

Green Labs

Laboratory
Efficiency
Assessment
Framework

A Green Lab Accreditation



The Laboratory Efficiency
Assessment Framework

Introducing LEAF

Laboratory Efficiency Assessment Framework (LEAF) is an environmental accreditation scheme that drives improvements in sustainability within higher education teaching and research.

The criteria involved in LEAF covers all environmental aspects of the lab including circular economy and waste, procurement, equipment efficiency and chemical management;

- LEAF also targets research quality and addresses the international issues surrounding the 'reproducibility crisis'.
- LEAF includes metrics which means it is possible to quantify 'actual' environmental and financial savings.
- The framework provides the opportunity for both staff and students to improve the sustainability of laboratories around the University.
- LEAF 2020 introduces new actions on teaching and transport.



How LEAF works:

Participants of LEAF will be tasked with a set of easy to implement actions that will improve lab sustainability in the form of an electronic workbook.

LEAF is categorised into **Bronze, Silver** and **Gold** accreditation and participants will need to fulfil a set of criteria for each of these categories.

The workbook provides useful links to help achieve the different criteria and informs why these actions are so important in improving lab sustainability.

Before labs take part in LEAF, we recommend that labs carry out baseline recordings of their waste and recycling and monitor the energy consumption of significant equipment in the lab. This means that labs can monitor their progress and could be eligible for our green grant prize.

There are also several special awards including Environmental Improvement and Innovation for Engagement and Community Action.

Teams can provide submissions at any point during the year after which the lab(s) will be audited by a student volunteer to ensure all the criteria have been fulfilled. Teams can also be audited by staff from the Estates department or by peer assessment as alternatives if they wish. If the criteria is met successfully, labs will then receive their LEAF accreditation!

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The closing date for the accreditation is Friday 13th November 2020, so be sure to have submitted your workbooks by then to get your lab accredited.

Why your lab should take part in LEAF

Leaf and the University's sustainability strategy:

The University of Bristol has a strong track record of sustainability action and became the first university to declare a 'Climate Emergency' in April 2019.

With sustainability high on the agenda, there is increasing pressure to demonstrate our commitment to reducing the university's environmental impact and meet our 2030 carbon neutrality pledge.

Considering STEMed buildings account for 40% of the University's energy consumption and a significant part of our business travel and procurement carbon, LEAF will play a crucial role in helping us meet our carbon reduction commitments.



***Green Labs will award a £3,000 grant to the lab achieving the greatest savings through LEAF 2020 (as determined by the calculator tabs)**

Benefits of taking part in LEAF:

- **Reduces utility costs and environmental footprint.** LEAF includes an in-tool calculator enabling groups to quantify economic and carbon savings.
- **Provides the opportunity for direct savings** through our financial incentive schemes such as **Green Grants.***
- **Provides chances of gaining additional research funding in future** as LEAF aims to be incorporated into research grants to promote the funding of greener research.
- **Ensures health and safety compliance within labs.**
- **Increases research efficiency** - LEAF contains criteria that focus on research quality, recognising that a repeated experiment can be the ultimate example of unsustainable or inefficient research. The programme is supported by the UK reproducibility network (UKRN).
- **Improves student experience** via volunteering opportunities as Laboratory Efficiency Assessment Volunteers (LEAVs).
- **Provides practice-based learning experiences** that improve professional skills and employability.
- **Criteria applicable to a variety of labs** including research, computer and teaching labs.
- **Developed with lab users in mind.** The programme is not time-intensive and most labs should be able to achieve bronze-level award with 2 hours of input.
- **A selling point for prospective students.**
- **Aligns your research** with the University strategy, Bristol Futures, climate targets and our commitment to the Global Sustainable Development Goals (SDGs).

Achievements of LEAF 2019:

Over a fifth of lab space from the University of Bristol gained LEAF accreditation in 2019 which saved an estimated 92 tonnes of carbon- enough to fill 18 hot air balloons!*

Five teams achieved gold, six achieved silver, and twenty-one achieved bronze accreditation.

The Biomedical Sciences Building at the University of Bristol managed to obtain **100% Green Lab accreditation** for the second year, making it the UK's largest, green accredited research building.



Student Volunteers:

Student volunteers (LEAVs) are an essential part of LEAF, they are trained to conduct environmental audits of the labs to ensure that LEAF criteria have been fulfilled.

The volunteers can conduct audits before commencing LEAF so that lab groups can see what needs to be done to gain accreditation before they commit to the scheme.

Once this preassessment has taken place, the Green Labs Team write a recommendation report providing guidance. LEAVs will be able to conduct these preassessments at clinics we host in the foyers of buildings.

A lab can be assigned a student volunteer if they wish to have practical help towards the LEAF accreditation.

Green Labs is always searching for students with lab experience and a passion for sustainability to conduct lab assessments for LEAF as well as helping us gauge the sustainability of scientific research across the University.

Contact the Sustainability team

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For more information and application details, please visit the green labs webpage:



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