



## **How Might We:**

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**Integrate sustainability and  
climate change into our  
learning and teaching**



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# Overview

## Introduction

This guide considers how sustainability and climate change might be embedded across the curriculum, what we teach and learn, and how we do it. At Leeds we consider sustainability in the context of the **UN Sustainable Development Goals** (SDGs) and the interdependence of environmental integrity, social justice, equality and economic prosperity. The SDGs and the interrelationship across these represent the most pressing and significant global challenges. There is increasing demand from students and employers for graduates to be equipped with the knowledge and skills needed to be future leaders on sustainability, climate change and equality and to engage with complex societal challenges.

Our University Strategy sets out our commitment to respond to these unprecedented global challenges and the importance of our role in delivering the SDGs. The Sustainable Curriculum programme is one of the key principles within the University's Climate Plan. The Plan outlines our approach, driven forward through student education, research, community engagement, our civic responsibilities and our journey towards net zero. The core aim of the Sustainable Curriculum programme is to ensure that we provide our students with the knowledge and skills they need to have a positive impact in the world and to contribute sustainable solutions in our local community, and globally in an equitable and just way.

This guide draws together insight gathered in the early stages of the **Sustainable Curriculum programme**, further resources will be made available via our web page.

This guide aims to support you in the following areas:

- developing your awareness of the SDGs and identifying where the sustainability issues are already surfaced;
- considering the role of your discipline in delivering solutions to global sustainable development challenges?
- identifying new opportunities to embed sustainability within the curriculum;
- discussing the SDGs with students so they are aware of how they have been considered and are able to contribute further ideas for how these may be considered;
- enabling students to gain, recognise and articulate their sustainability knowledge and skills;
- considering a range of approaches for embedding sustainability - learning & teaching content; through active learning; student research and other projects; and work-based learning.
- identifying opportunities for interdisciplinary teaching and projects?
- thinking about sustainability in relation to teaching methods e.g. reducing the environmental impact of your teaching, or improving social impact.

It is important to note that this is broader than climate change and environmental considerations and also relates to equality and inclusion, decolonisation, belonging and well-being and this is represented within this guide and *the How might we ensure that students feel seen, respected, and valued* guide.

Educational sustainability incorporating accessibility, adaptability, reusability and scalability is covered within our tips and also within the guide on open educational resources and how to empower students as open knowledge co-producers.

Sustainability knowledge, attributes and skills are essential in preparing our students to succeed in their careers and lives beyond university. This is also explored in the *Capabilities* guides.

## Strategy links

[University Strategy](#)

[Climate Plan](#)

[Education Strategy](#)

[Access and Student Success](#)



# Student voice

## Increased student demand for sustainable development to be embedded within education

Students Organising for Sustainability UK (SOS-UK), undertake an annual national survey on student's attitudes towards and skills for sustainability. In our 2020-21 University response:

- 97% of respondents felt that places of study should actively incorporate and promote sustainable development, with the majority agreeing sustainable development is something that every course (82%), and every tutor/teacher (69%) should incorporate.
- 83% of respondents agreed that places of study should be obliged to help develop students' social and environmental skills as part of their courses.
- 88% of respondents felt that learning to look at global problems from the perspective of people from around the world was very (50%) or somewhat (38%) important, while 87% agree that both learning to consider the ethical issues linked to their subject, and challenging the way we do things now, are important skills to learn during their studies.
- 85% consider it important to learn about the causes of inequality in the world as part of their course

When asked about how to include these skills or knowledge within their course:

- 85% of respondents said 'offering voluntary placements'
- 83% of respondents said 'building the material into existing course content'
- 79% of respondents said 'linking coursework, projects, or dissertations to the issues'
- 76% of respondents said offering 'a specific module on the course'

Student demand is evident within the national picture too with 91% of respondents agreeing that their place of study should actively incorporate and promote sustainable development and 84% indicated they would like to see sustainable development actively incorporated and promoted through all courses.

The Department for Education's **Sustainability and Climate Change Strategy (2022-2030)** commits to giving all children, young people and adults the knowledge and skills to thrive in the green economy and to help restore nature. The strategy sets out the ambition to enable all learners, at all stages of education, to learn about climate change and how it will impact their futures. As a result of changes and initiatives driven by this strategy, our future learners are likely to progress into higher education with greater knowledge of sustainable.



## Quotes from University of Leeds survey respondents on the benefits of embedding sustainability:

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**“I have become more conscious and concerned about global environmental and social issues, as well as our role as citizens in this matter”**

**“It has made me have a greater understanding of a wide range of issues which I can pass on to others”**

**“It has shaped how I plan to use my career and what to focus on. I want to work in an industry that gives back”**

”



# How might we...

## Awareness of UN SDGs

We are very aware that not everyone has knowledge or expertise in the area of sustainability and do not expect everyone to become experts. As a starting point it is useful to be familiar with the **UN Sustainable Development goals (SDGs)** as a framework for defining sustainability and interconnectivity between the most significant global challenges. These encompass environmental issues but also inequalities, economic prosperity, health and well-being.

## Embedding sustainability within teaching

The below gives some ideas for ways to embed sustainability in your module content.

### Module summary/catalogue:

- Could the module summary/catalogue content be linked explicitly to the SDGs and show which it is most relevant to?

### Objectives:

- Could you include an objective for the module, which explicitly addresses reflection on links between your discipline and sustainability/SDGs?

### Syllabus:

- Could you link explicitly to the relevant SDGs in teaching sessions? Or dedicate a whole session/lecture to the links between your content and the SDGs? Or point students to a pre-recorded lecture from our bank of resources to get them thinking about how sustainability interacts with their subject?
- This **case study from Leeds Business School** provides an example.

## Dissertations, capstone or research projects:

Could you:

- offer dissertations that focus on sustainability?
- engage students in a **Living Lab project** (a collaborative project that seeks to research and test sustainable solutions);
- ask students to include explicit consideration of / reflection on how their research relates to sustainability in their dissertation/project?
- encourage students to present on sustainability research projects within the annual **Student Sustainability Research Conference?**

This Sustainability Research Project page provides some examples and will be developed further as the Sustainable Curriculum programme progresses.

## Optional interdisciplinary modules:

Explore interdisciplinary module content already developed within a variety of sustainability focused modules, see the 'Creating Sustainable Futures' theme and our **sustainable curriculum web page**.





## Sustainability Skills

The Leeds Skills Matrix can be used to identify core sustainability skills. These skills are informed by the [QAA Education for Sustainable Development framework](#) and internal consultation. It is important that students are able to identify and articulate their sustainability skills and supported to do so; these are increasingly sought by employers. A summary of these is provided below:

- Systems thinking
- Anticipatory/future thinking
- Critical thinking
- Strategic practice
- Collaboration
- Integrated problem solving
- Effective communication
- Relationship development
- Ethical

## Student Sustainability Architects

Student Sustainability Architects are paid part-time to deliver projects that align with the University's strategic objectives and increase student participation with sustainability. Could a Student Sustainability Architect opportunity be used to support extra-curricular project work?







## Inclusivity

Inclusivity is considered within the guide *How might we ensure that students feel seen, respected, and valued*; some of the questions included are captured below.

- Are our curricular practices dominated by Eurocentric voices? Do we draw on ‘non-western’ and non-white forms of knowledge in our teaching?
- Do we encourage students to co-create reading lists and suggest items they have read (including on social media, blogs, TV and cinema)?
- How do we engage students in questioning the dominant culture and exploring beyond it?
- How can we incorporate community building initiatives into our modules, which foster a sense of belonging among students? For example, group or project work that enables meaningful connections through shared production.

In addition you could:

- link your content to diverse contexts and examples?
- ensure that lesser known names in your field are also profiled in your teaching materials?
- explore the power dynamics behind the content of your course?

## Accessibility

- Can you ensure your teaching is accessible and inclusive?
- Can you include assessment methods that appeal to a range of learning styles?
- Could you ensure you consider the [Minerva Ally guidance](#) when developing teaching resources?

More information on accessible and inclusive teaching can be found in the [inclusive teaching resources](#) pages.

## Wellbeing and sense of belonging

- Have you considered the wider programme’s assessment timetable when deciding on distribution of workload and assessment?
- Could you incorporate community building initiatives into your module, which foster a sense of belonging among students? For example, group or project work that enables meaningful connections through shared production.
- Are there opportunities for extra-curricular sessions that bring those passionate about the module content together?
- Are there opportunities to share your own position and/or authentic self in relation to the material being covered?
- Is there an opportunity to get outside and use campus spaces?



## Teaching methods

### Students as open knowledge co-producers:

Producing and sharing evidence-based knowledge in the form of Open Educational Resources (OER) is an excellent way for students, in collaboration with teaching and research staff, to actively contribute to the sustainability of quality education across the World by placing these resources (podcasts, Wikipedia pages, presentations, open text-books, etc) in the public domain and making them free to use by others. For more on OER see the guide on this theme.

### Lab work:

The University has schemes in place to support sustainability in labs. This includes engagement in the national higher education **Laboratory Efficiency Assessment Framework (LEAF)** and locally managed **Blueprint** action plans.

- Have you thought of ways to reduce unnecessary waste (especially single use plastic), water and energy?
- Are there opportunities to co-ordinate with other labs to e.g. reduce chemical use?
- Could you think about specific issues such as whether you need freezers to be as cold as they are?
- Could you encourage your students to think about ways to operate in sustainable ways in labs e.g. keeping fume cupboards closed and reducing single use plastics where possible?
- Could you initiate a Blueprint action plan? or sign up to the national higher education Laboratory Efficiency Assessment Framework (LEAF)?

### Field work:

Many locations across the City and Region offer great opportunities for study and are accessible via public transport. Could you:

- link up with local organisations / buy local produce to ensure you are contributing to the local economy?
- ensure accessibility for all students?
- Review options to maximise carbon/emissions, cost and travel time benefits?

### Placements:

- Sustainability skills are increasing sought by employers and embedded into employment roles. To enhance sustainability employment skills could you:
  - seek placement providers who are committed to sustainability, particularly Third Sector organisations.
  - Could you seek placement providers who will support the development of sustainability skills
  - embed interaction with the Leeds community in your teaching? This might include using local case studies for example.
  - Are there opportunities for Living Lab projects with partner organisations in the city?







# More information

Here are some links to some resources that you may find useful. Additional resources will be added to our [Leeds Sustainable Curriculum](#) web page as the Sustainable Curriculum programme develops. The University also has a Sustainable Community Teams site which may be of interest.

[Living Labs](#) - these projects bring together students, staff and partners (internal and/or external) to research and test solutions to sustainability challenges. This [Living Lab Case study](#) from MSc Organizational Psychology, Leeds Business School, provides an example.

This Library Blog outlines [the role of OER in building greater educational sustainability](#) - enhancing access, use, and the longevity of resources and helping to increase diversity in the curriculum.

In 2021 QAA produced an updated [QAA Education for Sustainable Development framework](#) for embedding sustainable knowledge, skills and attributes. This also provide guidance and case study examples. The [AdvanceHE Sustainable Development Toolkit](#) provides further resources to support embedding Education for Sustainable Development.

At Leeds we consider sustainability in the context of the [UN Sustainable Development Goals \(SDGs\)](#). The 17 goals and the interdependence across these represent the most significant global challenges. This page captures some of the ways that the University is responding to the UN SDGs - [United Nations Sustainable Development Goals – at the University of Leeds](#).

[SDG Academy](#) is a flagship education platform of the Sustainable Development Solutions Network (SDSN), a global initiative for the United Nations.

[UN SDG:Learn](#) is a collection of presentations, resources and webinars aligned to the UN SDGs.

[UN SDG Help Desk](#) is an online service providing access to tools, knowledge products, data portals, expertise, advice, and opportunities for peer-learning aligned to the UN SDGs.

[Students Organising for Sustainability](#) have produced a bank of resources for academics to help them start to think about the SDGs in relation to their teaching.

[EAUC Resources](#) for education providers include resources for learning & skills.

[Taylor and Francis](#) – this is a curated library of resources to support the UN SDGs.

Sustainability is also referenced across other ‘How might we’ guides including the following:

- Ethics
- How might we ensure that students feel seen, respected, and valued
- Capabilities & the Leeds Skills Matrix
- Open Educational Resourcesz



# References

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The Department for Education's **Sustainability and Climate Change Strategy (2022-2030)** outlines ambitions to ensure that all learners, across all levels of study, increase their knowledge of climate change and sustainable development.

Annan-Diab, F. and Molinari, C., 2017. Interdisciplinarity: Practical approach to advancing education for sustainability and for the Sustainable Development Goals. *The International Journal of Management Education*, 15(2), pp.73-83.

Dyer, J, Middlemiss, L and Thew, H (2021) Towards just and inclusive community

sustainability initiatives: learning from the Mixed Ability movement. *justice spatiale - spatial justice* (16). ISSN 2105-0392

Evans, J., Jones, R., Karvonen, A., Millard, L. and Wendler, J., 2015. Living labs and co-production: university campuses as platforms for sustainability science. *Current Opinion in Environmental Sustainability*, 16, pp.1-6.

Mazutti, J., Brandli, L.L., Salvia, A.L., Gomes, B.M.F.,

Damke, L.I., da Rocha, V.T. and dos Santos Rabello, R., 2020. Smart and learning campus as living lab to foster education for sustainable development: an experience with air quality monitoring. *International Journal of Sustainability in Higher Education*.

Molthan-Hill, P., Worsfold, N., Nagy, G.J., Leal Filho, W. and Mifsud, M. 2019. Climate change education for universities: A conceptual framework from an international study. *Journal of Cleaner Production*. 226, pp.1092-1101.

NUS (2019) Annual Skills Survey, <https://sustainability.nus.org.uk/our-research/our-research-reports/education-learning-employment-and-sustainability/sustainability-skills-annual-survey>

Padayachee, K., Matimolane, M. and Ganas, R., 2018. Addressing curriculum decolonisation and education for sustainable development through epistemically diverse curricula. *South African Journal of Higher Education*, 32(6), pp.288-304.

Purvis M, Young CW, Marsh C, Clarke J. 2013. An institutional approach: education for sustainable development at the University of Leeds. In: Atfield R;

Kemp P (eds.) Enhancing education for sustainable development in Business and Management, Hospitality, Leisure, Marketing, Tourism. York: Higher Education Academy, pp. 1-10

Thew, H., Graves, C., Reay, D., Smith, S., Petersen, K., Bomberg, E., Boxley, S., Causley, J., Congreve, A., Cross, I., Dunk, R., Dunlop, L., Facer, K., Gamage, K. A. A., Greenhalgh, C., Greig, A., Kiamba, L., Kinakh, V., Kioupi, V., Lee, M., Klapper, R., Kurul, E., Marshall-Cook, J., McGivern, A., Mörk, J., Nijman, V., O'Brien, J., Preist, C., Price, E., Samangoei, M., Schrodt, F., Sharmina, M., Toney, J., Walsh, C., Walsh, T., Wood, R. Wood, P., and Worsfold, N.T. (2021). Mainstreaming climate education in Higher Education Institutions. COP26 Universities Network Working Paper. [https://www.gla.ac.uk/media/Media\\_814664\\_smx.pdf](https://www.gla.ac.uk/media/Media_814664_smx.pdf)

UNESCO (2015) Rethinking education for the common good. Available at: <http://tinyurl.com/o73vzay>. Google Scholar