since then, co-evolution has been elaborated and built on in open systems theory and has proved an extremely useful concept.

I hope co-evolution will be accepted in biology, as I would love to see some studies on how niche construction is affecting our species. There are many possible starting points, but perhaps the priorities could include the long-term effects of spending about 16 hours a day in a light-rich environment heavily dominated by visual media.

Canberra, ACT, Australia

Spoonful of sugar

From Alasdair Cook
I read the article on "taming the beast" of bacterial infection with great interest, but it does seem to be yet another occasion when the scientists should have started by checking with their grandparents (29 November, p 34).

My ex-nurse wife points out that at one time honey was used as a last-resort treatment for bed sores and similar sores that refused to heal. And in the early 1940s I would sometimes accompany my veterinary surgeon father when he went to treat a cow with an involuted uterus. I watched him push that mass of innards back into the animal. Depending upon the season and the size of the farm,

the operation might be carried out in an unheated cowshed, with lighting by paraffin lamps, with hot water brought in buckets from the kitchen, and with the other cattle continuing their normal bodily functions nearby. So it wasn't exactly an ideal germ-free environment.



The operation took place with the cow standing, with two men supporting the uterus at the required height, and with sugar being poured over the flesh as it went back inside. At a time of severe food rationing, the sugar was usually the farmer's wife's hoarded stock for the next jammaking season. I know that I asked my father "why the sugar?", and regret that I don't recall the answer, but I do know that the cattle usually recovered without further problems. Torthorwald, Dumfries, UK

Suspect emails

From John Bullas, University of Southampton
I admire Lucent Technologies for suggesting that their "reverse Turing test" (which sends out challenge responses to emails considered to be "suspicious") will provide a welcome answer to the problem of new viruses slipping through before you have had a chance to update your antivirus software (22 November, p 27).

Pray tell what happens if you miss the latest update to the list of things that the Lucent software uses to define "suspicious"? Southampton, UK

Pick a number

From Barry Coldrick
Regarding your report that a
New Zealand statistician has
shown that the Kiwis were the
best team in the Rugby World
Cup, the fact that New Zealand
were visiting their greatest
rivals would have placed the
team in such high spirits that
we need to reduce their
performance results a little
(6 December, p 6).

By my calculations – based on score margins, climatic variance between each side's home country and Australia, world ranking of each player in the various games, the "high spirits" factor which only impacted on New Zealand, and a number of other spurious factors that Hugh Morton didn't think of – New Zealand came fourth. Mansfield, Queensland, Australia

Alien snapshot

From Joseph Mockus
About that cover showing the galaxy with a "you are here" indicator in the middle of it (22 November). Just where was the photographer standing?
Columbus, Ohio, US

For the record

• In our Cutting Edge story on a food label that reveals when fruit is ripe (29 November, p 20), we erroneously said that Ron Henzell led the research team at HortResearch in New Zealand. In fact, the leader of the team that developed the technology was Keith Sharrock.

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