

## Radiation protection - how is your record-keeping?

Perhaps it's an "end of the financial year" thing, or perhaps people are more confident buying radioactive sources now that disposal legislation has been fixed (see Bulletin 254). Whatever the reason, we have had a flurry of requests for approval to buy new items. This is probably a good time to remind you of what you should be doing if you own sources, with particular regard to checking, testing and record-keeping. Here is a summary.

- Display the "What you should know and do" poster, downloadable from our website.
- Keep an inventory.
- Do a monthly stock check (except during the summer holidays).
- Store your sources in a locked, metal cabinet.
- Carry out leak tests every two years, or annually for older sources.
- Have a contingency plan.
- Have risk assessments for all activities involving radioactivity.

Guidance on how to do all this, plus templates for recording stock checks and so forth, are available in the password-protected area of our site: [tinyurl.com/SSERCradpro](http://tinyurl.com/SSERCradpro). The above list does not give every single legal requirement that has to be addressed if you have sources. There is also guidance on handling and buying, for example.

### Case study

A school owned an alpha source, two beta sources, a gamma source and an eluting half life source. One day, it was discovered that there was only one beta source in the store. The school had no inventory listing the types and activities of source, had not carried out leak-testing when this was no longer done by a visiting council



employee and did not do regular stock checks. They did keep a log of use, but did not unambiguously identify which sources had been taken out for experiments. As a result, there was no way of knowing when the beta source went missing. SSERC investigated and, from our own records, were able to identify the missing source as a 74 kBq strontium-90 Hi-Tech source. Unlike many school sources, this one's activity was below that which would have required SEPA and HSE to be notified of its loss. Note that the threshold is different for different types of source and different isotopes.

Strontium sources such as this come in a storage pot that absorbs all beta radiation. If it is removed from this pot, the source's construction is such that beta particles can only emerge in a cone from its front. It is unlikely that anyone was harmed by the loss. Having said that, SSERC considers this to be a serious incident. Fortunately, staff at the school are most willing to ensure that this sort of occurrence will not happen again. We are confident that the procedures listed in part 1 of this article will be put in place immediately. ◀

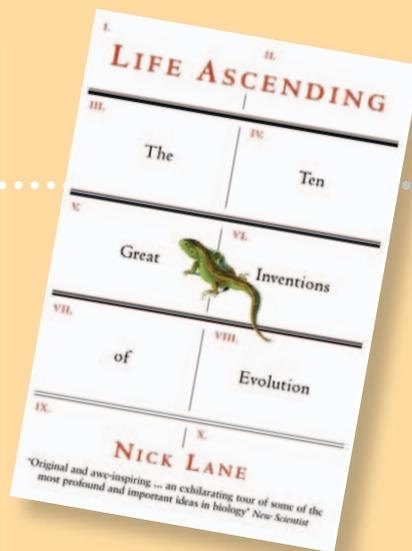


**In issue 245 of the SSERC Bulletin in 2013 we reported that we were planning to produce a series of reviews of 'popular science' books in biology.**

## Biology books

Our focus with these reviews was to support the new areas of biology that have been introduced to the revised and CfE Higher Biology, Higher Human Biology and Advanced Higher Biology courses.

We have recently added the 10<sup>th</sup> review *Life Ascending - The Ten Great Inventions of Evolution*, Nick Lane, Profile Books, London, 2009.



All ten reviews are available on the SSERC website at [www.sserc.org.uk/index.php/biology-2/biology-resources/book-reviews](http://www.sserc.org.uk/index.php/biology-2/biology-resources/book-reviews).

## Health & Safety

### A tale of two coats

Recently we received an enquiry from a school technician with a whole school remit. Their question was "Can I wear my Science lab coat in the Technical Education department?" In short the answer is no, but the detail of the answer requires more explanation. Personal Protection Equipment (PPE) must be provided to technicians to safely carry out their duties in a working school environment. However if a technician works for a period of time in a Science department wearing a traditional white lab coat, they run the risk of transferring any possible contagions to the new department visited. The same goes if a traditional blue dust coat is worn in a Technical cutting and preparation room. It is common that wood dust and plastic granules end up on the dust coat so wherever the technician goes next, they may transfer the wood dust and granules. The control measure is to simply have



your school provide you with a Science lab coat which is only worn within that department and also a second dust coat kept within the Technical Education department.