



Implementing the Laboratory Efficiency Assessment Framework (LEAF) in Bioscience and Chemistry Teaching Laboratories

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Abstract

Given the on-going and overlapping environmental crises facing the world, universities need to play a key role in forging a more sustainable future. Green accreditation systems for laboratories, such as the Laboratory Efficiency Assessment Framework (LEAF) and My Green Lab, provide frameworks to assess and improve laboratories' performance on these metrics. While green accreditation is increasingly required for research laboratories, it is also important for teaching laboratories. This implementation differs as teaching laboratories have high numbers of users with varying skill levels, and cover a wide range of techniques. The Sheffield Hallam University Bioscience and Chemistry teaching laboratories have achieved LEAF Bronze Accreditation and are working towards Silver Accreditation. Steps towards implementing the criteria can be divided into four key themes: 1) Matching staff to areas of responsibility within a wider working group that includes academics, technical team members, and students, 2) Integrating sustainability into existing systems (e.g. Health & Safety, waste management, equipment maintenance, purchasing), 3) Measuring baselines for plastic, energy, water, and equipment use, and 4) Targeted interventions on high-impact areas (e.g. freezers, drying cabinets, fume cupboards, practicals with high plastic usage). Best practices learned during implementation will be shared as a guide for others.

Keywords

Sustainability, integration, green laboratories

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