

University of Bristol

Green Labs Induction



Importance of green labs

Lab work has a significant impact on our planet, ranging from energy and resource consumption to chemical and equipment use and disposal. Most researchers aren't aware where the bulk of energy is consumed or how to curb usage. Sharing how and where energy is consumed can empower you to optimise lab methods while reducing wastage and inefficiencies wherever possible – saving money for more science.



Five steps to a more Green lab

- 1** Switch off lights, computers and equipment when not in use. Ensure that 80% of your equipment has appropriate signage available from Sustainability.
- 2** Manage your freezers. Ensure your freezers are running well, defrosted and samples are managed. Don't leave the freezer door open longer than necessary and run ULT freezers at -70 degrees rather than -80 to save energy. Adhere to a racking system and have an upto date inventory of your freezer.
- 3** Manage your chemicals. Order and use appropriate quantities and check if there is already the same chemical available. Make sure chemicals are disposed of correctly. Sharing chemicals with
- 4** Close your fume hood sash when not in use. If you are interested you can run or partake in a Shut the Sash Up campaign.
- 5** Purchase more energy efficient equipment.

Waste Management

Laboratories produce immense amounts of waste (often plastics), much of which is incinerated at high-temperatures. Reducing the waste produced and the treatment waste receives can have significant environmental benefits, as well as reduce associated costs. Clinical waste will cost 3-5 times more than typical waste streams. It is important to have clear waste disposal areas with appropriate signage.

There should be an emphasis within the lab on reduction, then reuse and finally recycling. Items should be sent to landfill as a last resort.



Lab Efficiency Assessment Framework

The Lab Efficiency Assessment Framework (LEAF) provides the guidelines to more sustainable lab practice. It focuses on small changes that can decrease the environmental impact of the lab whilst not compromising the research quality and output of the lab.

The framework focuses on **waste, people, procurement, equipment, IT, sample & chemical management, research quality** and **ventilation**. To sign up to partake in the framework please contact green-labs@bristol.ac.uk

